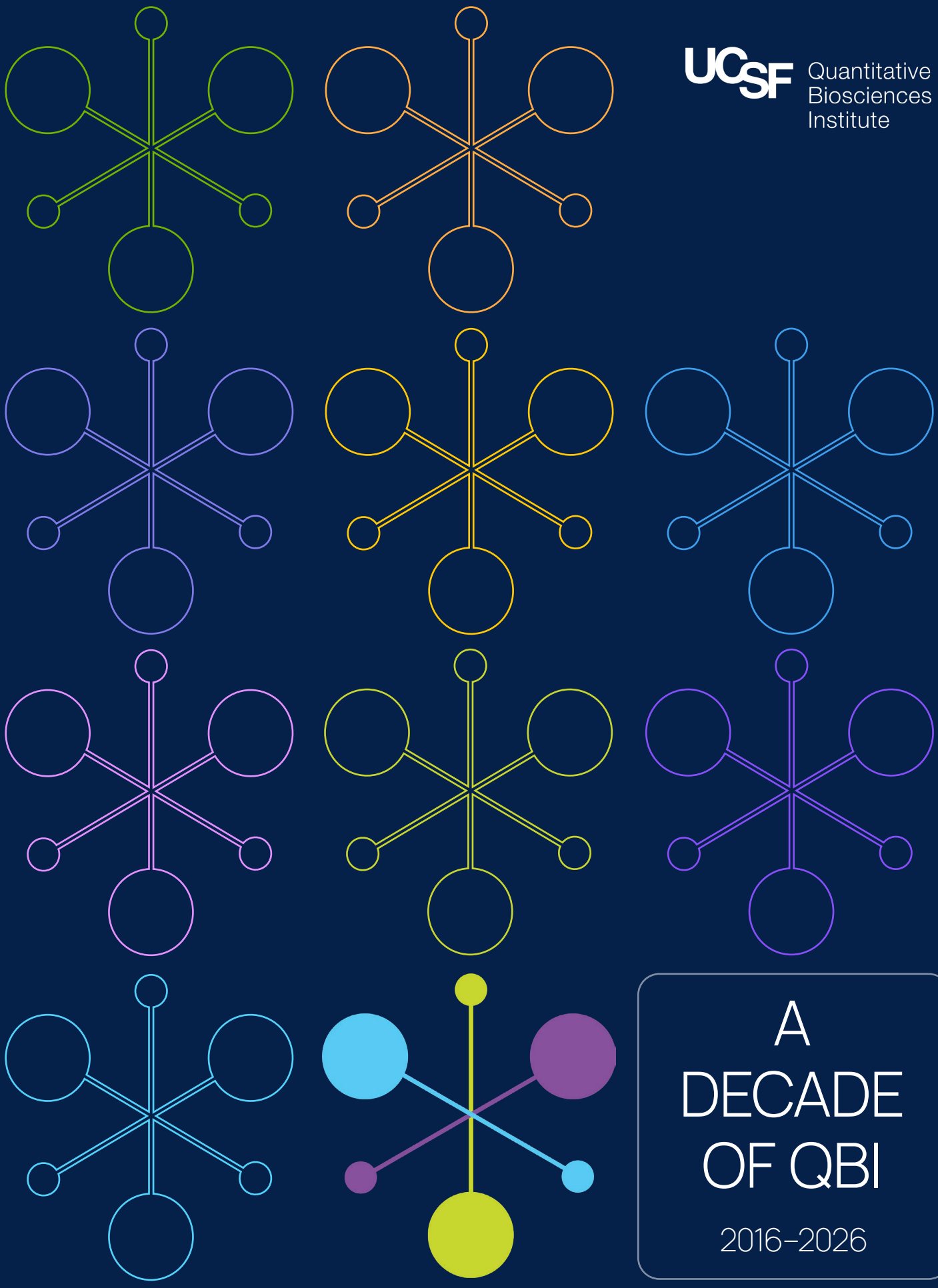


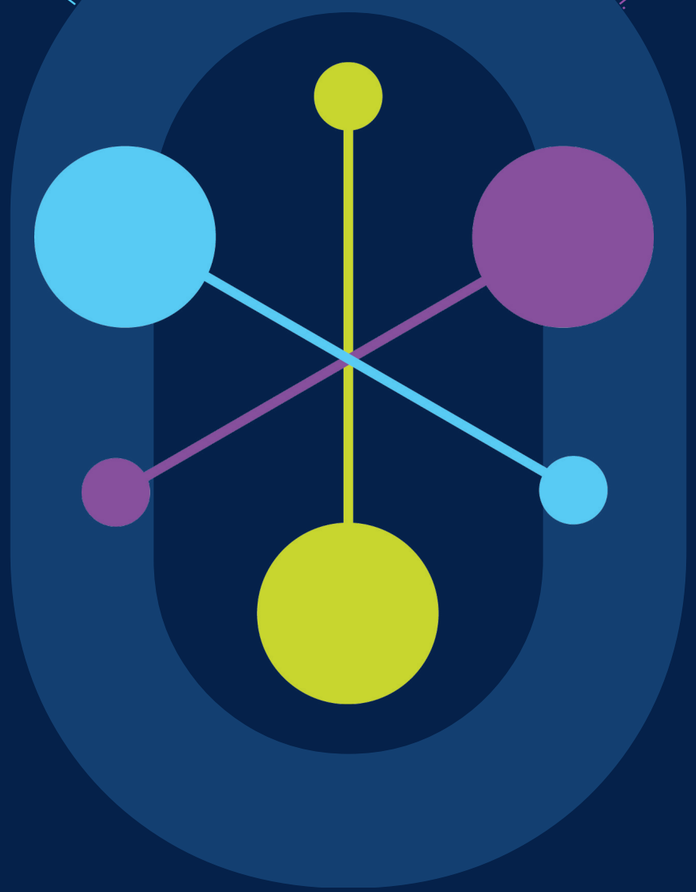
UCSF Quantitative Biosciences Institute

A DECADE OF QBI

2016–2026

10

A decade's worth of moments that led us here ...



2016–2026

As we mark QBI's 10-year anniversary, we are proud to present this publication—a reflection on the journey we began in 2016 and the community we have built together. This book is more than a record of our milestones; it is a celebration of a shared vision that has reshaped the way we approach scientific discovery.

Let's begin!

Published July 2026

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INTRODUCTION

WELCOME

When we founded the Quantitative Biosciences Institute (QBI) ten years ago, our mission was clear: to break down the walls of traditional academic research and replace them with bridges. The prevailing structure of academia too often places emphasis on the accomplishments of individual scientists, rewarding competition over collaboration. Grants, tenure, and recognition are typically tied to single investigators, leaving little space for the kind of teamwork that modern science increasingly demands. Yet the challenges we face, whether in understanding biology or developing therapies for disease, are far too complex for any one laboratory to solve alone.

From the beginning, QBI set out to change this paradigm. We believed that if we could bring together scientists from diverse disciplines, empower them with the latest technologies, and foster a culture where collaboration is not only possible but celebrated, we could accelerate discovery in transformative ways.

Ten years later, this belief has proven true.

Throughout this book, you will see the collective achievements of our community and the spirit that drives our work. At QBI, progress comes from the way different ideas and expertise come together — from the technologies that allow us to explore biology in new ways, to the researchers, trainees, staff, and collaborators who apply those tools to some of the most pressing biomedical challenges of our time. Their curiosity, creativity, and collaborative spirit ensure that insights move from one discipline to another. And by building strong connections between academia and industry, we work toward a future where discoveries can move seamlessly from the lab to real-world solutions.

Together, these efforts form the foundation of QBI's approach to science — one that accelerates discovery and opens new paths toward understanding and treating disease.

This 10-year milestone is not an endpoint but a marker along the way. It is an opportunity to reflect on how far we have come and to look forward to the challenges and opportunities that lie ahead. Science continues to evolve, and so will QBI. Our commitment to collaboration, innovation, and discovery will remain at the heart of everything we do.

To everyone who has contributed to QBI's first decade—our team, scientists, collaborators, and supporters—thank you. This book is a tribute to you and a reminder that when we work together, we can push the boundaries of what is possible.



Nevan Krogan, QBI Director

"We believed that if we could bring together scientists from diverse disciplines, empower them with the latest technologies, and foster a culture where collaboration is not only possible but celebrated, we could accelerate discovery in transformative ways."

QBI AT A GLANCE

QBI grew from a bold idea into a thriving engine for collaboration. At a glance, this timeline follows the early decisions that set the foundation, the turning points that steered the institute forward, and the ambitious initiatives that opened new scientific frontiers. Together, these moments trace **a decade of curiosity, collaboration, and impact**.

2016

March 16

QBI Established

Founded as a new Organized Research Unit within the UCSF School of Pharmacy.

2017

May 11

Cancer Cell Map Initiative Launched

Understanding cancer at the cellular and network level.

September 19

HIV Accessory and Regulatory Complexes Program Joins QBI

Studying how HIV proteins interact with human proteins.

2018

August 7

Host Pathogen Map Initiative Launched

Mapping molecular interactions between viruses and human cells.

September 5

Psychiatric Cell Map Initiative Launched

Exploring the molecular biology of neuropsychiatric conditions.

2020

March 7

QBI Coronavirus Research Group (QCRG) Formed

300+ scientists from QBI and partner institutions collaborate on SARS-CoV-2 research.

2022

May 18

QCRG Awarded $67.5M to Establish AViDD Center

The QBI Coronavirus Research Group (QCRG) becomes one of the nine NIH-funded centers for antiviral drug discovery and pandemic preparedness.

November 17

Rezo Therapeutics Launched

$78M Series A to create a company advancing precision therapeutics using QBI's disease network mapping approach.

2024

October 10

Research and Engineering to Accelerate DiscoverY (READY) Center Launched

Advancing disease understanding through genome engineering.

2025

December 10

QBI becomes a leader in ARIA (Aligning Research to Impact Autism) Initiative

QBI is appointed to lead the ARIA initiative's Protein-Protein Interactions Hub to accelerate autism research and identify new therapeutic targets.

2026

January 23

Mreza Therapeutics Launched

Targeting complex neuronal conditions, beginning with schizophrenia and autism, to develop novel, disease-modifying treatments.

Fall

CRISP Launching

Integrating structural proteomics and AI to understand disease biology.

QBI IN NUMBERS

Behind every breakthrough is a network of people and partnerships driving discovery forward. These numbers highlight a decade of QBI's impact, from groundbreaking research and global collaborations to community engagement, training, and public outreach.

160
Funded Faculty Across 39 Institutions Worldwide

740+
Publications

345+
Million Raised in Research Funding

310+
Public Events Hosted

10
Years of Discovery

16K+
Attendees Across Events

14
Countries in Our Global Network





HISTORICAL OVERVIEW

The QBI Origin Story

The University of California, San Francisco (UCSF) established the Quantitative Biosciences Institute (QBI) in March 2016 as an Organized Research Unit (ORU) within the School of Pharmacy. QBI traces its origins to the Molecular Design Institute (MDI), founded in 1993 by Irwin “Tack” Kuntz, PhD, now Professor Emeritus in the Department of Pharmaceutical Chemistry. MDI was created to advance the discovery, design, and delivery of novel pharmaceutical agents at a time when many of the experimental and computational tools required for quantitative approaches to drug discovery were still in their infancy. Over the subsequent two decades, rapid advances in quantitative and computational biology transformed the scientific landscape, enabling new systems-level approaches to studying complex biological processes. This evolution created an opportunity to expand MDI into a broader, integrative institute. The formation of QBI was also influenced by its relationship with the California Institute for Quantitative Biosciences (QB3), a multicampus institute spanning UCSF, UC Berkeley, and UC Santa Cruz. As quantitative bioscience research expanded across disciplines, QB3 investigators at UCSF increasingly sought a formal structure that could support large-scale collaborative research and grant activities. Building on the administrative foundation established by MDI, QBI provided that institutional home, serving as the primary research hub for QB3-affiliated scientists at UCSF. In 2016, under the leadership of then-Dean of the School of Pharmacy B. Joseph Guglielmo, and with strong support from UCSF leadership and the University of California Office of the President, MDI was formally reconstituted as QBI.

The founding director of QBI, Nevan Krogan, PhD, Professor in the Department of Bioengineering and Therapeutic Sciences at UCSF and Senior Investigator at the Gladstone Institutes, is widely recognized for pioneering systems biology approaches and large-scale collaborations to elucidate complex biological networks at a mechanistic level, often yielding actionable therapeutic insights. Since 2022, Kathy Giacomini has served as Dean of the School of Pharmacy, providing continued leadership and support for QBI’s growth and evolution.

Building a Collaborative Discovery Engine

In its first five years, QBI focused on oncology, psychiatric disorders (including autism, obsessive-compulsive disorder, and schizophrenia), and infectious diseases such as HIV, dengue, and Zika virus. During this period, QBI launched several flagship Cell Mapping Initiatives, including the Cancer Cell Map Initiative (CCMI), the Host Pathogen Map Initiative (HPMI), and the Psychiatric Cell Map Initiative (PCMI). These programs brought together interdisciplinary teams from both basic and clinical research to investigate disease through unbiased, quantitative, and highly collaborative approaches. Collectively, these initiatives helped establish QBI’s identity as a hub for network-based discovery science capable of operating across diseases, technologies, and institutional boundaries. Rather than organizing research around individual laboratories alone, QBI increasingly developed a collaborative framework designed to integrate expertise across systems biology, proteomics, structural biology, genetics, computation, and translational research. The resulting network has connected researchers across North America, Europe, the Middle East, and Africa through

Institutional Support

QBI operates within a broader ecosystem of university leadership and institutional support that has helped its interdisciplinary research thrive over the years.



Sam Hawgood
Chancellor (2014–Present),
UC Office of the President



B. Joseph Guglielmo
Former Dean (2013–2022),
UCSF School of Pharmacy



Kathy Giacomini
Dean (2022–Present),
UCSF School of Pharmacy



Nevan Krogan
Director (2016–Present),
QBI UCSF

UCSF

scientific partnerships and institutional alliances.

As an ORU within the University of California, QBI is eligible to compete for large-scale, cross-disciplinary funding from agencies such as the National Institutes of Health (NIH), DARPA, and ARPA-H. Building on the foundation of its cell mapping initiatives, QBI has secured multiple major collaborative awards that have enabled the development of extensive research networks across UCSF and with institutions worldwide. This has reinforced QBI as a global hub for collaborative science and, in turn, catalyzed additional support from philanthropy, foundations, and international partnerships.

During the COVID-19 pandemic, QBI rapidly established the QBI Coronavirus Research Group (QCRG) under HPMI, mobilizing investigators across UCSF and globally. QCRG quickly emerged as one of the leading international efforts to elucidate SARS-CoV-2 biology and identify therapeutic strategies for COVID-19. This work ultimately led to QBI securing a $67.5 million NIH grant—the largest ever awarded to the University of California—under the AViDD (Antiviral Drug Discovery) program. The award supports a consortium of 43 principal investigators, more than half based at UCSF, focused on developing antiviral therapeutics against viruses with pandemic potential. The rapid mobilization of QCRG demonstrated the scalability of QBI's collaborative model and reinforced the institute's role as a convener of large, interdisciplinary scientific networks capable of responding to urgent global health challenges.

"At its heart, QBI is a testament to what can happen when we create an environment where scientists are encouraged to think beyond traditional boundaries and work together on problems that matter. Under Nevan's leadership, the institute has grown from a bold idea into an internationally recognized hub for collaboration and innovation. QBI reflects the culture of partnership, creativity, and scientific excellence that defines UCSF."

– Sam Hawgood, Chancellor, UCSF

Expanding the Future of Translational Science

Over the past five years, QBI has further expanded its scope through the launch of several new programs and centers. For example, in 2024, QBI launched the Bruker Center of Excellence in Proteomics, a state-of-the-art Mass Spectrometry Facility located at the Weill Institute for Neurosciences at UCSF. Other examples include the READY (Research Engineering to Accelerate DiscoverY) Center, which focuses on engineering human cells using CRISPR-based approaches in induced pluripotent stem cells (iPSCs) to generate precise disease models. This capability enables experimental validation of hypotheses derived from systems and structural biology, linking discovery science with mechanistic understanding of biological function.

QBI has also established the CRISP (Center for Research on Integrative Structural Proteomics), which integrates structural biology, mass spectrometry, and advanced computational approaches—including artificial intelligence and machine learning—to visualize molecular machines at high resolution. By connecting system-level data to molecular structure, CRISP provides mechanistic insights into how protein architecture governs cellular function and informs therapeutic development.

Together, these efforts reflect QBI's broader evolution from a systems biology institute into an integrated discovery and translational ecosystem that increasingly bridges computation, engineering, structural biology, and therapeutic development.

QBI is also playing a leadership role in the recently established ARIA (Aligning Research in Autism) program, supported by Bayshore Global Management (BGM) through the Sergey Brin Family Foundation (SBFF), and overseen by Chief Scientific Advisor Matt State, Chair of Psychiatry at UCSF. Specifically, QBI is leading one of five programmatic "hubs" within this initiative, focused on Protein-Protein Interactions and Drug Discovery, a research area connected to PCMI. Through this collaborative effort, ARIA aims to advance the understanding of profound autism and accelerate the development of new approaches to support individuals affected by the condition.

QBI has also played a central role in launching biotechnology companies that translate its scientific discoveries into therapeutic development. These include Rezo Therapeutics, founded in 2022 with a $78 million Series A financing, which focuses on oncology and leverages disease network mapping to identify novel drug targets. More recently, Mreza Therapeutics has been incorporated, applying a similar conceptual framework to neuropsychiatric disorders. In addition, in close partnership with UCSF leadership, QBI has helped found Enso Therapeutics, a platform designed to advance academic discoveries to key inflection points, enabling the formation of new companies while increasing value capture for inventors and the university. Enso is intended to pilot a new model for translational science by providing longer incubation runways for promising UCSF discoveries while attracting capital to QBI. It also serves as a front door for commercial partners seeking access to the deep discovery expertise and innovation ecosystem of QBI and UCSF. This report highlights the role QBI has played in expanding participation across the UCSF research community by fostering scientific collaboration in new, interdisciplinary, and technologically advanced ways. Over the past decade, QBI has helped establish a modern framework for team-based discovery science—one that integrates systems biology, structural biology, engineering, computation, and translation across institutional and geographic boundaries.

This commitment to collaboration is reflected not only in QBI's scientific programs but also in its investment in the broader research community. Since its inception, QBI has provided research support through one or more funding mechanisms to 89 UCSF faculty members and 160 investigators worldwide, while engaging 96 UCSF faculty members in scientific meetings and collaborative events. In total, 124 unique UCSF faculty have participated in QBI through funding, events, or both. These numbers represent more than institutional growth; they reflect a sustained effort to create opportunities for connection, collaboration, and scientific exchange across disciplines.

"QBI shows what's possible when scientists work across disciplines, institutions, and borders. Its success reflects strong leadership and the dedication of its many collaborators. It's been inspiring to watch it grow and expand its impact across the School of Pharmacy and UCSF."

– Kathy Giacomini, Dean, UCSF School of Pharmacy

As the institute enters its next decade, QBI continues to reflect UCSF's commitment to bold, collaborative science and stands at the forefront of a new model for biomedical innovation, where academia and industry work in closer partnership and where quantitative biology accelerates the path from fundamental discovery to therapeutic impact.





MISSION & VALUES

Mission

QBI fosters collaboration across the biomedical and physical sciences, applying quantitative approaches to address pressing challenges in biology and biomedicine. Driven by problems in human disease, we are committed to investigating fundamental biological mechanisms, recognizing that transformative solutions to many diseases often emerge from unexpected discoveries in basic science. QBI aims to serve as a global hub for a new scientific era that reshapes how we understand and treat disease by bridging disciplines and mapping the molecular networks of life.

QBI aims to serve as a global hub for a new scientific era that reshapes how we understand and treat disease by bridging disciplines and mapping the molecular networks of life.

Core Values & Guiding Principles

Our initial motivation in forming QBI at UCSF was simple: a conviction that the most important problems in biomedicine cannot be solved by a single laboratory, a single discipline, or a single institution. Rather than assembling a fixed scientific agenda, we set out to build something rarer and more durable—a culture and infrastructure for collaboration at scale. What has emerged over the past decade is a living demonstration of that vision: an institute that breaks down silos not as a policy aspiration, but as a daily operating reality, bringing together scientists across fields to tackle questions that none of them could address alone.

Academic research has historically emphasized the individual scientist. Grants are often awarded to single investigators, tenure decisions are based primarily on individual achievements, and most major awards recognize individual contributions. In this structure, even when substantial collaborative work occurs, the contributions of individual investigators—particularly junior scientists—can be overlooked or questioned. As a result, the system can incentivize unnecessarily competitive and siloed research practices. We would argue that, in many cases, this structure can impede discovery.

Increasingly, major breakthroughs in biomedical research require coordinated team-based efforts, where each group contributes unique but highly complementary expertise. QBI seeks to lead by example by organizing teams of scientists who work collectively on shared scientific problems. At the core of these collaborative efforts is technology and the data it generates, as QBI scientists develop experimental and computational tools that can be broadly applied across biological and biomedical questions, impacting many disease areas. These tools help bridge discovery science and the clinical world, as well as academia and industry, ultimately enabling the development of new therapeutic strategies for disease. The evidence speaks for itself: more than $346 million secured in the past decade, more than 740 publications, three biotechnology companies founded, and a global network of investigators that mobilized with extraordinary speed when a novel coronavirus emerged and threatened the world. That last fact—that QBI was able to pivot its entire infrastructure toward COVID-19 within weeks and ultimately secure the largest grant in UC history—is perhaps the clearest proof that the collaborative model works.

Over time, this collaborative foundation has evolved into a clear framework defined by four interconnected pillars:

1) New technologies that expand the frontiers of biological discovery

2) Disease-focused research that anchors innovation in urgent biomedical challenges

3) Bridges between academia and industry that accelerate translation into real-world impact

4) A diverse scientific community that fosters creativity, rigor, and collective discovery

→

The Four Pillars of QBI

Technology

We develop and apply quantitative tools that help open new frontiers in biological discovery.

Mass Spec

Cryo-EM/ET

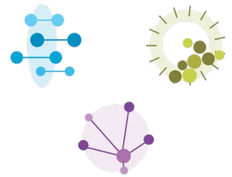
CRISPR

Chemical tools

AI/ML

Disease Focus

We direct disease-agnostic research toward pressing biomedical challenges to ensure impact on human health.



Translation

We bridge academia and industry to connect basic discovery with therapeutic development.



Global Network

We bring together a global network of collaborators at UCSF and beyond to drive discovery.



UCSF Quantitative Biosciences Institute

Together, these pillars form an ecosystem where ideas move freely between disciplines, discoveries build upon one another, and progress accelerates. At QBI, collaboration is not simply encouraged, but is the foundation of how science is done.

As QBI looks to the future, its vision remains clear: to create a model for research where shared knowledge, innovative technologies, and collective effort drive breakthroughs that transform our understanding of biology and human health.

Scan to learn more about the four pillars shaping QBI's approach to discovery



PEOPLE & SPACES OF QBI

Our Executive Committee



David Agard

Professor, Biochemistry and Biophysics, UCSF



Tanja Kortemme

Professor, Bioengineering, UCSF



Andrej Sali

Professor, Bioengineering, UCSF



Brian Shoichet

Professor, Chair, Pharmaceutical Chemistry, UCSF

Our Associate Directors



James Fraser

Professor, Chair, Bioengineering and Therapeutic Sciences, UCSF



Danica Fujimori

Professor, Cellular Molecular Pharmacology, UCSF



Natalia Jura

Professor, Cardiovascular Research, UCSF

QBI is guided by a leadership team of accomplished scientists whose experience and long-standing commitment help shape the Institute's direction and strengthen its connection to the broader UCSF community. Across the Executive Committee and Associate Directors, this group of principal investigators brings thoughtful perspective and trusted guidance, helping to carry QBI's vision forward and support a collaborative environment where ideas, expertise, and technologies come together to tackle complex questions.

Our Team *as of July 2026*

QBI is supported by an integrated operating and leadership structure that is uncommon in academic research environments, and essential to its success. The institute's operational foundation brings together scientific portfolio coordination, grants and finance administration, program management, international collaborations, communications, and events, forming a unified infrastructure that enables scientific discovery, fosters collaboration and community, and supports the translation of ideas into real-world impact. Alongside these core functions, QBI has strengthened its leadership capacity across strategy, science, and translation, bringing in complementary expertise spanning academia, industry, government innovation programs, and biotechnology. These capabilities deepen the institute's ability to bridge discovery science with real-world impact, expand large-scale collaborations, and support an increasingly complex scientific portfolio. Together, this integrated team forms the backbone of QBI, ensuring continuity, operational excellence, and strategic alignment across all areas of the institute's work.



Nevan Krogan

Director



John Young

Chief Strategy Officer



Andy Kilianski

Chief Science and Technology Officer



Brad Schneider

Chief Operations Officer



Kirsten Obernier

Senior Director of Science, Portfolio, and Strategy



Jyoti Batra

Director of Infectious Disease



Reshmi Tognatta

Director of Neuroscience



Nadia Arang

Director of Oncology



Celine Perier

Director of International Partnerships



Zelda Love

Associate Director, Grant Management



Manon Eckhardt

Senior Manager, Scientific Publications



Promisree Choudhury

Project Manager, Infectious Diseases



Robyn Kaake

Director of Science Communications



Gina Nguyen

Director of Communications and Events



Alexa Rocourt

Media Producer and Graphic Designer



Andrea Bolanos

Media and Events Assistant



Sarika Parekh

Finance Supervisor



Ali Sasan

Finance Analyst



Peggy Ackerberg

Executive Assistant



Anjelica Regino

Executive Assistant

Our Principal Investigators & Core Facilities

QBI brings together more than 85 principal investigators from across UCSF, spanning departments and disciplines from bioengineering and biochemistry to medicine, neurology, psychiatry, and radiology. This network of researchers contributes their expertise, helps lead initiatives, host events, and actively shape the Institute's collaborative science and programs. QBI's work is supported across multiple key buildings on the Mission Bay campus, including administrative hubs, research labs, core facilities, and collaborative spaces.



Weill Institute for Neurosciences

Neuroscience & Core Labs

Interdisciplinary space for neuroscience research & includes one of QBI's Mass Spectrometry facilities

Gladstone Institutes

Independent UCSF-Affiliated Institute

Has a BSL-3 lab & QBI Mass Spectrometry facility for collaborative research

Byers Hall

QBI HQ

Home to QBI offices, the READY Center, & research labs

Rezo Therapeutics

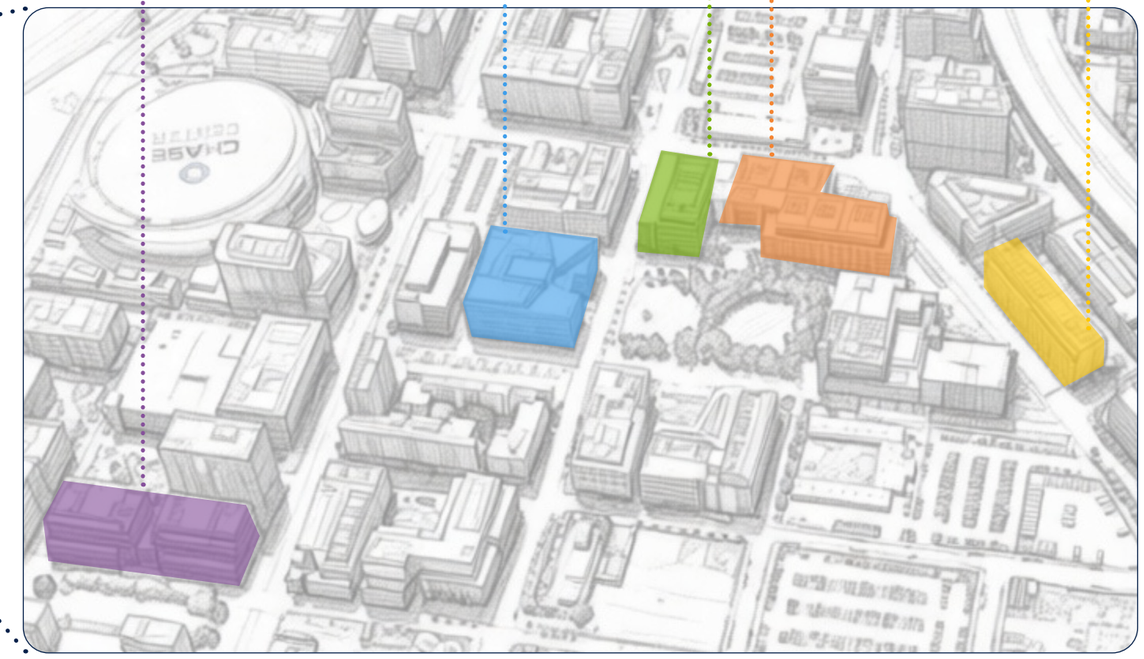
Translational Drug Discovery

Located within Mission Bay's broader life-science innovation ecosystem with ties back to QBI

Genentech Hall

Core Labs

Houses research labs including CRISPR, Cryo-EM, & Mass Spectrometry



Mission Bay, San Francisco, California

Scan to learn more about the faculty members within the QBI community



FINANCE

QBI is supported by a diverse and robust funding portfolio that includes federal and industry grants, philanthropic and foundational gifts, as well as institutional support. Financial operations are overseen by Sarika Parekh and Ali Sasan. Over the past ten years, QBI has secured more than $346M in total funding, including $264.6M from federal, industry, and state sources through 12 center grants, and $81.5M in non-sponsored support. QBI's annual revenue has grown from $20M in 2021 to a projected $47.2M in 2027, enabling a broad and expanding network of collaborations within UCSF, across UC campuses, and with national and international partners. Critically, this growth not come from a single large grant or a single moment of good fortune. It reflects the cumulative return on a decade of deliberate investment in people, infrastructure, and relationships—a funding model that is broad, resilient, and built to sustain long-term discovery regardless of shifts in any individual agency's priorities.

Through sponsored funding mechanisms totaling $264.6M, QBI's research portfolio includes several large-scale initiatives, including CCMI, HARC, HPMI, QCRG, ARPA-H Avoid-ome, and ARIA, among others (see Scientific Approach section). In addition to sponsored research, QBI has secured $81.5M in non-sponsored support, including philanthropic gifts from the Gates Foundation and family foundations, support associated with the QBI Coronavirus Research Group (QCRG), and funding through international partnerships. For example, QBI received a $7.5M gift in 2026 from the Sergey Brin Family Foundation in support of the Psychiatric Cell Map Initiative, part of a broader $15M philanthropic commitment. QBI has also received a $6M commitment from a donor to support the QBI–Tel Aviv University partnership focused on AI and drug discovery.

Overall, QBI has supported 160 distinct principal investigators through sponsored and non-sponsored funding, including 89 at UCSF representing 16 departments. Additional collaborative funding has been distributed to 71 investigators at 38 other institutions, including four UC campuses, across six countries. QBI has also made strategic investments in institutional priorities, including $300K for faculty recruitment, $406.8K for faculty retention, and $775K for fellowship support.

Funding, Scale & Growth

$346M+ total funding secured over 10 years

$264.6M in federal, industry, and state funding (including 12 center grants)

160 principal investigators supported across QBI-funded programs

- **89** PIs at UCSF across 16 departments
- **71** PIs across 38 external institutions in 6 countries (including 4 UC campuses)

$47.2M projected annual revenue by 2027, up from $20M in 2021



SCIENTIFIC APPROACH

Scientific discovery has long been shaped by siloed environments where closely aligned fields operate in parallel rather than in partnership. While this structure can foster deep specialization, it often limits the exchange of ideas, slows progress, and constrains creativity. Traditional funding and publication systems have reinforced these divisions, making meaningful shifts in research culture difficult to achieve. Yet moments of global urgency can catalyze change. The COVID-19 pandemic, in particular, underscored the power and necessity of working across disciplines, accelerating a more collaborative model of science.

At QBI, breaking down these silos is central to our approach. By fostering intentional collaboration and coordinating large-scale, multi-investigator grant efforts, QBI has helped unlock new opportunities for funding from agencies such as the NIH and DARPA. These efforts build on and strengthen connections across UCSF's Mission Bay and Parnassus campuses, uniting researchers from diverse institutes and departments, including the Cancer Center, Clinical and Translational Science Institute (CTSI), Gladstone Institutes, Cardiovascular Research Institute (CVRI), the Department of Psychiatry, and the Weill Institute for Neurosciences. Together, these partnerships have enabled the formation of sustained, center-level grants—once difficult to achieve—providing long-term stability and growth for collaborative science.

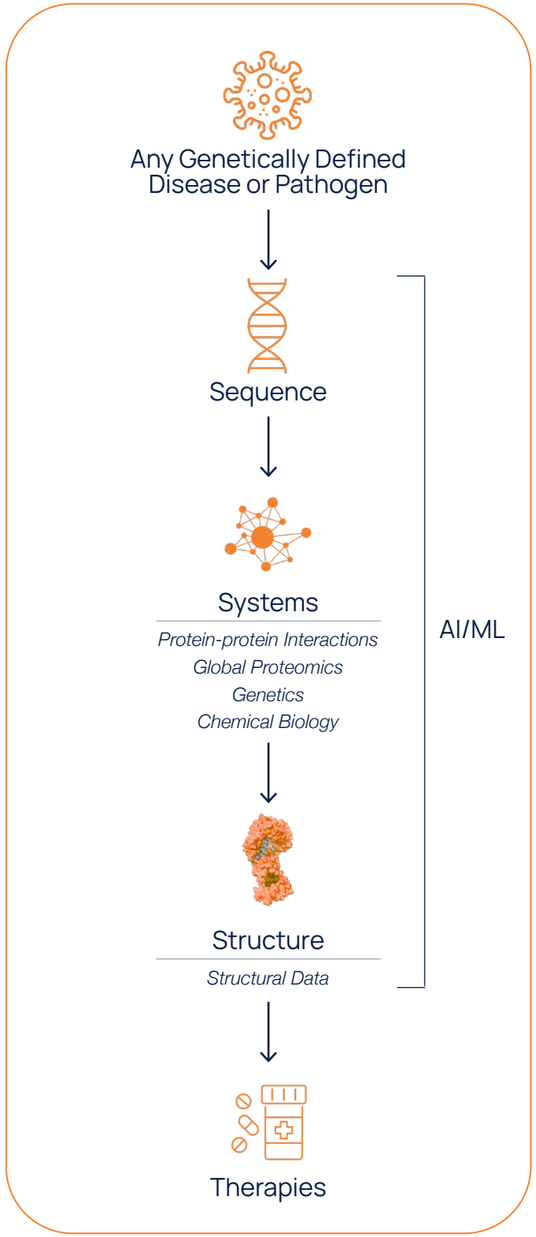
QBI's scientific vision is built on a unifying principle: any genetically defined disease or pathogen can be studied through the same systematic lens. By integrating technologies across disciplines, QBI follows a continuous path from genetic information to therapeutic insight.

The process begins with sequencing, where genes associated with disease are identified. From there, researchers move to the systems level, mapping how proteins interact within the cell using approaches such as proteomics, genetic perturbation (including CRISPR), and chemical biology. These technologies reveal how biological networks are organized and how they are disrupted in disease.

QBI bridges systems-level discoveries to structure, using tools like cryo-electron microscopy, cross-linking mass spectrometry, and integrative modeling to visualize molecular interactions in detail. This step provides critical insight into how proteins function and how they can be targeted. Throughout this pipeline, artificial intelligence helps integrate and interpret complex datasets, accelerating discovery across scales.

Together, this sequence-to-systems-to-structure framework enables a deeper understanding of disease biology and drives the development of new, mechanism-based therapies. By applying the same approach across disease areas, QBI creates a scalable model for discovery—one that transforms how science is conducted and translated into impact.

In doing so, QBI is uniquely positioned to lead a new era of protein-protein interaction (PPI)-based biological understanding and drug discovery, where mapping and targeting the dynamic networks that govern cellular function opens new possibilities for therapeutic innovation.



Technology

QBI's approach is powered by cutting-edge technologies and dedicated research centers that enable scientists to move seamlessly from genes to therapeutics.

At the **Mass Spectrometry Centers** at the Weill Institute for Neurosciences and Gladstone Institutes, researchers apply a suite of advanced proteomics tools—including cross-linking mass spectrometry (XL-MS), hydrogen/deuterium exchange (HDX-MS), affinity purification (AP-MS), native MS, global post-translational modification analysis, APEX labeling, size-exclusion chromatography (SEC-MS), and targeted proteomics—to map protein interactions, modifications, and complex networks with exceptional precision. The centers also pioneer new mass spectrometry technologies, expanding the frontiers of what can be measured in biology.

The **READY (Research Engineering to Accelerate DiscoverY) Center** focuses on CRISPR-mediated engineering in human induced pluripotent stem cells (iPSCs), creating precise models of disease. This platform allows QBI scientists to use deep phenotyping to experimentally test hypotheses generated from systems and structural studies, bridging discovery to functional validation.

The **CRISP (Center for Research on Integrative Structural Proteomics)** integrates structural biology, mass spectrometry, and computational innovation, including artificial intelligence and machine learning, to visualize molecular machines in detail and reveal how protein structures govern cellular function. By linking system-level data to molecular structure, CRISP provides mechanistic insight critical for developing targeted therapies.

Together, these technologies and centers form a coordinated toolkit that underpins QBI's sequence-to-systems-to-structure framework, enabling transformative insights across diverse diseases and accelerating the potential development of new, mechanism-based therapies.

The Mass Spectrometry Centers

At the Bruker Center of Excellence in Proteomics at the Weill Institute for Neurosciences at UCSF and the Mass Spectrometry Center at Gladstone Institutes, led by Danielle Swaney, and building on the work of key experts including Robyn Kaake and Ruth Huttenhain, QBI researchers investigate how proteins function as dynamic drivers of cellular behavior and how these processes are altered in disease. Because proteins constantly change in abundance, location, and interaction, they provide a direct readout of cellular state. Using mass spectrometry, researchers can measure thousands of proteins at once, revealing how molecular systems are reorganized in conditions such as infection, cancer, and neurodegeneration.

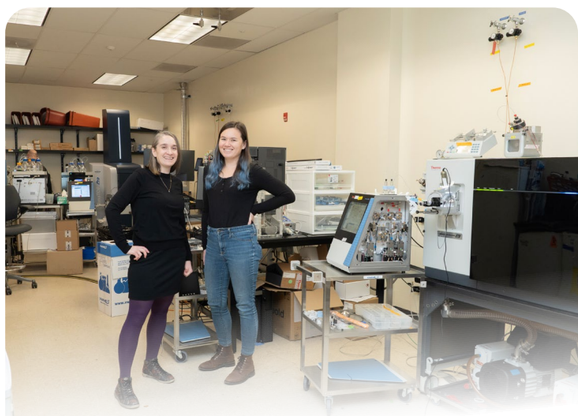
The centers use a diverse set of proteomics approaches, including affinity purification mass spectrometry (AP-MS), cross-linking mass spectrometry (XL-MS), hydrogen-deuterium exchange (HDX-MS), native MS, and global profiling of post-translational modifications. These methods enable systematic measurement of protein abundance, interactions, and regulatory changes such as phosphorylation, ubiquitination, and acetylation, providing a comprehensive view of how cellular networks are rewired in health and disease.

A key focus is large-scale mapping of protein interaction networks, particularly host–pathogen systems, to understand how viruses such as HIV, herpesvirus, and hepatitis C hijack human cellular machinery. The centers apply proteomics broadly across disease areas, including cancer, infectious disease, and neurological disorders, to link molecular changes to functional outcomes.

Interaction Proteomics	*AP-MS, XL-MS, PL-MS*
Structural Proteomics	*HDX-MS, Native MS, SEC-MS, Protein Complex Characterization*
Quantitative Proteomics	*Global Proteome Profiling, PTM Analysis, Targeted Proteomics, Technology Development*



Nevan Krogan, Sam Hawgood, Danielle Swaney, Bruker CEO Frank Laukien, Stephen Hauser, and Matthew State at the grand opening of the Bruker Center of Excellence in Proteomics at the Weill Institute for Neurosciences at UCSF, 2024



Danielle Swaney and Robyn Kaake at the Mass Spectrometry Center at Gladstone Institutes, 2024

The READY Center

The Research and Engineering to Accelerate DiscoverY (READY) Center was launched in 2024, bringing together expertise across academia and industry to accelerate the understanding of disease biology and the development of new therapeutics. Led by Ying Pei, Director of the READY Center (formerly Lee Spraggon), the center's growing team includes Robert Martin, Head of Operations; Yvonne Lim, Staff Research Associate; and Hasnaa Elfawy, Associate Specialist. The center combines innovative academic science with industrial-scale genome engineering technologies—including advanced CRISPR-based gene editing—to reveal molecular drivers of disease, map the interface between human proteins and pathology, and identify promising therapeutic targets across multiple diseases, including infectious disease, cancer, and neurological disorders. Building on this foundation, READY applies high-throughput cellular engineering platforms to create powerful disease models and generate large-scale functional datasets that deepen insight into pathogenesis and treatment opportunities. One of its early flagship efforts, supported by the UCSF Department of Psychiatry and the California Institute for Regenerative Medicine (CIRM), focuses on uncovering the molecular and neurodevelopmental basis of schizophrenia. Through genetic editing of human induced pluripotent stem cells (iPSCs) across high-risk genes and clinical variants, READY is helping create the first comprehensive molecular and proteomic landscape of schizophrenia while establishing scalable tools for future precision therapeutics.

CRISPR Gene Editing

CRISPR Cas9, Gene Knockout, Chromosomal Tagging, CRISPRi, CRISPRa, CRISPRn, Technology Development

CRISPR Cell Editing Engineering in iPSCs

Endogenous Tagging, Structural Variants, Single Nucleotide Variants, Knockout, CRISPRa/i, Base Editing



Ying Pei

Director, READY Center

The CRISP

Science and technology have advanced to a point where large-scale protein-centered datasets generated through mass spectrometry (MS), cryo-electron microscopy (Cryo-EM), and cryo-electron tomography (Cryo-ET), together with developments in artificial intelligence, can provide unprecedented insight into molecular and cellular biology and inform new approaches to understanding human disease. In response to these advances, QBI is establishing the Center for Research on Integrative Structural Proteomics (CRISP) in Fall 2026 to integrate multi-modal structural and proteomic datasets and apply them to the molecular characterization of healthy and diseased cells.

CRISP combines complementary MS-based approaches—including global proteomics, native MS, co-fractionation MS, hydrogen/deuterium exchange MS, and cross-linking MS—with structural analyses by Cryo-EM and Cryo-ET, ultimately integrated through sophisticated modeling approaches and AI-guided structural predictions. These integrated approaches support the study of protein complexes, intracellular protein networks, and cellular architecture across multiple spatial scales. By linking structural, proteomic, and genomic information, CRISP enables deeper investigation of how molecular disruptions through genetic mutation, infectious disease proteins, or toxic agents can contribute to disease biology and therapeutic response.

In the Fall of 2026, CRISP will be established to develop integrated technological and analytical pipelines that interrogate the proteomic consequences of genetic variation linked to human disease. CRISP efforts will support mechanistic studies of biological dysfunction and facilitate structurally informed approaches to therapeutic development and precision medicine.

Once established, CRISP will draw on UCSF's collaborative research ecosystem, including expertise in Cryo-EM, Cryo-ET, and MS proteomics within QBI; AI and computational modeling through the UCSF/Enso partnership; and emerging Cryo-ET technologies developed in collaboration with CZ Biohub initiatives. In addition to advancing interdisciplinary research, CRISP aims to support scientific exchange and training through structural proteomics symposia, workshops, and collaborative programs that connect academic and industry investigators across instrumentation, computation, and biology.

Proteomics

XL-MS, HDX-MS, SEC-MS, AP-MS, Native MS, APEX, Global PTM Analysis, Targeted Proteomics, Technology Development

Structural Biology

Cryo-EM, Cryo-ET

Artificial Intelligence/ Machine Learning

Protein-protein interaction and AI-guided approach to drug discovery



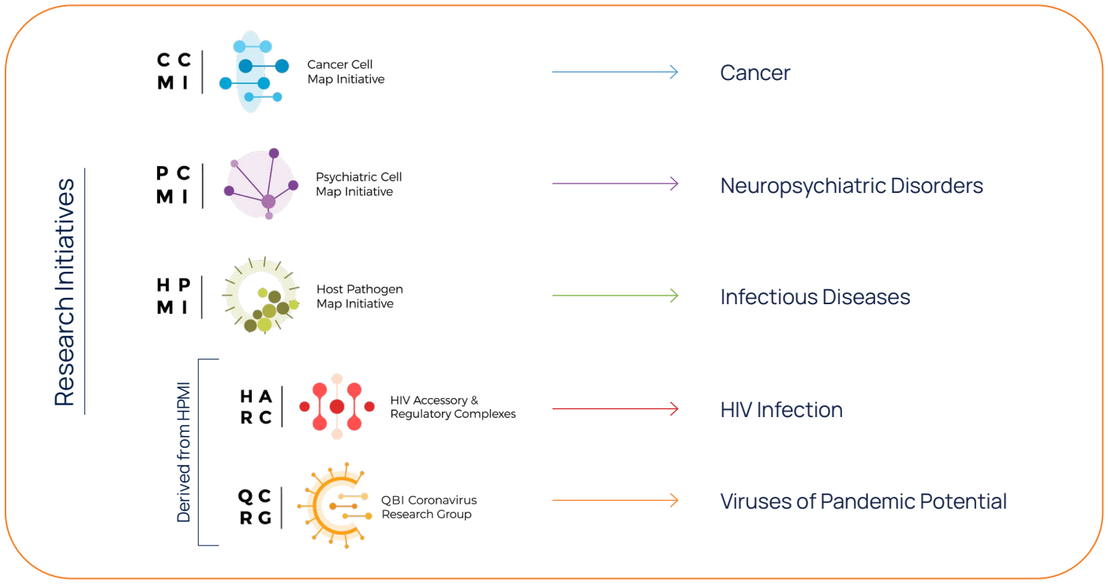
Shouling Xu

Director, CRISP

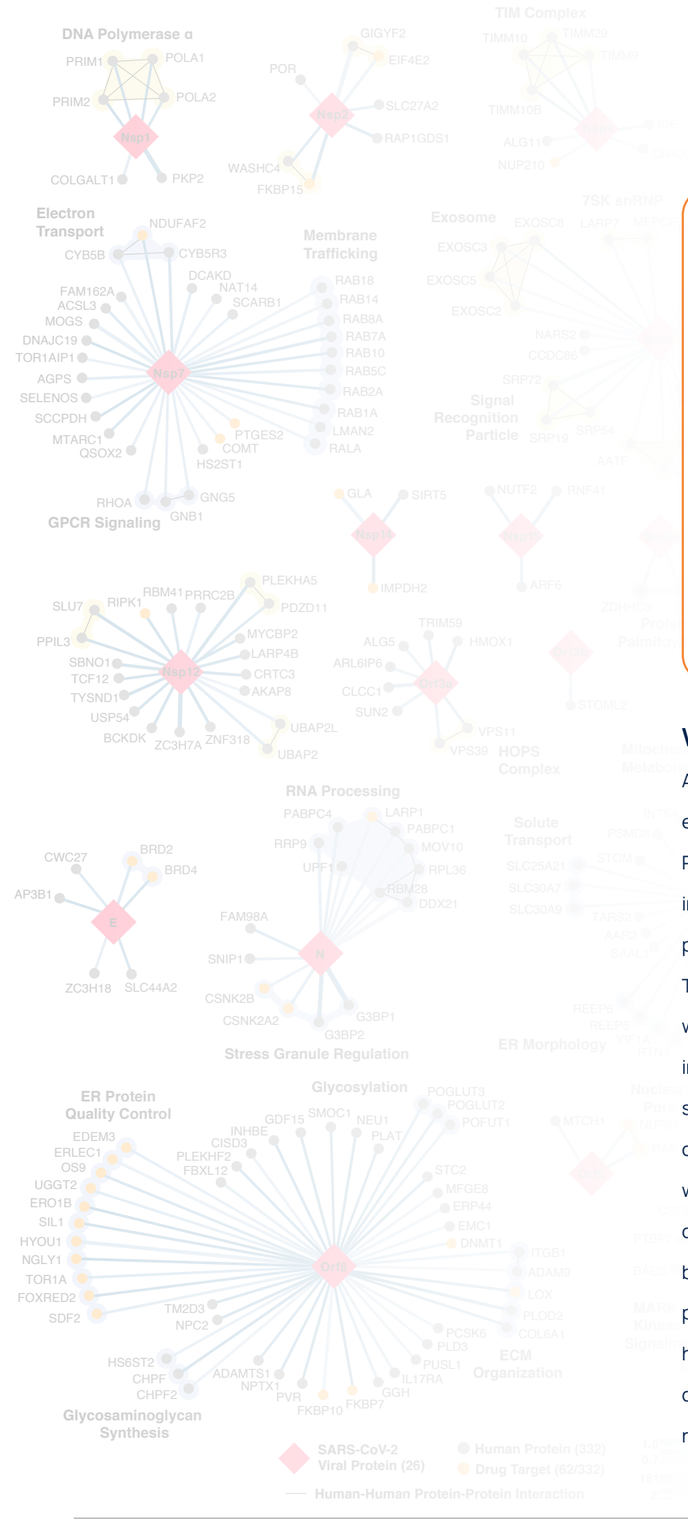
Disease Focus

QBI's vision is rooted in team science, driven by several unifying frameworks, including mapping the cell. As decades of research have identified genes associated with disease, a central focus of our approach is in understanding how their corresponding proteins interact—physically and functionally—within both healthy and diseased systems. By building these interaction maps, QBI connects disciplines spanning genetics, bioinformatics, biochemistry, structural biology, and clinical science. This disease-agnostic approach enables discoveries that are broadly applicable across conditions, while also informing targeted, mechanism-driven research and patient-centered studies.

This model has catalyzed the launch of major collaborative initiatives, including the **Cancer Cell Map Initiative (CCMI)**, the **Psychiatric Cell Map Initiative (PCMI)**, and the **Host Pathogen Map Initiative (HPMI)**. In parallel, established programs such as the **HIV Accessory and Regulatory Complexes Center (HARC)** have been integrated into QBI's ecosystem, as well as the **QBI Coronavirus Research Group (QCRG)** further strengthening a diverse and impactful research portfolio that continues to drive innovation and sustain large-scale collaborative research efforts.



Over the past decade, QBI's collaborative research ecosystem has evolved into a platform capable of supporting large-scale, multi-institutional science. The impact of this model is reflected not only in its ability to secure major center-scale grants, but also in its scientific output. Since inception, QBI has supported a highly productive scientific community that has contributed to more than 740 publications.



QBI uses cell mapping to uncover how cells function—and malfunction—by studying how proteins work together across different disease areas.

What is cell mapping?

A cell's ability to function, adapt, and survive depends entirely on the coordinated actions of its proteins. Rather than working in isolation, proteins organize into intricate networks and molecular machines called protein complexes to drive essential cellular processes. The aim of "cell mapping" is to determine which proteins work together in these complexes, and how their interactions are altered in different disease states—such as in the presence of mutations or pathogens. By combining physical maps of protein-protein interactions with genetic maps of gene-to-gene influences, we can derive high-resolution, quantitative insights into the biological functions of cells. Ultimately, integrating these physical and genetic landscapes allows us to study how molecular networks break down or miswire during disease, providing a roadmap for how they might be restored therapeutically.

Cancer

The Cancer Cell Map Initiative (CCMI) seeks to transform cancer research by placing genomic data into biological context. While tumor sequencing has identified many cancer-associated genes, understanding how these alterations drive disease requires mapping how they function within cellular networks.

By integrating computational and experimental approaches, CCMI maps the physical and genetic interactions that define cancer cells—revealing key pathways, molecular complexes, and new disease genes. These insights enable more accurate models of cancer biology and support improved patient stratification and targeted therapies.

Total Funding: $22.3M

CCMI was initially funded by the NIH/NCI from 2017 to 2022 and was subsequently renewed for an additional five-year period, extending support through 2027.

CCMI Faculty: 26 investigators from 5 institutions *(see faculty list on next page)*

Program Manager: Zelda Love, UCSF

Total Publications: 187 *as of July 2026*

Co-Lead Principal Investigators:



Nevan Krogan
Director, QBI UCSF



Trey Ideker
Professor, UCSD

CCMI Cancer Cell Map Initiative

Projects

Project 1: Systematic Physical and Spatial Mapping of Driver Networks In Cancer

Lead PIs: Nevan Krogan, Emma Lundberg

Project 2: Functional Genetic Networks for Systems-guided Precision Medicine

Lead PIs: Prashant Mali, Stephanie Fraley

Project 3: From Networks and Structures to Hierarchical Whole-Cell Models of Cancer

Lead PIs: Trey Ideker, Andrej Sali

Cores

Functional Genomics and Proteomics Core

Lead PIs: Nevan Krogan, Prashant Mali

Software Infrastructure for Network Models and Cell Maps Core

Lead PI: Trey Ideker

Outreach Core

Lead PIs: Nadia Arang, Promisree Choudhury

Administrative Core

Lead PIs: Nevan Krogan, Trey Ideker

Research-Derived Company

Rezo Therapeutics emerged from CCMI research in November 2022 to advance precision therapies through disease network mapping. Built on technology from QBI, its platform integrates biological data with computational methods to identify new, druggable oncology targets.

REZO



CCMI External Advisory Committee Meeting, UC San Diego, Scripps Seaside Forum, La Jolla, 2025

Faculty

Adam Abate (UCSF)	Jennifer Grandis (UCSF)	Prashant Mali (UCSD)	Danielle Swaney (UCSF)
David Agard (UCSF)	Hani Goodarzi (UCSF)	Jill Mesirov (UCSD)	Pablo Tamayo (UCSD)
Alan Ashworth (UCSF)	Silvio Gutkind (UCSD)	Christian Metallo (UCSD)	Susan Taylor (UCSD)
Michael Boutros (Heidelberg U)	Olivier Harismendy (UCSD)	Minkyu Kim (UCSF)	Laura van't Veer (UCSF)
Laura Esserman (UCSF)	Trey Ideker (UCSD)	Karin Pelka (Gladstone)	Keith Yamamoto (UCSF)
Antoine Forget (UCSF)	Nevan Krogan (UCSF) (PI)	David Rideout (UCSD)	
Stephanie Fraley (UCSD)	Emma Lundberg (Stanford U)	Andrej Sali (UCSF)	

Publication Highlights *as of July 2026*

Schaffer LV, Hu M, Qian G, et al. Multimodal cell maps as a foundation for structural and functional genomics. Nature. 2025.

Kim M, Park J, Bouhaddou M, et al. A protein interaction landscape of breast cancer. Science. 2021.

Swaney DL, Ramms DJ, Wang Z, et al. A protein network map of head and neck cancer reveals PIK3CA mutant drug sensitivity. Science. 2021.

Zheng F, Kelly MR, Ramms DJ, et al. Interpretation of cancer mutations using a multiscale map of protein systems. Science. 2021.

Eckhardt M, Zhang W, Gross AM, et al. Multiple Routes to Oncogenesis Are Promoted by the Human Papillomavirus-Host Protein Network. Cancer Discov. 2018.

View all

Neuropsychiatric Disorders

The Psychiatric Cell Map Initiative (PCMI) aims to map how genes and proteins linked to psychiatric disorders interact within specific brain cell types, and how these networks differ between healthy and disease states. Focusing first on autism spectrum disorder (ASD), the initiative integrates human stem cell–derived neurons, primary brain tissue, and model systems to build high-resolution, cell type–specific interaction maps. By combining genetics, systems biology, and structural insights, PCMI is advancing our understanding of ASD and establishing a framework to study a broad range of neuropsychiatric conditions, including schizophrenia, bipolar disorder, epilepsy, and intellectual disability.

Total Funding: $94.4M

PCMI was initially funded by the NIH/NIGMS from 2018 to 2023 and is now entering a new phase, with major support beginning in 2025 from the Sergey Brin Family Foundation, the Weill Neurohub, and the California Institute for Regenerative Medicine (CIRM).

PCMI Faculty: 13 investigators from 3 institutions *(see faculty list on next page)*

Program Manager: Reshmi Tognatta, UCSF

Total Publications: 47 *as of July 2026*

Co-Lead Principal Investigators:



Nevan Krogan
Director, QBI UCSF



Matthew State
Professor, UCSF

PCMI | Psychiatric Cell Map Initiative

Research-Derived Company

Mreza emerged from PCMI research in January 2026 to develop disease-modifying therapies for neurodevelopmental disorders, beginning with schizophrenia and autism. By combining causal genetics with protein-protein interaction networks, Mreza maps how disease-associated mutations disrupt cellular systems and uses AI-driven analysis to identify targets for small molecule drug development.

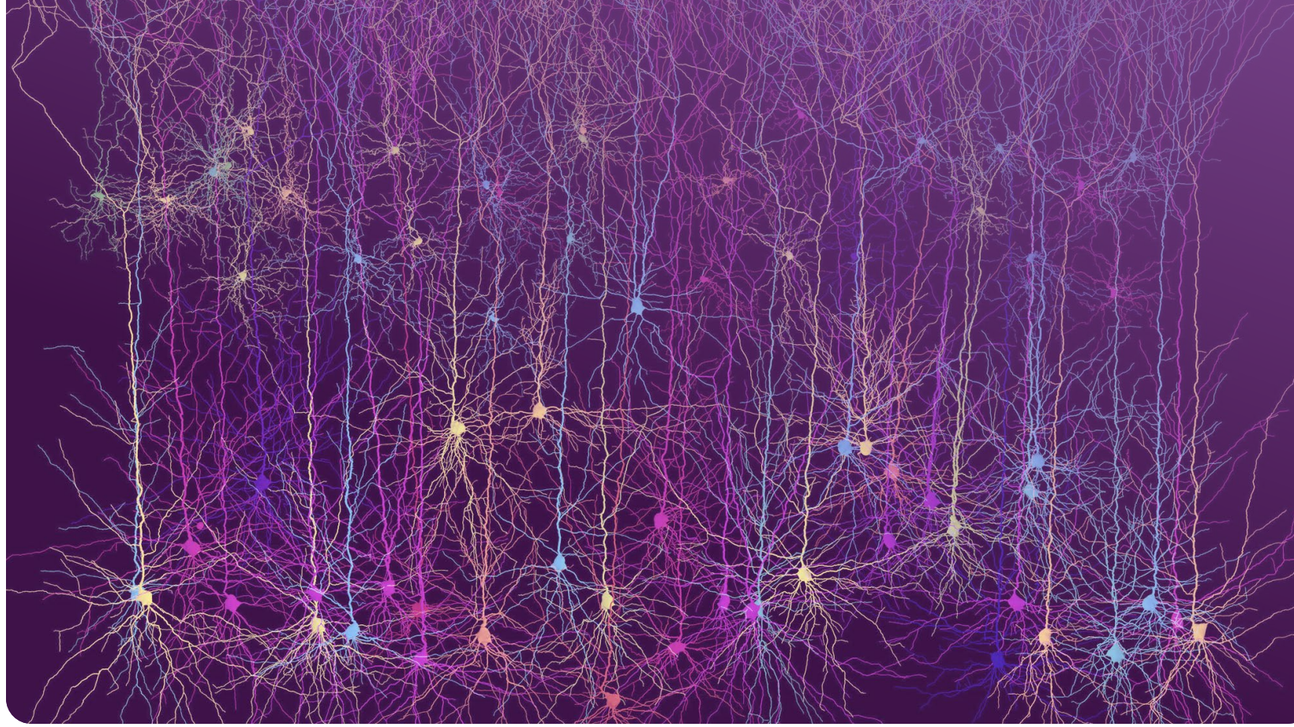
With complete protein networks for schizophrenia-associated genes and a focus on severe autism driven by rare, high-impact mutations, Mreza prioritizes convergent pathways to uncover therapeutic strategies that may extend across a broader spectrum of neurodevelopmental disorders.

MREZA

Research-Derived Initiative

Building on research from PCMI, QBI was appointed in June 2026 as lead of the Protein-Protein Interactions Hub within the **ARIA** initiative, an integrated research ecosystem focused on advancing discovery and therapeutic opportunities for autism and related neurodevelopmental conditions (detailed on page 50).

ARIA Aligning Research to Impact Autism



Faculty

Jennifer Doudna (UCB)	Martin Kampmann (UCSF)	Brian Shoichet (UCSF)	Eugene Yeo (UCSD)
Steven Finkbeiner (UCSF)	Michael Keiser (UCSF)	Matthew State (UCSF)	
Ruth Huttenhain (UCSF)	Nevan Krogan (UCSF) (PI)	Mark von Zastrow (UCSF)	
Trey Ideker (UCSD)	Tomasz Nowakowski (UCSF)	Jeremy Willsey (UCSF)	

Publication Highlights *as of July 2026*

Wang B, Vartak R, Hennick KM, et al. Autism mutations rewire protein interaction networks to drive neurodevelopmental pathology. Science. In press, 2026.

Wang B, Tran MN, Wang S, et al. Rare coding mutations identify 36 large-effect risk genes in obsessive-compulsive disorder and chronic tic disorders. Nature Neuroscience. In press, 2026.

Krogsaeter EK, McKetney J, Valiente-Banuet L, et al. Lysosomal proteomics reveals mechanisms of neuronal APOE4-associated lysosomal dysfunction. Autophagy. 2025.

Tracy TE, Madero-Pérez J, Swaney DL, et al. Tau interactome maps synaptic and mitochondrial processes associated with neurodegeneration. Cell. 2022.

Willsey AJ, et al. The Psychiatric Cell Map Initiative: A Convergent Systems Biological Approach to Illuminating Key Molecular Pathways in Neuropsychiatric Disorders. Cell. 2018.

View all

Infectious Diseases

The Host Pathogen Map Initiative (HPMI) maps the gene and protein networks that drive infectious disease, with the goal of translating these insights into targeted therapies. By integrating advanced interaction mapping, computational analysis, and infectious disease platforms across collaborating institutions, HPMI builds comprehensive host–pathogen network models. Initially focused on Mycobacterium tuberculosis and Staphylococcus aureus, the HPMI research portfolio now also includes respiratory viruses, and has revealed shared as well as pathogen-specific host responses—uncovering critical pathways that shape the outcome of infection. As part of NIAID's Systems Biology Consortium for Infectious Diseases, HPMI exemplifies a collaborative, systems-level approach to understanding and treating infectious diseases caused by diverse pathogens from bacteria to viruses.

Total Funding: $21.3M

HPMI was initially funded by NIH/NIAID from 2018 to 2023 and was subsequently renewed for an additional five-year period, extending support through 2028.

HPMI Faculty: 15 investigators from 6 institutions *(see faculty list on next page)*

Program Manager: Promisree Choudhury, UCSF

Total Publications: 132 *as of July 2026*

Co-Lead Principal Investigators:



Nevan Krogan
Director, QBI UCSF



Jeffrey Cox
Professor, UCB

HPMI Host Pathogen Map Initiative

Projects

Project 1: Identification of Host and Bacterial Pathways that Control TB Pathogenesis in Humans

Lead PIs: Jeff Cox; Co-I: Tom Hawn, Michael Glickman

Project 2: Determine Clinically Relevant Host-viral Dependency Networks for Respiratory Infections Including SARS-CoV-2

Lead PIs: Melanie Ott; Co-I: Jennifer Doudna, Jyoti Batra

Cores

Technology Core

Lead PIs: Danielle Swaney, Jennifer Doudna; Co-I: Kliment Verba

Data Management and Bioinformatics Core

Lead PI: Trey Ideker; Co-I: Andrej Sali

Modeling Core

Lead PI: Andrej Sali; Co-I: Ignacia Echeverria

Administrative Core

Lead PIs: Nevan Krogan, Jeff Cox; Co-I: Robyn Kaake

Research-Derived Initiative

Building on HPMI research, the QBI Coronavirus Research Group (QCRG) was launched in March 2020 as a rapid response to the COVID-19 pandemic (detailed on page 46).

QCRG QBI Coronavirus Research Group



HPMI Systems Biology for Infectious Diseases Annual Meeting, Conference Center Grand Hall, NIAID, Maryland, 2025

Faculty

David Agard (UCSF)	Jennifer Doudna (UCB)	Nevan Krogan (UCSF) (PI)	Sarah Stanley (UCB)
Jyoti Batra (Gladstone)	Michael Glickman (MSK)	Alex Marson (Gladstone)	Thuong T. Nguyen (U of Oxford)
Greg Barton (UCB)	Thomas Hawn (U of Washington)	Oren Rosenberg (UCSF)	Kliment Verba (UCSF)
Jeffrey Cox (UCB)	Trey Ideker (UCSD)	Andrej Sali (UCSF)	

Publication Highlights *as of July 2026*

Bouhaddou M, Reuschl AK, Polacco BJ, et al. SARS-CoV-2 variants evolve convergent strategies to remodel the host response. Cell. 2023.

Budzik JM, Swaney DL, Jimenez-Morales D, et al. Dynamic post-translational modification profiling of Mycobacterium tuberculosis-infected primary macrophages. eLife. 2020.

Gordon DE, Jang GM, Bouhaddou M, et al. A SARS-CoV-2 protein interaction map reveals targets for drug repurposing. Nature. 2020.

Penn BH, Netter Z, Johnson JR, et al. An Mtb-Human Protein-Protein Interaction Map Identifies a Switch between Host Antiviral and Antibacterial Responses. Mol Cell. 2018.

Shah PS, Link N, Jang GM, et al. Comparative flavivirus–host protein interaction mapping reveals mechanisms of dengue and Zika virus pathogenesis. Cell. 2018.

View all

HIV Infection

The HIV Accessory and Regulatory Complexes Center (HARC) investigates how HIV interacts with and exploits host cellular systems at the molecular and structural level. By mapping the physical and functional relationships between viral and human components, HARC uncovers mechanisms that drive infection, immune evasion, and persistence.

Bringing together focused research on HIV accessory and regulatory proteins with advanced capabilities in proteomics, genetics, structural biology, and integrative modeling, the Center enables analysis from primary cells to high-resolution structures.

This integrated, systems-level approach reveals new therapeutic opportunities, including host-directed strategies to overcome the limitations of current antiviral treatments.

Total Funding: $54.1M

HARC was initially funded by NIH/NIAID from 2017 to 2022 and was subsequently renewed for an additional five-year period through 2027.

HARC Faculty: 30 investigators from 14 institutions *(see faculty list on next page)*

Program Manager: Zelda Love, UCSF

Total Publications: 154 *as of July 2026*

Lead Principal Investigator:



Nevan Krogan
Director, QBI UCSF

HA RC HIV Accessory & Regulatory Complexes

Projects

Project 1: Structure and Evolution of the Vif-APOBEC3 Complex

Lead PI: John Gross; Co-I: Nevan Krogan, Yifan Cheng, Charles Craik

Project 2: Regulation of HIV Transcription and Latency

Lead PI: Alan Frankel; Co-I: Natalia Jura, Lillian Cohn, Yifan Cheng, Nancie Archin, Geeta Narlikar, Nevan Krogan

Project 3: Genetics and Evolution of HIV Restriction Factors

Lead PI: Alexander Marson; Co-I: Jennifer Doudna, Harmit Malik, Judd Hultquist, Nevan Krogan

Cores

Proteomics Core

Lead PI: Danielle Swaney; Co-I: Robyn Kaake, Nevan Krogan

Genetics Core

Lead PI: Jennifer Doudna; Co-I: Alexander Marson, Judd Hultquist

Structural Biology Core

Lead PI: Yifan Cheng; Co-I: Charles Craik, Robert Stroud

Computational Core

Lead PI: Andrej Sali, Nevan Krogan

Administrative Core

Lead PI: Nevan Krogan

Developmental Core

Lead PI: Nevan Krogan; Co-I: Robyn Kaake



HARC Scientific Advisory Board Meeting, UCSF Nancy Friend Pritzker Psychiatry Building, San Francisco, 2026

Faculty

David Agard (UCSF)	Michael Emmerman (Fred Hutch)	Nevan Krogan (UCSF) (PI)	Ruth Serra-Moreno (U of Rochester)
Nancy Archin (UNC)	Alan Frankel (UCSF)	Namita Kumari (Howard U)	Nathan Sherer (U of Wisconsin)
Jamie Cate (UCB)	Oliver Fregoso (UCLA)	Harmit Malik (Fred Hutch)	Robert Stroud (UCSF)
Yifan Cheng (UCSF)	John Gross (UCSF)	Alex Marson (Gladstone)	Jeannette Tenthorey (UCSF)
Charles Craik (UCSF)	Judd Hultquist (Northwestern U)	Geeta Narlikar (UCSF)	Michael Thompson (UCM)
Lilian Cohn (Fred Hutch)	James Hurley (UCB)	Matija Peterlin (UCSF)	Kliment Verba (UCSF)
Jennifer Doudna (UCB)	Trey Ideker (UCSD)	Alessandra Sacco (Sanford Burnham)	
David Drubin (UCB)	Natalia Jura (UCSF)	Andrej Sali (UCSF)	

Publication Highlights *as of July 2026*

Rathore U, Dugan E, Thornton H, et al. Systematic discovery of pro- and anti-HIV host factors in primary human CD4+ T cells. Cell. 2026.

Smith AM, Li Y, Velarde A, et al. The HIV-1 nuclear export complex reveals the role of RNA in CRM1 cargo recognition. Mol Cell. 2025.

Li YL, Langley CA, Azumaya CM, et al. The structural basis for HIV-1 Vif antagonism of human APOBEC3G. Nature. 2023.

Jäger S, Cimermancic P, Gulbahce N, et al. Global landscape of HIV-human protein complexes. Nature. 2011.

Jäger S, Kim DY, Hultquist JF, et al. Vif hijacks CBF-β to degrade APOBEC3G and promote HIV-1 infection. Nature. 2011.

View all

Viruses of Pandemic Potential

The QBI Coronavirus Research Group (QCRG) became one of nine NIH-funded centers for antiviral drug discovery and pandemic preparedness through the Antiviral Drug Discovery (AViDD) program. The program brought together more than 40 laboratories across over a dozen U.S. and international institutions, and ultimately expanded to more than 300 collaborators worldwide. The center was organized into five coordinated research themes and supported by nine specialized cores *(see projects and cores)*. Across its first three years and subsequent no-cost extension, AViDD advanced multiple antiviral programs from early discovery toward IND-enabling studies, including inhibitor development against key viral targets. Notably, the center established and patented a first-in-class macrodomain (Mac1) inhibitor program, a best-in-class major protease (Mpro) inhibitor, and novel membrane protein inhibitors, demonstrating its ability to rapidly translate basic science into therapeutic opportunities with broad relevance for future pandemic preparedness.

Total Funding: $67.5M

QCRG was funded by NIH/NIAID from 2022 to 2026 as one of nine NIH-funded centers for antiviral drug discovery and pandemic preparedness.

QCRG Faculty: 45 investigators from 16 institutions *(see faculty list)*

Program Manager: Promisree Choudhury, UCSF *(formerly Sam Krishnan, UCSF)*

Total Publications: 92 *as of July 2026*

Lead Principal Investigator:



Nevan Krogan
Director, QBI UCSF

QCRG | QBI Coronavirus Research Group (AViDD)

Projects

Project 1: Targeting Viral RNA Using a Sequence Programmable Small Molecule-Oligonucleotide
Lead PI: Kevan Shokat; Co-I: Jennifer Doudna, Davide Ruggero

Project 2: Developing Antivirals Targeting Proteases and Polymerases of Coronaviruses, Picornaviruses and Bunyavirales
Lead PI: Charles Craik; Co-I: Eddy Arnold, Mathias Götte, Ursula Schulze-Gahmen, Judd Hultquist, Brian Shoichet

Project 3: Targeting Viroporins and Coronavirus M Protein
Lead PI: Bill DeGrado; Co-I: Robert Stroud, Mei Hong

Project 4: Development of Novel Antivirals Targeting Viral RNA Methylation
Lead PI: Danica Fujimori; Co-I: Kevan Shokat, Masoud Vedadi, Brian Shoichet

Project 5: Inhibiting Viral Macrodomains Using Structure-Based Design
Lead PI: James Fraser; Co-I: Brian Shoichet, Alan Ashworth

Cores

Biochemistry Core
Lead PI: Robert Stroud; Co-I: Tanja Kortemme, James Fraser

Screening Core
Lead PI: Michelle Arkin; Co-I: Brian Shoichet, James Fraser, Jason Gestwicki

Medical Chemistry Core
Lead PI: Adam Renslo; Co-I: Brian Shoichet, Jian Jin

Structural Biology Core
Lead PI: David Agard; Co-I: Kliment Verba, Yifan Cheng, Robert Stroud, James Fraser

Integrative Modeling Core
Lead PI: Andrej Sali; Co-I: Ignacia Echeverria Riesco, Pedro Beltrao, Michael Keiser, Tanja Kortemme

In Vitro Virology Core
Lead PI: Melanie Ott; Co-I: Adolfo Garcia-Sastre, Greg Towers, Clare Jolly, Marco Vignuzzi, Ana Sesma, Carla Saleh, Luis Martinez-Sobrido, Lorena Zuliani-Alvarez, Jennifer Doudna

In Vivo Virology Core
Lead PI: Adolfo Garcia-Sastre; Co-I: Kris White, Randy Albrecht, Marco Vignuzzi, Carla Saleh, Melanie Ott

Proteomics Core
Lead PI: Danielle Swaney; Co-I: Robyn Kaake, Nevan Krogan

Administrative Core
Lead PI: Nevan Krogan; Co-I: Lorena Zuliani-Alvarez, Manon Eckhardt, Sam Krishnan

Faculty

David Agard (UCSF)	William DeGrado (UCSF)	Jason Gestwicki (UCSF)	Nevan Krogan (UCSF) (PI)	Karla Satchell (Northwestern U)	Masoud Vedadi (U of Toronto)
Edward Arnold (Rutgers U)	Jennifer Doudna (UCB)	Matthias Götte (U of Alberta)	Luis Martinez-Sobrido (UT San Antonio)	Ursula Schulze-Gahmen (Gladstone)	Kliment Verba (UCSF)
Michelle Arkin (UCSF)	Manon Eckhardt (UCSF)	Mei Hong (MIT)	Melanie Ott (Gladstone)	Kevan Shokat (UCSF)	Marco Vignuzzi (Institut Pasteur)
Alan Ashworth (UCSF)	Ignacia Echeverria-Riesco (UCSF)	Judd Hultquist (Northwestern U)	Margaux Pinney (UCSF)	Brian Shoichet (UCSF)	Jun Wang (Rutgers U)
Jyoti Batra (Gladstone)	Ana Fernandez-Sesma (Mount Sinai)	Jian Jin (Mount Sinai)	Adam Renslo (UCSF)	Robert Stroud (UCSF)	Kris White (Mount Sinai)
Pedro Beltrao (EMBL-EBI)	James Fraser (UCSF)	Clare Jolly (UCL)	Davide Ruggero (UCSF)	Danielle Swaney (UCSF)	Lorena Zuliani Alvarez (UCSF)
Yifan Cheng (UCSF)	Danica Galonic Fujimori (UCSF)	Michael Keiser (UCSF)	Andrej Sali (UCSF)	Taha Taha (Gladstone)	
Charles Craik (UCSF)	Adolfo Garcia-Sastre (Mount Sinai)	Tanja Kortemme (UCSF)	Carla Saleh (Institut Pasteur)	Greg Towers (UCL)	



QCRG AViDD Retreat, Walt Disney Family Museum at the Presidio, San Francisco, 2024

Publication Highlights *as of July 2026*

Lizzadro L, Li J, Taha TY, et al. Discovery of coronavirus main protease inhibitors with enhanced brain exposure and potent oral efficacy in SARS-CoV-2 and MERS infection models. J Med Chem. 2026.

Jaishankar P, Correy GJ, Matsui Y, et al. Discovery of AVI-6451, a potent and selective inhibitor of the SARS-CoV-2 ADP-ribosylhydrolase Mac1 with oral efficacy in vivo. J Med Chem. 2026.

Suryawanshi RK, Jaishankar P, Correy GJ, et al. The Mac1 ADP-ribosylhydrolase is a therapeutic target for SARS-CoV-2. eLife. 2025.

Detomasi TC, Degotte G, Huang S, et al. Structure-based discovery of highly bioavailable, covalent, broad-spectrum coronavirus MPro inhibitors with potent in vivo efficacy. Sci Adv. 2025.

Jadhav P, Liang X, Ansari A, et al. Design of quinoline SARS-CoV-2 papain-like protease inhibitors as oral antiviral drug candidates. Nat Commun. 2025.

Tan B, Liang X, Ansari A, et al. Structure-based design of covalent SARS-CoV-2 papain-like protease inhibitors. J Med Chem. 2024.

Tan B, Zhang X, Ansari A, et al. Design of a SARS-CoV-2 papain-like protease inhibitor with antiviral efficacy in a mouse model. Science. 2024.

View all

The QCRG Story – *Turn the page to learn how the QBI Coronavirus Research Group helped lay the foundation for the AViDD Center.* →

The QCRG Story: A Global Scientific Response

The QBI Coronavirus Research Group (QCRG) transformed QBI's collaborative model into a rapid-response scientific network, uniting hundreds of researchers to confront the COVID-19 pandemic through open science, interdisciplinary discovery, and unprecedented speed.

In March 2020, as SARS-CoV-2 spread rapidly across the globe, QBI mobilized an unprecedented scientific response by launching QCRG under HPMI. What began as an emergency effort quickly evolved into one of the world's largest and most collaborative research initiatives focused on understanding coronavirus biology and accelerating therapeutic discovery at the time. Built on years of interdisciplinary relationship-building at QBI, QCRG assembled researchers across virology, proteomics, structural biology, chemistry, computational biology, biochemistry, and drug discovery within a matter of days. To coordinate this collaborative effort, researchers formed focused groups spanning Structural Biology (led by Kliment Verba and Oren Rosenberg), Bioinformatics & Systems Biology (led by Pedro Beltrao and Nevan Krogan), Modeling & Mechanism (led by Tanja Kortemme and Andrej Sali), Drug Discovery (led by Kevan Shokat and Brian Shoichet), Protein Trafficking (led by Shaeri Mukherjee), Genetics (led by Martin Kampmann), Epigenetics and Chromatin (led by Danica Fujimori and Alan Ashworth), Ubiquitination (led by John Gross), Mitochondrial Function and Metabolism (led by Natalia Jura and Eric Verdin), Virology (led by Melanie Ott), Cardiology (led by Bruce Conklin and Todd McDevitt), and Translation (led by Davide Ruggero). Notably, the Structural Biology group grew to include more than 60 trainees from 15 different UCSF labs, underscoring the extraordinary level of engagement and collaborative effort across the consortium. The network ultimately grew to include more than 300 researchers spanning UCSF, the Bay Area, and international partner institutions, all working with extraordinary speed toward a common goal: identifying vulnerabilities in SARS-CoV-2 and translating discoveries into potential treatments.

> The QBI Coronavirus Research Group transformed QBI's collaborative model into a rapid-response scientific network, uniting hundreds of researchers to confront the COVID-19 pandemic through open science, interdisciplinary discovery, and unprecedented speed.

Among QCRG's earliest landmark achievements was the rapid mapping of SARS-CoV-2 protein interactions in human cells, providing one of the first systematic views of how the virus hijacks host cellular machinery. The study identified dozens of existing compounds and drug targets with therapeutic potential, helping establish a foundation for global antiviral research efforts during the early months of the pandemic. QCRG investigators also characterized the phosphorylation landscape of infected cells, developed infectivity assays across multiple international sites, and pursued pan-coronavirus analyses comparing SARS-CoV-2 with SARS-CoV-1 and MERS to uncover shared biological mechanisms and therapeutic opportunities.

The scale and pace of the collaboration were extraordinary. Research timelines that traditionally unfolded over years were compressed into weeks and months through coordinated data sharing, open communication, and around-the-clock collaboration across disciplines and institutions. Within its first two years, QCRG contributed to more than 50 publications and helped advance multiple therapeutic directions for current and future coronavirus threats.

Equally important was QCRG's commitment to open science. To accelerate discovery worldwide, QBI distributed plasmids and research reagents freely to hundreds of laboratories across dozens of countries without material transfer agreements, eliminating barriers that often slow scientific progress (see next spread). These shared resources enabled laboratories around the world to rapidly launch their own SARS-CoV-2 studies and contributed to hundreds of downstream publications.

Beyond the science itself, QCRG fostered a deeply connected research community during a period of global isolation. The consortium hosted regular cross-lab meetings online and later launched trainee-focused programs and informal gatherings that encouraged the exchange of ideas across groups. QCRG leaders also engaged in broad public outreach through social media and rigorous press coverage (detailed on pages 110-113).

By the end of July 2020, just months after its formation, QCRG had raised more than $6M from 128 donors in support of its efforts. The initiative ultimately demonstrated not only the scientific power of QBI's collaborative model, but also the importance of rapidly deployable research networks capable of responding to urgent global health crises. The success and momentum of QCRG later helped lay the foundation for QBI's leadership of one of nine NIH-funded AViDD Centers.

Research at Pandemic Speed

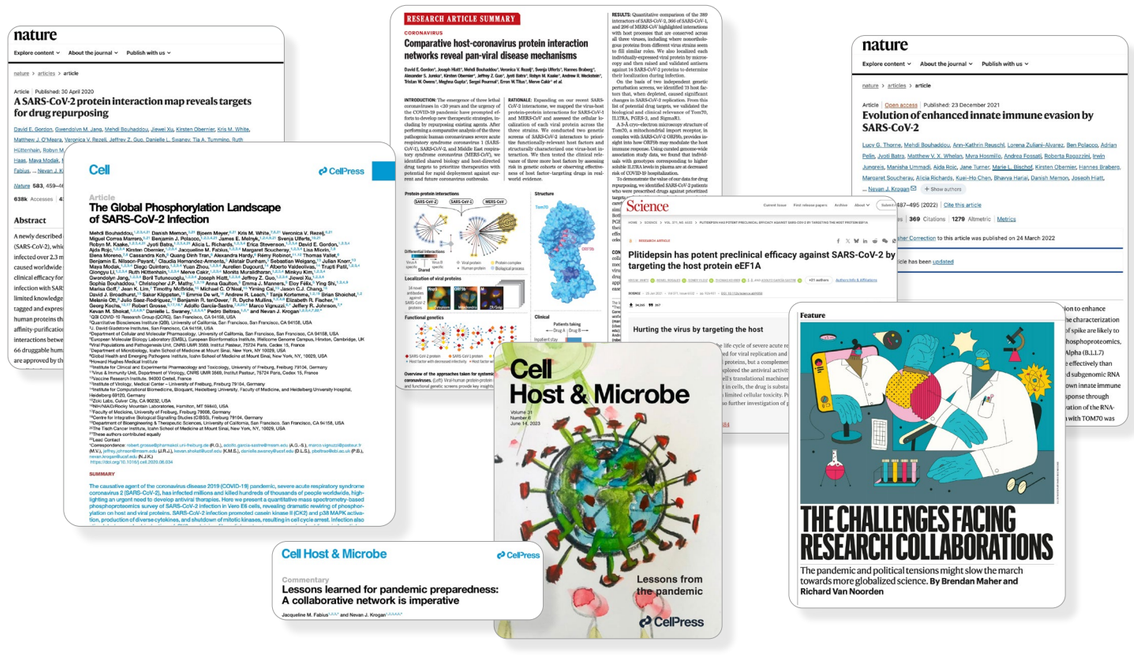
QCRG | QBI Coronavirus Research Group

300+ collaborators from around the world

50+ publications in two years

462 labs in **42** countries received freely distributed SARS-CoV-2 plasmids

$6.1M philanthropic support raised in the first four months



Key publications and milestones that shaped the QCRG story and laid the foundation for AViDD.

Global Distribution of SARS-CoV-2 Plasmids



Country	Laboratories
Argentina	1
Australia	4
Austria	2
Brazil	7
Canada	19
Chile	2
China	7
Ecuador	1
Finland	2
France	11
Germany	18
Ghana	1
Hungary	1
India	26
Iraq	1
Israel	6
Italy	2
Japan	3
Korea	1
Lebanon	1
Malaysia	1
Mexico	4
New Zealand	1
Norway	4
Pakistan	1
Palestine	1
Peru	1
Philippines	1
Poland	1
Russia	1
Saudi Arabia	2
Serbia	1
Slovenia	1
Spain	6
Sweden	2
Switzerland	6
Thailand	1
The Netherlands	6
Turkey	9
UK	21
US	188
Total countries	**42**
Total laboratories	**462**



Jeff Guo and FedEx courier Todd Haley assisted in coordinating the global shipment of plasmids and research reagents, 2020

Open Science in Action

QCRG's commitment to open science extended far beyond publishing data. Following the release of the SARS-CoV-2 interaction map, requests for plasmids arrived from laboratories around the world. As laboratories around the world raced to understand SARS-CoV-2 and develop new therapeutics, QBI freely distributed plasmids and research reagents to 462 laboratories across the globe, removing barriers that often slow scientific progress.

Requests poured in from hundreds of laboratories spanning North America, Europe, Asia, the Middle East, and beyond. The demand was so great that the team occasionally exhausted its shipping supplies while working to fulfill requests as quickly as possible. By providing these tools without material transfer agreements, QBI enabled researchers worldwide to rapidly launch their own SARS-CoV-2 studies, accelerating discovery during a critical moment in the pandemic and contributing to thousands of downstream publications.

Other QBI Collaborative Initiatives

While QBI's core scientific programs are organized around major disease focus areas and cell map initiatives, the institute's collaborative infrastructure also enables broader, cross-cutting research efforts supported by a diverse range of federal and philanthropic partners. By fostering team-based science across UCSF, the UC system, and global collaborators, QBI has built the organizational and scientific foundation needed to successfully compete for and lead large-scale, multi-institutional programs beyond its primary NIH-supported initiatives. This collaborative model has enabled QBI to secure and lead a diverse portfolio of major center-scale grants from different agencies, which are highlighted here.

ARIA

Aligning Research to Impact Autism (ARIA) is an integrated ecosystem of six interconnected research hubs focused on accelerating scientific discovery and expanding therapeutic opportunities for autism and related neurodevelopmental conditions. Within this initiative, QBI leads the Protein-Protein Interactions (PPI) Hub, which investigates the molecular interaction networks underlying neurodevelopment and disease.

Faculty and Partners:
David Agard (UCSF/CZI Imaging Center), Pedro Beltrao (ETH Zurich), James Fraser (UCSF), Christian Freund (Freie Universität Berlin), Barry Honig (Columbia University), Nevan Krogan (UCSF) (PI), Tomasz Nowakowski (UCSF), Adam Renslo (UCSF), Andrej Sali (UCSF), Brian Shoichet (UCSF), Kevan Shokat (UCSF), Matthew State (UCSF), Danielle Swaney (UCSF), Kliment Verba (UCSF), John Young (UCSF)

Program Manager: Kirsten Obernier (UCSF)

Award Period: 06/01/2026–2029

Total Funding: $46M

CIRM

The California Institute for Regenerative Medicine (CIRM) Center for Neuropsychiatric Stem Cell Proteomics aims to investigate how high-confidence neuropsychiatric risk proteins interact, where they are distributed, and how they function, in order to uncover shared biological mechanisms underlying patient genetic variants. By generating comprehensive datasets and stem cell resources, the project will establish a molecularly informed platform that links genetic variation to disease traits, helping to identify druggable pathways and accelerate therapeutic development for neuropsychiatric disorders.

Faculty and Partners:
Aparna Bhaduri (UCLA), Willow Coyote-Maestas (UCSF), Trey Ideker (UCD), Nevan Krogan (UCSF), Tomasz Nowakowski (UCSF) (PI), Matthew State (UCSF), Danielle Swaney (UCSF), Alice Ting (Stanford University)

Program Manager: Reshmi Tognatta (UCSF)

Award Period: 01/01/2025–12/31/2029

Total Funding: $13.7M

ARPA-H

The Advanced Research Projects Agency for Health (ARPA-H) Avoid-Ome project aims to reduce late-stage drug development failures by improving the prediction and optimization of pharmacokinetic (ADME) properties alongside therapeutic activity. Through the creation of large-scale experimental and structural datasets, the program leverages advanced computational methods and AI-driven modeling to develop a more proactive, data-driven framework for faster and more successful drug discovery.

Faculty and Partners:
John Chodera (Memorial Sloan Kettering Cancer Center), Karmen Condic-Jurkic (Open Molecular Software Foundation), Willow Coyote-Maestas (UCSF), Steven Edgar (Octant), James Fraser (UCSF) (PI), Kathy Giacomini (UCSF), Naomi Handly (Octant), Sri Kosuri (Octant), Hugo MacDermott-Opeskin (Open Molecular Software Foundation), Andrej Sali (UCSF), Brian Shoichet (UCSF), Kliment Verba (UCSF), Pat Walters (Open Molecular Software Foundation), Robert Warneford-Thomson (Octant)

Program Manager: Promisree Choudhury (UCSF)
(formerly Sam Krishnan, UCSF)

Award Period: 10/01/2024–09/30/2029

Total Funding: $15.6M

DARPA Panacea

The Defense Advanced Research Projects Agency (DARPA) Program for Advancing Neural and Chemical Evaluation of Chemical Agents (Panacea) project sought to develop chemically novel, non-opioid pain therapeutics by using a guided polypharmacology approach to target multiple pain-related receptors simultaneously. Combining genomic and proteomic discovery methods with ultra-large library docking and rational drug design, the program aimed to overcome the limitations of traditional single-target therapies and establish a new framework for safer, more effective pain treatment. A significant portion of the funding was directed to QCRG at the start of the pandemic to help understand and ultimately treat Covid-19.

Faculty and Partners:
Allan Basbaum (UCSF), John Irwin (UCSF), Matt Jacobson (UCSF), Nevan Krogan (UCSF), Aashish Manglik (UCSF), Yurii Moroz (ChemSpace), Matthew O'Meara (University of Michigan), Bryan Roth (UNC), Brian Shoichet (UCSF) (PI), Mark Von Zastrow (UCSF)

Program Manager: Anat Levit (UCSF)

Award Period: 09/01/2019–08/31/2024

Total Funding: $36.1M



TRANSLATION

Bridging Academia & Industry

At QBI, we are redefining the path from scientific discovery to therapeutic development. By seamlessly integrating experimental biology with advanced computational methods, we are building a new model for translational research—one designed to usher in a new era of protein-protein interaction (PPI)-based biological understanding and drug discovery. Positioned at the intersection of systems biology, structural biology, and AI-driven computation, QBI is uniquely equipped to translate discoveries from academia into industry-ready therapeutic applications with unprecedented speed and scale. Our platform begins with disease-specific inputs—genes, mutations, pathways, or protein-protein interactions—and constructs comprehensive, disease-focused protein networks. Using iterative, AI-guided high-throughput proteomics, we map these interactions to uncover critical nodes and prioritize targets. These targets are then assessed for druggability through AI-driven predictions and physics-based structural analysis. Only the most promising candidates are validated in cellular systems using functional assays and genetic screens before entering our drug discovery pipeline, which combines chemistry, AI, high-throughput screening, biophysical assays, and structure-based design.

QBI's industry-focused branches extend this platform into therapeutic development:

Rezo Therapeutics (Oncology) applies QBI's methods to map interactions for hundreds of cancer-relevant proteins, including mutant variants, demonstrating the scalability and impact of our integrated approach.

Mreza Therapeutics (Neuroscience) targets complex neuronal conditions, beginning with schizophrenia and autism, aiming to develop novel, disease-modifying treatments.

Enso Therapeutics is a collaborative venture with UCSF designed to systematically translate breakthrough academic discoveries, technologies, and intellectual property into transformative medicines while returning greater value to the university ecosystem. Operating as a scalable "perpetual IND engine," Enso combines world-class drug discovery and AI capabilities to advance programs from preclinical development through early clinical milestones and launch new companies at key inflection points.

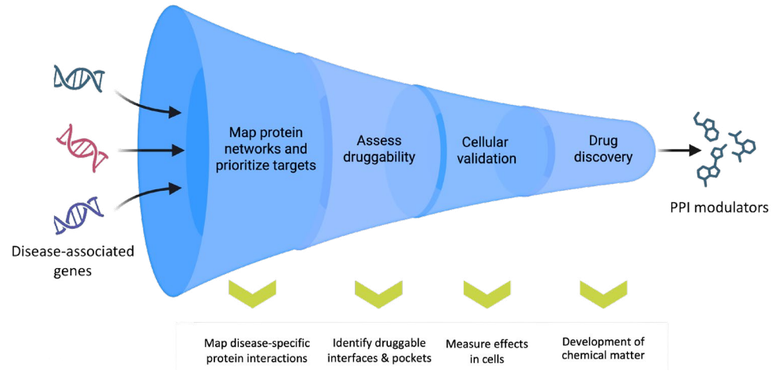
REZO

MREZA

ENSŌ

By linking discovery, validation, and drug development within a unified workflow, QBI accelerates the translation of fundamental insights into actionable therapies, bridging academia and industry to deliver results with unprecedented speed.

An Integrated Discovery-to-Therapeutics Pipeline



Our Vision:

An Interconnected Drug Discovery Engine

QBI/UCSF

↓

Early discovery

Rezo, Mreza, Enso, future companies

↓

Preclinical and precision therapy development

Biotech & Pharma

↓

Partners in drug discovery and development

How It Works:

1. Map the disease: Genes, mutations, pathways, and protein interactions feed into comprehensive networks.
2. Prioritize targets: AI-guided proteomics identifies critical nodes, validated through functional assays and genetic screens.
3. Design therapeutics: AI-driven chemistry, high-throughput screening, and structural analysis generate promising molecules ready for drug discovery and development.

Why This Matters:

- Increases confidence in disease target biology, improving the likelihood of success for drug discovery programs
- Accelerates translation from lab to therapy
- Attracts cross-sector funding from VCs, philanthropy, pharma, and biotech
- Opens new opportunities for academic research with pre-negotiated IP
- Delivers novel, scalable therapies faster than traditional models



FACULTY DEVELOPMENT

Recruitment & Retention

QBI recognizes that faculty retention is one of the most effective and meaningful mechanisms for building and sustaining an excellent, diverse, and inclusive academic community. Retention efforts are especially important in addressing the well-documented challenges many institutions face in supporting and advancing women and individuals from historically underrepresented groups in science and academia.

Securing sufficient resources to recruit and retain high-caliber faculty remains imperative to QBI's long-term success. The institute has therefore maintained a proactive stewardship approach that combines strategic investment with culture-building initiatives designed to help faculty thrive. This includes ongoing efforts to identify and reduce barriers to advancement, mitigate implicit bias in recruitment and retention processes, and strengthen pathways for long-term academic success.

QBI has also prioritized support for faculty whose work aligns with the institute's commitments to scientific excellence, interdisciplinary collaboration, diversity, and service to underserved or vulnerable populations. Annual investments have been directed toward individuals whose scholarly contributions, leadership potential, and community impact are expected to strengthen both the institute and the broader UCSF environment. Over the past decade, more than $1.5M was awarded in recruitment, retention, and fellowship support.

Advancement & Mentorship

At QBI, we are dedicated to nurturing scientists throughout every stage of their journey, from students taking their first steps in research, to early-career investigators building independent labs, to faculty contributing to global collaborations. Supporting growth in science goes beyond access: it is about mentorship, visibility, and creating clear pathways to leadership.

To translate that commitment into practice, QBI fosters a vibrant and inclusive scientific community through programs intentionally designed to showcase talent across disciplines. Our approach creates meaningful opportunities for researchers to learn from one another, expand their networks, and contribute to a collaborative culture of science.

Programs include the Fellowship Program, International Visiting Scholar Program, and Faculty Mini-Sabbatical Program. Together, these opportunities provide hands-on training, leadership development, and cross-disciplinary collaboration.

Many emerging researchers begin their scientific journeys within QBI-led initiatives, where they contribute to collaborative research efforts and develop expertise in emerging technologies. As they advance to independent faculty positions, many remain active participants in the QBI network, continuing collaborations, mentoring new trainees, and contributing to the scientific programs and technologies that helped shape their careers.

Fellowship Program

The Fellowship Program is designed to support outstanding early-career researchers as they launch independent laboratories within UCSF's collaborative research environment. The program enables fellows to establish independent research programs while benefiting from mentorship, institutional support, and access to a dynamic interdisciplinary community.

Fellows serve as small group leaders with Principal Investigator status, allowing them to pursue extramural funding, recruit trainees, and grow their laboratories. By combining scientific independence with guidance from senior faculty, the Fellowship Program creates a strong foundation for developing the next generation of leaders in quantitative biology and biomedical research.

QBI Fellows



Kliment Verba
2018-2022



Willow Coyote-Maestas
2020-2024



Kevin Lou
2025-present



Leah Roe
2026-present



Kliment Verba

QBI Fellow, 2018-2022

As QBI's first Fellow, Kliment Verba established an independent research program focused on how protein structure and dynamic conformations enable cellular function. Trained in the laboratory of David Agard, he contributed to the first high-resolution Cryo-EM structure of Hsp90 bound to a kinase substrate, helping shape the scientific direction of his laboratory. During his fellowship, Klim also emerged as a scientific leader by co-leading the QCRG Structural Biology Consortium during the COVID-19 pandemic and launching QBI's Hackathon series, fostering interdisciplinary collaboration across UCSF and the broader Bay Area community.

In Conversation with Klim

When you think back to your time as a QBI Fellow, what was the central focus of your research, and what originally drew you to that scientific question?

My focus during fellow, which continues now, was to better understand how protein kinases use non canonical conformations for signal processing. Structure-function paradigm is well established in biology and is very intuitive for well folded proteins with well-defined structure. During my PhD work I discovered that some protein kinases, ones tasked with life and death decisions for cells, are constitutively metastable/partially folded, being able to deviate far away from their canonical conformation. Why and how these states are used for information processing have been the focus of my research since.

What initially drew you to the QBI Fellowship Program, and how did it shape or accelerate the research direction you were building at the time?

QBI fellow position indubitably accelerated my research and growth. The position allowed me to freely explore the questions I was interested in. Importantly, it enveloped me in the community of amazing scientists, exposing me to all kinds of new scientific directions and ways of thinking, that has been essential to my growth and development of my research. It also provided me with resources to playfully explore ideas which are less canonical, like hosting QBI hackathons.

In what ways did the fellowship contribute to your development - scientifically, intellectually, or as a leader of a research group?

Scientifically the fellowship allowed me to take individual risks (on projects) and make independent decisions, and see how they play out – very different than doing this in the context of an existing lab. Through the wonderful community of QBI and broader UCSF, through collaborations and meetings, it exposed me to different types of biology and science in general, pushing me to think in new directions. Even things like host-pathogen interactions, which now we have a continuous effort on, I would probably not do if not for the collaborations during COVID-19 (via QCRG). The position also forces one to become more of a scientific multitasker, where there are so many things happening that you develop intuitions on things that you are not an expert in, which I think is invaluable. Lastly, as part of this position you immediately start mentoring scientists at different levels, which has been both, humbling, sometimes hard but overall incredibly rewarding.

Did your time as a QBI Fellow influence how you mentor students or trainees today? If so, how has your mentoring philosophy evolved?

Of course, absolutely. As a QBI fellow, this was the first time I was actually fully responsible for another scientist, for their project, for their salary and benefits, for their resources, etc. So, QBI fellow years are incredibly formative in this regard. The wins but also mistakes are still vivid in the mind. In terms of how the mentoring philosophy evolved, it has been a continuous change from basically being a hands on, direct mentor, with me doing a ton of lab work side by side with folks, to slowly giving up that control and letting the lab do the science with a bit of a softer touch, make their own mistakes while taking on more responsibilities for the bigger picture of the lab. Its both highly unsettling and tremendously exciting when all of the sudden you are not the best person at particular experimental technique in the lab. Navigating this change, to stay an effective mentor but in a less direct hands-on way has played a huge role in the continuous evolution of my mentorship.

> " ... as part of this position you immediately start mentoring scientists at different levels, which has been both, humbling, sometimes hard but overall incredibly rewarding."

Are there particular projects, collaborations, or initiatives from your time as a Fellow that you still feel proud of/ or that had lasting impact on your work?

Of course, many of the collaborations that started out during the fellow are the backbone of my labs work right now! QBI fellow was the time I started working closely with Dr. Jura on RTKs and this is an incredibly rewarding and fruitful collaboration that is still going on, with many co-mentored scientists. In terms of endeavors, certainly co-leading the QCRG Structural Biology Consortium has been one of the highlights. Just seeing so many amazing scientists come together and make such rapid progress has been inspiring. This effort was truly the best showcase of what makes UCSF special, when people just get along and creative ideas are flowing. And of course, QBI being able to resource those ideas has been essential.

Who were key mentors or collaborators during your time at QBI, and how did those relationships shape your trajectory?

I have a long running collaboration with Dr. Natalia Jura and this has certainly shaped both, my science but also my mentorship and the way I run the lab. I learned a tremendous amount from Natalia and she has always been not just a collaborator but a mentor to me. Dr. Nevan Krogan certainly played a huge role in both, being a scientific collaborator but also being a mentor. The type of high stakes, hugely collaborative science that he does is infectious and certainly played a huge role in my thinking about science in general. Lastly, I have been lucky to get continued mentorship from my PhD advisor, David Agard, which has been invaluable.



Willow Coyote-Maestas

QBI Fellow, 2020-2024

During his Fellowship, Willow Coyote-Maestas developed innovative approaches to study membrane proteins at scale, helping bridge the gap between structural models and cellular function. His research introduced high-throughput methods to map how genetic variants affect membrane protein activity, advancing collaborative studies across ion channels, transporters, and receptors at UCSF. Alongside his scientific work, and in collaboration with QBI, Willow founded the "Full Circle of Native and Indigenous Scientists in Quantitative Biology" symposium series to foster mentorship, visibility, and community among Native and Indigenous scientists.

In Conversation with Willow

When you think back to your time as a QBI Fellow, what was the central focus of your research, and what originally drew you to that scientific question?

The central focus was figuring out how to mechanistically study the roles of residues of membrane proteins. I was initially driven to this topic because my PhD coincided with the 'resolution revolution' of Cryo-EM on membrane proteins. When I started my PhD, most membrane proteins didn't have structures when it ended most had models. Much of that initial development was done here at UCSF so I felt that at UCSF I could try to take advantage of the expertise and ways of thinking to address what I thought was one of the major challenges in the field. It's actually hard to go from a structure to a model of function. I saw that mutational scanning or saturation mutagenesis could be used to probe the functional properties of membrane proteins to address this challenge.

What initially drew you to the QBI Fellowship Program, and how did it shape or accelerate the research direction you were building at the time?

I was drawn to the program by the opportunity to start my independent journey in science directly out of my PhD and to get to work in collaboration across many labs at UCSF. At the end of my PhD, I did not feel I had finished on that research arc but felt if I were to do a conventional postdoc I would be restricted on what I could work on. I would have probably focused on a specific model protein and wouldn't have expanded as much as a general 'membrane protein biologist' as opposed to being an ion channel, transporter, or GPCR scientist.

In what ways did the fellowship contribute to your development - scientifically, intellectually, or as a leader of a research group?

I felt the QBI program and the environment encouraged me to forge my own path. This allowed me to become highly differentiated from anyone else in my many fields and try to continue to work across fields. This broadened my horizons and allowed me to learn from experts across different areas of expertise and work more as colleagues than as a typical postdoc.

Did your time as a QBI Fellow influence how you mentor students or trainees today? If so, how has your mentoring philosophy evolved?

I started my lab right out of my PhD and in my PhD, I was the first grad student during which I started my projects from scratch in areas my PhD mentor had no background and neither did I.

While I continued using technologies in my PhD during my QBI position, it was a big departure from my past work. I had the pleasure to work with exceptionally talented, skilled, and independent lab members: a postdoc, graduate student, and technician. Together, we achieved a lot in a short time and in a way where everyone got on papers. There was a mixture of independent projects but with shared methods that allowed us to move quickly, teach each other, and make quick progress.

From these experiences from my own educational background, I encourage all lab members to take on ambitious projects in new directions. I believe in students and trainees to lead perhaps even some times to a fault.

Over time, I have tried to create more guard rails to help support everyone. But at the same time at my core I think science should be innovative, challenging, and fun so my approach to mentorship is very much focused on supporting the development of independence. If I hadn't had independence so early I likely wouldn't have that absolute belief in trainees ability to drive forward projects.

> "I felt the QBI program and the environment encouraged me to forge my own path ... This broadened my horizons and allowed me to learn from experts across different areas of expertise and work more as colleagues than as a typical postdoc."

Are there particular projects, collaborations, or initiatives from your time as a Fellow that you still feel proud of/ or that had lasting impact on your work?

My goal was to figure out how to functionally map the properties of membrane proteins. We have succeeded at that goal and now others in my field's are taking similar approaches on their favorite proteins. That has been quite awesome to see. The basic idea was to measure how all possible mutations imapct a protein's surface expression and activity using multi-phenotypic assays. I first did this in a potassium channel in the last couple months of my PhD but really that idea came from the time I spent as a visitor in James Fraser's lab here at UCSF in the last year of my PhD (Coyote-Maestas, eLife 2022). I then worked with Kathy Giacomini to apply a similar approach to a drug transporter Oct1 which we integrated with Ai guided MD simulations with Lucie Dellemotte at Karolinska/Life Science Labs (Yee, Molecular Cell, 2024). Finally working with Aashish Manglik we revealed the basis of proton sensing receptors (Howard, Cell, 2025). To conduct these assays, we had to develop new assays and molecular biology pipelines which are being picked up across the field (Macdonald, 2023, Genome Biology). I am proud of this body of work that has partially come out after the fellowship, but all these projects were started while a fellow.

How did QBI's interdisciplinary environment influence your thinking or approach to research?

I was encouraged to think broadly and work collaboratively across disciplines. I also felt it was really important to uplift all my collaborators with me to give credit via co-senior authorships and first authorships for their lab members. In my PhD I felt siloed a bit and was so excited to be in the collaborative and supportive environment that is UCSF that QBI is a part of.

Looking back, what advice would you give to current or future QBI Fellows who are at the stage you once were?

Be fearless, take on new projects, talk to everyone, and leverage the community. Think about how you can become invaluable to the community and vice versa. UCSF and QBI are so much better than the sum of our parts (not that the people aren't awesome) because we know how to work together. This is what makes this place special.



Kevin Lou

QBI Fellow, 2025-present

As a Fellow, Kevin Lou is building an interdisciplinary research program that bridges synthetic chemistry, functional genomics, and quantitative biology to advance next-generation drug design. His work integrates large-scale genomic and proteomic approaches with chemical perturbation strategies to understand how complex therapeutic molecules function within biological systems. Drawing on discoveries from his graduate research, Kevin aims to expand the boundaries of drug discovery by developing chemically designed molecules with novel mechanisms of action and therapeutic potential.

In Conversation with Kevin

Can you tell us a bit about your research focus and what inspired you to pursue this area of science?

My research focuses on using synthetic chemistry and functional genomics techniques to develop new approaches in drug design. What drew me to chemical biology in general was learning how medicines are made through chemistry and how every atom in a therapeutic molecule can be perfectly positioned to serve its purpose. During my graduate work, I investigated linked chemotypes, molecules that break traditional “drug-like” chemical design rules, and we discovered cellular mechanisms like IFITM-assisted uptake that help these unconventional molecules function. I’m excited to leverage these expanded drug design possibilities to develop more molecules with new mechanisms of action that could be therapeutically useful.

What drew you to the QBI Fellowship Program, and how does it support the kind of research you want to build?

QBI’s interdisciplinary environment aligns well with my work, which brings together chemistry and systems biology approaches. I’m also excited by the technological platforms at QBI, particularly mass spectrometry, functional genomics, and computational capabilities, as well as their collaborative approach to science. I hope to complement the existing expertise at QBI by bringing a drug discovery perspective to help translate the biological insights being generated into potential therapeutics.

What have you found unique or inspiring about the QBI community so far?

I’m inspired by the collaborative culture here and the drive to tackle important questions across different areas of biology using quantitative, systems-based approaches. Members regularly share their research and bounce ideas off one another with an eye toward applying these technologies where they can have the most impact.

How do you see quantitative biology shaping the future of biomedical research, especially in your field?

The unprecedented scale of data generation in biomedical research, combined with emerging computational approaches, is transforming how we tackle scientific questions. The field of chemical biology is no exception. In chemical biology, we can now combine large-scale genomic and proteomic data with chemical perturbation to understand how therapeutic molecules work at a much more detailed level. Our IFITM-assisted uptake pathway discovery came from this kind of systems-based approach. Looking forward, as therapeutic molecules become more complex in how they interact with biological systems, quantitative biology approaches that enable their characterization at scale will be increasingly essential at every stage of drug development.

> "The combination of QBI’s technological platforms and collaborative culture creates opportunities to approach complex biological questions that might not be possible elsewhere."

Who have been some of the most influential mentors or collaborators in your scientific journey?

My undergraduate mentors, the late Amos Smith III and Carlo Ballatore, helped me establish a strong foundation in synthetic organic chemistry and medicinal chemistry and were instrumental in sparking my initial interest in research. Kevan Shokat provided invaluable guidance as my PhD mentor while encouraging me to think independently and pursue unconventional ideas. Luke Gilbert was also an important mentor and collaborator who helped me learn CRISPR functional genomics. Working across both the Shokat and Gilbert labs showed me how valuable it can be when different disciplines collaborate, and this experience shaped how I approach research today.

What excites you most about being part of UCSF’s and QBI’s interdisciplinary research environment?

I’m really excited to be in an environment where large-scale data generation and computational capabilities can help accelerate discovery. The combination of QBI’s technological platforms and collaborative culture creates opportunities to approach complex biological questions that might not be possible elsewhere. Being surrounded by experts across different disciplines means I can contribute from the chemical drug design perspective while learning from computational biologists, systems biologists, and others who are approaching similar questions from different angles. I’m also inspired by the potential to translate fundamental insights into molecules that could eventually benefit patients.



Leah Roe

QBI Fellow, 2026-present

Leah Roe became the first woman to receive a Fellowship at QBI, bringing a research vision centered on expanding the chemical diversity of biologics through protein backbone editing. Her work sits at the intersection of chemical biology and therapeutics, moving beyond natural amino acid backbones to design proteins with new chemical properties and enhanced functional potential. During her time at UCSF as a Fellow, she plans to further explore protein backbone modification and investigate how these engineered changes reshape protein structure and function, integrating method development, biophysical analysis, and translational application toward next-generation engineered biologics.

In Conversation with Leah

Can you tell us a bit about your research focus and what inspired you to pursue this area of science?

My research focuses on protein backbone modification/editing—an emerging field at the intersection of chemical biology and therapeutics. The long-term vision of my work is to bring the vast chemical diversity typically used in optimizing small molecule and peptide therapeutics into the realm of biologics. Currently, biologics are restricted to natural alpha-amino acid backbones. By developing methods to efficiently produce biologics with expanded chemical diversity, we can enhance their fundamental properties and therapeutic functions. At UCSF, I plan to continue method development, study the biophysical properties of modified proteins, and translate them into real-world medical applications.

How would you describe the vision for your independent lab? What big questions are you most excited to tackle?

My ultimate dream is to see biologics with novel chemistries readily screened and, ideally, to witness a drug developed using my technology reach the market. What excites me most about this research is its multifaceted nature: method development offers creative freedom, biophysical studies satisfy my desire to understand protein folding at a fundamental level, and translational applications allow me to explore diverse fields while fulfilling my personal goal of improving medicine. I couldn't imagine a research program more perfectly aligned with my interests and aspirations.

Beyond the science, I envision my lab as a place where people genuinely enjoy research and learning. I've been fortunate to have mentors who made science fun, and I'm committed to providing that same experience for my trainees. While research can be challenging, maintaining a sense of humor and making the day-to-day enjoyable is essential.

Another major goal is to demystify the hidden curriculum of academia. I plan to create, collect, and share public resources on topics like competitive fellowship applications, efficient reading strategies, graduate school preparation, fostering positive lab culture, effective networking, etc. By making these resources openly available, I hope to level the playing field for emerging scientists.

What advice would you give to other early-career scientists aspiring to build independent research programs?

Surround yourself with people who have succeeded in this path and who genuinely believe in you. Your community and environment are everything—they will support and propel you toward your goals. As you progress through your training, always pay it forward and support others on their journeys.

Who have been some of the most influential mentors or collaborators in your scientific journey?

I've been incredibly fortunate to train with exceptional mentors who continue to support me today. Ron Zuckermann, my undergraduate PI, showed me the joy of doing science. Jaime Fraser, my post-baccalaureate PI, made me believe that pursuing a fellow position was possible. Alanna Schepartz, my PhD advisor, profoundly shaped my approach to chemical biology and scientific thinking. As part of the first generation of women in quantitative sciences, she's been a tremendous inspiration. I'm grateful for the five years I spent training in her lab.

What excites you most about being part of UCSF's and QBI's interdisciplinary research environment?

My research is highly fundamental—focused on method development and basic biophysical understanding—which means it can be applied across diverse areas of biology. Being at UCSF and QBI provides endless opportunities to learn new topics and apply my science in unexpected ways. This interdisciplinary environment is perfect for someone who thrives on continuous learning and cross-field collaboration.

"Being at UCSF and QBI provides endless opportunities to learn new topics and apply my science in unexpected ways. This interdisciplinary environment is perfect for someone who thrives on continuous learning and cross-field collaboration."

If you could describe your approach to science in three words, what would they be and why?

Fearless, critical, and enjoyable.

Fearless: I love a good challenge; I tend not to worry about how I will get there as long as the fundamental concepts are scientifically sound. As a result, I find myself learning any technique or topic I need to accomplish a goal.

Critical: I invest significant time in experimental design and strategic planning before execution. I try to imagine every pitfall or application so that as I move through the project, I know exactly what each piece of data means for the big picture (whether that's good or bad). And I always have a backup plan.

Enjoyable: I wouldn't have become a scientist if I didn't genuinely enjoy the work and the environment. I understand that projects typically have more failures than successes, but I view this as part of the process rather than a reflection of my abilities or intellect. I love being surrounded by motivated people and having fun along the way. I celebrate every victory—it makes all the setbacks worthwhile.

International Visiting Scholar Program

The International Visiting Scholar Program, originally launched under former COO Jacqueline Fabius and now continued by Scientific Project Manager for International Collaborations Celine Perier, is designed to strengthen global scientific partnerships while supporting researchers from countries with emerging research capacity.

The program reflects QBI's commitment to fostering equitable access to advanced scientific training and to building long-term collaborative networks that extend beyond institutional and geographic boundaries.

The program provides a six-month to one-year transdisciplinary research experience at UCSF, where visiting scholars engage in research across a wide range of disease areas, including infectious disease, cancer, cardiovascular disease, and psychiatric disorders. With an emphasis on mentorship from QBI investigators, formal skill development, and participation in seminars and symposia, scholars are supported in advancing their scientific expertise within a highly collaborative environment.

A key goal of the program is to empower researchers, particularly women from developing research communities, by equipping them with tools, networks, and training that can be applied upon return to their home institutions. Scholars are expected to translate their experience into strengthened local research programs, amplifying scientific capacity and impact in their home countries while maintaining ongoing connections with QBI collaborators. From the outset, it also recognized the structural and personal challenges women may face in pursuing international opportunities, incorporating flexible arrangements and individualized planning to accommodate family and professional needs.

Visiting Scholars



Jacqueline Kyosimiire-Lugemwa
(From Uganda)
2017-2018



Hoai Nguyen
(From Vietnam)
2025



Bailor Barrie
(From Sierra Leone)
2025



Jacqueline Kyosimiire-Lugemwa

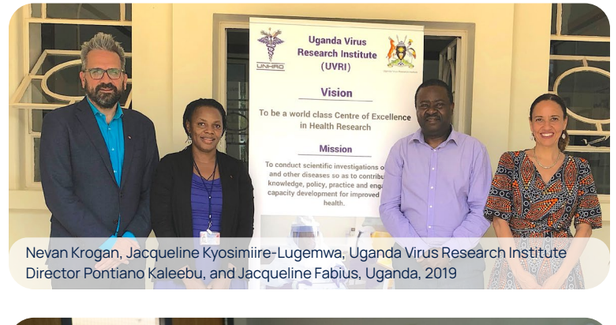
Senior Research Scientist at the Uganda Virus Research Institute

The International Visiting Scholar Program launched its inaugural cohort in 2017–2018 with Jacqueline Kyosimiire-Lugemwa from Uganda, who joined UCSF to study HIV disease progression using flow cytometry–based approaches. Her research aimed to better understand why some individuals living with HIV progress to AIDS more slowly than others, an important question for improving future treatment strategies.

During her time at UCSF, she encountered a major setback when previously collected flow cytometry data was found to be compromised due to technical issues with the instrument. With support from the UCSF scientific community, she was able to reframe her research direction and rebuild her experimental approach, gaining new skills and strengthening her methodological foundation.

She went on to retrain extensively in advanced experimental techniques, including improved flow cytometry workflows, protein purification, mass spectrometry, and CRISPR-Cas9 gene editing. These new approaches enabled her to redesign her HIV studies with greater precision and to generate more robust experimental strategies for understanding viral progression at the cellular level.

Following her fellowship, Jacqueline returned to Uganda equipped with new technical expertise and renewed scientific direction, where she resumed her HIV research and began sharing knowledge and training with emerging scientists. Her experience reflects the program's goal of strengthening global research capacity through hands-on training, mentorship, and sustained scientific exchange.



Nevan Krogan, Jacqueline Kyosimiire-Lugemwa, Uganda Virus Research Institute Director Pontiano Kaleebu, and Jacqueline Fabius, Uganda, 2019



Jacqueline Kyosimiire-Lugemwa and Rachel Rutishauser, Division of Experimental Medicine at the Zuckerberg San Francisco General Hospital, 2018

"You guys are making me popular, thanks for all the great work you are doing. That exposure has changed me for good, I have now submitted 2 grant proposals one to L'Oréal UNESCO for women from developing countries and another to Organisation for Women from developing countries, both are small but ok for me now. I also submitted my paper to the Journal of Infectious diseases this week. It feels so good to be able to do these."

– May 2019



Hoai Nguyen

Faculty Member & Vice Director of the Research Center for Infectious Diseases at Vietnam National University

Hoai Nguyen joined the International Visiting Scholar Program in 2025 to work with researchers from UCSF and the Gladstone Institutes on infectious disease research and antimicrobial resistance. Her research focuses on diagnostic development and antimicrobial resistance, with an emphasis on a One Health approach that integrates human, animal, and environmental health.

During her time in San Francisco, Hoai collaborated with multiple groups across the UCSF ecosystem, including the labs of Nevan Krogan and Melanie Ott, and held discussions with Daniel Fletcher's lab at UC Berkeley on portable diagnostic technologies. Her work focused on translating molecular and computational insights into more accurate and accessible tools for infectious disease detection and management.

Beyond her research, Hoai became known for her collaborative and community-oriented presence across UCSF and Gladstone Institutes, helping foster connections among researchers and trainees. A strong advocate for women in science, she emphasized mentorship, inclusion, and shared growth throughout her visit.



Hoai Nguyen with colleagues from QBI and Gladstone Institutes, 2025



Hoai Nguyen with Céline Périer and Nevan Krogan at the Gladstone Institutes, 2025



Hoai Nguyen presented her research at a QBI seminar in San Francisco, attended by members of the QBI–Gladstone Institutes community, 2025

"I was amazed by the brilliance and dedication of the people here ... Connecting globally allows us to combine diverse perspectives, expertise, and resources to tackle challenges that no single institution or country can solve alone—especially in the case of infectious diseases. I plan to stay actively engaged through joint grant proposals, collaborative research projects, virtual meetings, and webinars.

– July 2025



Bailor Barrie

Founder of the Wellbody Alliance in Sierra Leone & former QBI Fundraising Coordinator for Paul Farmer African Initiative for Research (PFAIR)

Bailor Barrie joined QBI in 2025, bringing with him extensive experience as a physician, global health researcher, and leader in Sierra Leone. A recent PhD graduate in Global Health from UCSF, he previously founded the Wellbody Alliance clinic and served as Executive Director of Partners In Health in Sierra Leone, where he played a key role in strengthening healthcare delivery and research capacity in the region.

Prior to joining QBI, Bailor also played a key role in organizing the 2024 International West Africa Symposium and Workshops on Infectious Diseases hosted by QBI in Sierra Leone, in partnership with the Ministry of Health and Sanitation of Sierra Leone, the University of Sierra Leone, and Partners In Health.

At QBI, Bailor helped build the Paul Farmer African Initiative for Research (PFAIR), an academic program created in honor of the late Paul Farmer. Designed as a consortium connecting institutions across the Global North and Global South, PFAIR aims to advance international research collaboration while supporting African scientists through education, mentorship, and resource sharing (see page 156). During his year at QBI, Bailor helped shape and grow the initiative, leveraging his extensive network and deep commitment to capacity building in Africa to lay a strong foundation for the program.

Through these efforts, Bailor helped advance QBI's commitment to global scientific exchange and capacity building, while contributing to the development of more sustainable and collaborative pathways for scientific innovation across Africa. He is now continuing his research and global health journey while maintaining close collaborative ties with QBI and the broader PFAIR network.

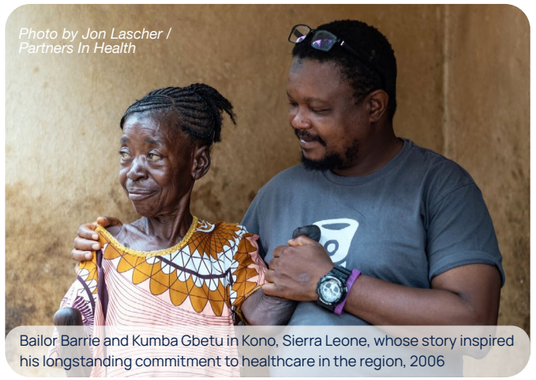
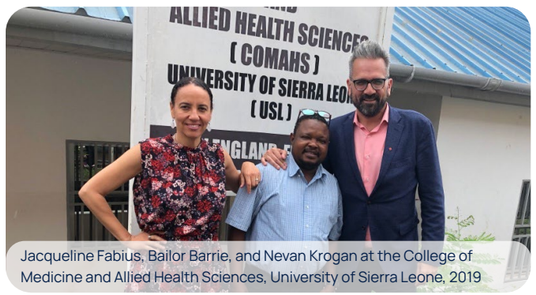


Photo by Jon Lascher / Partners In Health

Bailor Barrie and Kumba Gbetu in Kono, Sierra Leone, whose story inspired his longstanding commitment to healthcare in the region, 2006



Jacqueline Fabius, Bailor Barrie, and Nevan Krogan at the College of Medicine and Allied Health Sciences, University of Sierra Leone, 2019

"People from the Global South are often included in the 'menu,' but they don't design it. My goal, working with QBI and others, is to ensure that African scientists and researchers from low- and middle-income countries have a stronger voice in shaping research priorities and directions."

– August 2024

Mini-Sabbatical Program

The QBI–Institut Pasteur (IP) Faculty Mini-Sabbatical Program enables short-term scientific exchanges between UCSF, Gladstone Institutes, and Institut Pasteur. Established to strengthen transatlantic collaboration, the program supports one- to three-month visits during which faculty engage in joint research, scholarly activities, and knowledge sharing across institutions.

Supported in part by the $200K Research America Prize awarded to Nevan Krogan, the initiative has facilitated multiple exchanges, including six mini-sabbaticals at UCSF and Gladstone Institutes, and three at Institut Pasteur in Paris. These visits have helped catalyze new collaborations, deepen existing partnerships, and strengthen a shared scientific network focused on advancing discovery.

The program fosters interdisciplinary exchange and professional development, while also advancing collaborative research in areas such as pandemic preparedness and global health. By enabling scientists to work across institutions, it builds lasting connections and accelerates the flow of ideas between leading research environments in Europe and the United States.



Geeta Narlikar and Marc Lavigne, UCSF, 2024



Anastassia Komarova and Caroline Demeret, UCSF, 2024



Najma Rachidi, UCSF, 2024

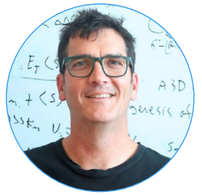
Scan to learn more about this sabbatical program

Faculty Members


Melanie Hamon
(Visited UCSF from IP)
July 2023


Najma Rachidi
(Visited UCSF from IP)
Feb 2024


Caroline Demeret
(Visited UCSF from IP)
March 2024


John Gross
(Visited IP from UCSF)
May 2024


Melanie Ott
(Visited IP from Gladstone)
June 2024


Shaeri Mukherjee
(Visited IP from UCSF)
Sept 2024


Ivo Gomperts-Boneca
(Visited UCSF from IP)
Nov 2024


Marc Lavigne
(Visited UCSF from IP)
Nov 2024


Raphael Laurenceau
(Visited Gladstone from IP)
May 2026



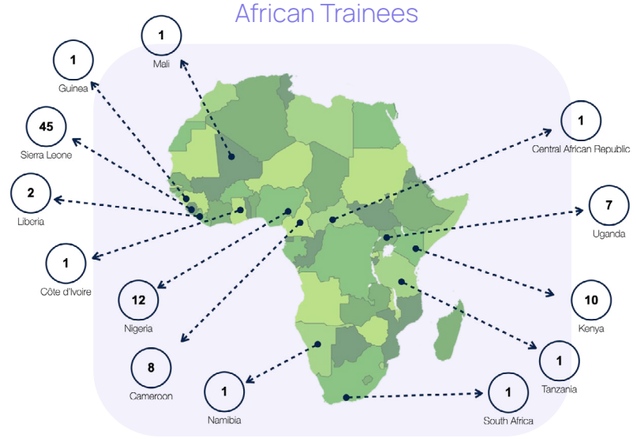
EDUCATION PROGRAMS

QBI is a recognized leader in developing innovative educational programs that prepare students and research trainees to tackle complex biological challenges through interdisciplinary approaches. By integrating cutting-edge research with hands-on training, QBI cultivates a collaborative learning environment through workshops, internships, and experiential activities, including networking sessions and hackathons. The institute's commitment to education ensures that the next generation of researchers is not only highly skilled but also prepared to work across disciplines and institutions to address pressing challenges in human health. This commitment to interdisciplinary, hands-on education is reflected in QBI's global training initiatives, regional workforce development efforts, and specialized technical workshops.

Capacity Building Workshops in Developing Nations

At the First International West Africa Symposium & Workshops on Infectious Disease in 2024 (detailed on page 144), QBI delivered a series of intensive, hands-on workshops in Sierra Leone to strengthen regional research capacity. Over the course of the program, 91 trainees from 13 countries in Africa participated in multi-day, skills-based training spanning clinical research design, molecular biology, grant writing, and bioinformatics. Participants gained practical experience by developing research proposals, analyzing real-world datasets, and engaging directly with international faculty and mentors.

Beyond delivering technical training, QBI also prioritized accessibility and long-term impact in its programs. To ensure equitable participation, QBI provided travel support to 44 participants from 13 countries and prioritized early-career scientists from under-resourced institutions. By pairing technical training with sustained mentorship and network-building, QBI's workshop model is helping establish a durable pipeline of scientists equipped to advance scientific research across the globe.



QBI provided travel support for 44 early-career researchers across 13 countries in Africa during the First International West Africa Symposium & Workshops on Infectious Disease in Sierra Leone.



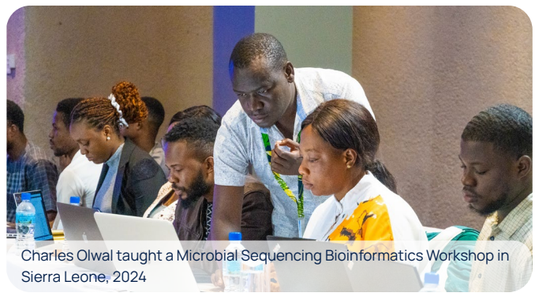
Dan Kelly taught a Clinical Research and Study Design Workshop in Sierra Leone, 2024



Jacqueline Fabius taught a Scientific Grant Writing and Science Presentation Skills Workshop in Sierra Leone, 2024



Participants performed experiments during a Molecular Biology Workshop in Sierra Leone led by Onikepe Folarin, 2024



Charles Olwal taught a Microbial Sequencing Bioinformatics Workshop in Sierra Leone, 2024

Workforce Development Initiatives in California

In 2021, the State of California allotted $20M to the California Institutes for Science and Innovation (Cal ISI) to plan and implement programs designed to strengthen and grow the scientific workforce. QBI used its share ($1.6M over five years) to provide students with experiential training opportunities in the life sciences. These activities included the QBI Hackathon Series and the QBI Youth Excellence in Science (Y.E.S.) Program, both designed to cultivate interdisciplinary collaboration, technical expertise, and hands-on research experience.

QBI Hackathon

Organized by Kliment Verba, the QBI Hackathon Series convenes interdisciplinary teams of computer scientists, biologists, and bioinformaticians to tackle biomedical challenges through rapid, collaborative problem solving. Since launching in 2018, QBI has hosted five hackathon competitions. These intensive, open-to-all 48-hour events have brought together 50–80 participants per hackathon from across institutions, industry, and career stages to generate innovative solutions at the intersection of biology, computation, and medicine.

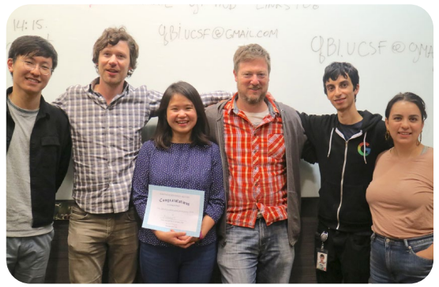
During each hackathon, 10–20 cross-disciplinary teams work with real-world datasets and active research questions spanning topics from artificial intelligence and protein dynamics to the development of more accessible scientific software. Teams produce computational tools, analytical pipelines, and novel biological insights, with more than 50 project outputs generated across the first five hackathons. To extend the impact beyond the initial 48-hour event, QBI provides continued support for winning teams to further develop their projects, strengthening cross-disciplinary collaborations that have led to sustained research efforts, publications, job opportunities, and five ongoing collaborations.

Designed to accelerate discovery while building community, the hackathons emphasize open science, mentorship, and cross-disciplinary exchange. Participants benefit from direct engagement with leading experts, while early-career scientists gain hands-on experience in team-based research and scientific innovation. By fostering rapid ideation and translating collaboration into measurable outcomes, the QBI Hackathon Series continues to advance a more agile, connected, and impact-driven approach to biomedical research.

























A selection of scenes from QBI Hackathons, capturing collaboration, presentation, and exchange among participants, organizers, and judges.

Scan to learn more about past Hackathon teams and participants

QBI Internship Programs

The **Science Internship Program** provides immersive, hands-on research experiences that serve as a critical entry point into the life sciences for emerging talent. Interns are placed in QBI laboratories through programs such as the Youth Excellence in Science (Y.E.S.) Program, participating in paid, full-time summer research placements spanning 4–8 weeks. Participants work alongside faculty, postdoctoral scholars, and graduate students on active research projects, gaining practical experience in experimental design, data analysis, and scientific problem solving.

In addition, the **Media & Events Internship Program** offers a complementary track focused on science communication, design, event planning, and administrative operations. This program provides hands-on experience supporting the organization and delivery of seminars, symposia, and community-facing events, while also engaging interns in visual communication and outreach efforts that help translate science for broader audiences.

The internship programs are designed to expand access and opportunity, with a significant proportion of participants coming from underrepresented or under-resourced backgrounds, and all interns receiving financial support to ensure equitable participation. Through structured mentorship and professional development programming, interns build not only technical and communication skills but also confidence and a sense of belonging in science.

The impact extends beyond the summer experience. Many student interns go on to pursue STEM majors or careers, while others maintain ongoing research engagement or return for advanced training opportunities. Interns also present their work at the annual QBI Internship Symposium, resulting in multiple research presentations each year and strengthening participants' scientific communication and professional skills.

By combining rigorous research training with intentional mentorship and measurable outcomes, QBI's internship programs are building a diverse, high-impact pipeline of future scientists and science communicators equipped to contribute to advances in human health.



Klaus Yserentant and Ricardo Picardo, Internship Symposium, UCSF, 2025



Jane Ton, Internship Symposium, UCSF, 2023



Marco Martins Gama, Internship Symposium, UCSF, 2024


Samali Namaganda, Internship Symposium, UCSF, 2019




QBI intern cohort, UCSF, 2023


QBI intern cohort, UCSF, 2019



Justice Lu, Internship Symposium, UCSF, 2024



Robert Stroud and Iniyaa Suresh, Internship Symposium, UCSF, 2025


Jolie Bilodeau, Internship Symposium, UCSF, 2023



Richa Tiwari and Gabriel Karrillon, Internship Symposium, UCSF, 2025



Monita Muralidharan and Ari Sinyaver, Internship Symposium, UCSF, 2025

Scenes from the annual Internship Symposium over the years, showcasing interns presenting their research, sharing scientific challenges and achievements, and engaging with their mentors, UCSF researchers and members of the broader QBI community.

Science Internship Program

2017

Brian Plotkin, Lowell High School

2018

Kate Karlovich, Ohio University
Brian Plotkin, Lowell High School
Ernst Pulido, Diablo Valley College
Fela T. Williams, Saint Mary's College High School

2019

Zoey Cao, UC Berkeley
Daphne Chen, UC Los Angeles
Lucas Jang, Mills High School
Phoebe Lawwill, Lowell High School
Samali Namaganda, Santa Rosa Junior College
Becka Padgett, Brown University
Ernst Pulido, San Francisco State University
Diego Quintero, UC San Diego
Alexandria Ripplinger, University of Regina

2020

Clayton Anderson, University of Puget Sound
Fela T. Williams, UC Berkeley

2021

Swathi Badrinarayanan, Saint Francis High School
Siya Bhadoria, Irvington High School
Zaina Ghouri, The Bishop's School
Bhavya Harjai, UC San Diego
Reanna Lao, City College of San Francisco
Heba Morsy, College of San Mateo
Yasmin Palacios, City College of San Francisco
Rabiya Sudebar, UC Berkeley
Francesca Torres, West Valley College

2022

Jeremy Scott Anderson, UC Riverside
Yasmin Palacios-Calderon, City College of SF
Lian Jeong Engle, American University
Alyssa Hoffert, University of Regina
Annaliese Beck McKenzie, University of Regina

2023

Jolie Bilodeau, International High School
Abhimanyu Ghosh, Poolesville High School
Idan Kashani, UC Berkeley
Nhi Nhi Ly, Chabot College
Isa Mahmood, Drew High School
Roxanne May, De Anza College
Felipe Morfin, Butte College
Simrun Parulekar, Redmond High School
Mishelle Taborga, California State University
Jane Ton, City College of San Francisco
Belen Maguina Veloz, Cuesta College

2024

Jolie Bilodeau, Northeastern University
Gracie Bitting, UC Los Angeles
Rhiana Grace Boyles, UC Berkeley
Matthew Chekay , University of Toronto
Matthew Dominguez, San Francico State University
Marco Martins Gama, Université Paris Cité
Idan Kashani, UC Berkeley
Justice Lu, De Anza College
Isa Mahmood, Drew High School
Roxanne May, UC Berkeley
Miles Napili, Worcester Polytechnic Institute
Rishima Tewari, UC Santa Barbara

2025

Srivalli Adarapu, Saint Francis High School
Saket Budhia, UC Berkeley
Shabnam Fazlalizadeh, Gladstone Institutes
Gabriel Karrillon, Université Paris Cité
Kushal Khare, Valley Christian High School
Quynh Le, UC San Francisco
Amelia McAlister, Imperial College London
Robert Picardo, UC Berkeley
Daniel Torres Pomares, UC San Francisco
Eva Potjer, Northwestern University
Ari Sinyaver, Santa Clara University
Iniyaa Suresh, UC Berkeley
Alexandra Willis, Crystal Springs Uplands School
Phyu Sin Win, San Jose State University

2026

Aaliyah Boykins, UC Irvine
Sara Morgantini, UC Santa Cruz
Miles Napili, Worcester Polytechnic Institute
Giona Nolan, Worcester Polytechnic Institute
Akash Pandit, UC Santa Cruz
Ari Sinyaver, Santa Clara University
Audrey Thacher, UC Berkeley
Alexandra Willis, Crystal Springs Uplands School

Media & Events Internship Program

2017 & 2018

Alexa Rocourt, American University

2019

Taihong Chen, California College of the Arts
Elvin Qin, California College of the Arts
Carolina Verrini Lenzi, University of San Francisco

2020

Saisha Nandamuri, Foothill High School
Owen Neistat, University of San Francisco
Leila Shokat, Reed College

2021

Carolina Verrini Lenzi, University of San Francisco

2022

Andrea Bolanos, University of San Francisco
Mary Chin, University of San Francisco

2023

Phoebe Lawwill, UC San Diego

2024

Coco Chiang, University of San Francisco
Hazel Velasco, University of San Francisco

2025

Martina Mongillo, Abraham Lincoln High School
Bria Mapuyan, University of San Francisco

2026

Neel Parekh, San Jose State University
Martina Mongillo, Abraham Lincoln High School



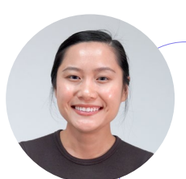
"The QBI internship program showed me how much an early opportunity can shape a career. From the start, I was surrounded by mentorship, trust, and opportunities to grow in a dynamic, mission-driven environment. That experience shaped my path and opened the door to years of learning, creativity, and meaningful work."

– Alexa Rocourt, Media & Events Intern, American University, 2017
(current QBI Media Producer & Designer)



"I come from a smaller university where research opportunities were limited, so coming to UCSF and seeing so many different projects and access to technology we didn't have back home was huge. Being here made me realize how much I enjoy research and that it's the path I want to pursue. I never would have known that without this opportunity."

– Alyssa Hoffert, Science Intern, University of Regina, 2022



"QBI gave me the opportunity to explore myself and discover whether research was something I wanted to pursue. More importantly, it showed me that there are people like me, and that there are opportunities for us. Seeing people like you become doctors and researchers makes you think, 'Maybe I can do that too.' I think that's one of the most important things a young person can experience."

– Jane Ton, Science Intern, City College of San Francisco, 2023

This list reflects interns included in available program records from 2017–2026.

Training Workshops

Beyond individual educational programs, QBI contributes to large-scale collaborative training efforts through federally funded initiatives. Through the NIH-supported Cancer Cell Map Initiative (CCMI), Host-Pathogen Map Initiative (HPMI), and HIV Accessory and Regulatory Complexes (HARC), QBI delivered 46 workshops between 2016 and 2026 spanning systems biology, structural biology, and computational platforms.

These programs are designed for scientists across career stages, integrating foundational instruction with advanced applications in data-driven biology. Emphasis on practical use cases and interactive learning ensure that participants can directly apply tools and concepts to their own research, accelerating discovery and strengthening a pipeline of researchers equipped to advance large-scale scientific innovation.

In parallel, QBI has expanded its training mission through public-facing outreach activities that engage broader audiences across the Bay Area and beyond, including participation in the Bay Area Science Festival, local STEM fairs, and guided laboratory tours and interactive demonstrations designed for students, families, and community members.

Systems Biology & Network Science

The QBI Systems Biology Workshop provides a full-day program on systems biology technologies and their applications to infectious disease. Featuring expert speakers, the workshop highlights key advances in network biology, multi-omics integration, and computational modeling, with an emphasis on host–pathogen interactions, drug discovery, and biomarker identification for researchers working in systems-level and computational approaches to biology.

Organized biannually by Robyn Kaake in conjunction with the HPMI and HARC Centers, the workshop brings together leading voices in the field, including Judd Hultquist, Alicia Richards, Jeff Johnson, Mehdi Bouhaddou, and Ignacia Echeverria Riesco. Together, this workshop forms one half of QBI's two-part training series in quantitative biology, paired with a complementary program focused on structural approaches.

Structural Biology & Proteomics

The QBI Structural Biology and Proteomics Training Workshop is the sister program to the Systems Biology & Network Science workshop, also organized by Robyn Kaake. Offered as a hands-on exploration of the QBI technology ecosystem, it focuses on experimental and computational techniques for understanding biological structure and function, including mass spectrometry for structural proteomics, cryo-electron microscopy (Cryo-EM) for high-resolution visualization of protein complexes, and computational modeling for predicting protein behavior and cellular dynamics.

Co-sponsored by the HPMI and HARC Centers, the workshop features instruction from Monita Muralidharan and Robyn Kaake on mass spectrometry, Katrina Black and Amy Diallo on Cryo-EM training, and Ignacia Echeverria Riesco on computational approaches to integrative protein structure modeling. Together with its counterpart, it completes a biannual training cycle spanning systems-level and structural approaches to biological discovery.

Computational Platforms & Data Science

In collaboration with scientists in the CCMI, QBI develops a series of workshops focused on widely used computational platforms, including Cytoscape, GenePattern Notebook, The Human Protein Atlas, Ensembl, and the UCSC Genome Browser. These platform-focused sessions equip researchers with practical tools for analyzing and interpreting complex biological data across a range of systems and datasets.

The Cytoscape workshop introduces tools for working with protein networks and pathway data, enabling participants to generate publication-ready network diagrams, identify biological pathways, and analyze their own datasets.

The GenePattern Notebook workshop teaches participants how to design, execute, and share bioinformatics workflows through an integrated environment combining Jupyter Notebook with the GenePattern platform, supporting machine learning and genomics analyses without requiring extensive coding experience.

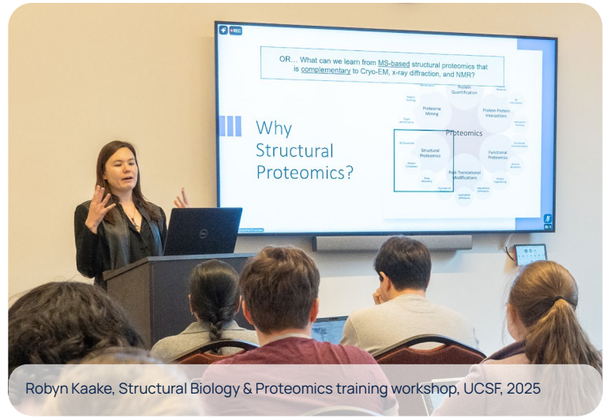
The Ensembl workshop introduces the Ensembl genome browser as a comprehensive genomic resource spanning vertebrate and non-vertebrate species, while the UCSC Genome Browser workshop demonstrates how genomic annotations and user-generated datasets can be visualized and explored through an interactive interface.

The Human Protein Atlas (HPA) workshop introduces a large-scale initiative focused on mapping the human proteome through antibody-based proteomics and integrated omics technologies. Led by Cecilia Lindskog Bergström, Director of the HPA Tissue Atlas, participants learn how to navigate and apply the platform's extensive datasets to studies in human biology and precision medicine.

Collectively, these programs reflect QBI's comprehensive approach to training, integrating technical expertise, interdisciplinary collaboration, and equitable access to computational resources to support a globally connected and highly skilled scientific workforce.



Allison Maker and workshop participants, Cryo-EM Facility Tour, UCSF, 2025



Robyn Kaake, Structural Biology & Proteomics training workshop, UCSF, 2025



Tamanash Bhattacharya, Sooraj Verma, and Kathryn Jackson-Jones, Structural Biology & Proteomics training workshop, UCSF, 2025



Workshop participants, CCMI training workshop, UCSF, 2024



Leaders and participants, Systems Biology for Infectious Diseases Workshop, Gladstone Institutes, 2026

Training Workshops: 2016-2026

2016

Sep: Cancer Cell Map Workshop, UCSF

2017

Jul: CSBC and PS-ON junior Investigators Meeting, NIH

Oct: Taste for the Cure: A Taste of Science, JCC, San Francisco

Integrative Genomic Analysis with GenePattern, UC San Diego

CRISPR Screening Workshop, UC San Diego

Elsevier in the Classroom-Pathway Studio, UC San Diego

Integrative Genomic Analysis with GenePattern, UC San Diego

2018

Jan: Ensembl Tutorial, UC San Diego

Mar: San Francisco STEM Career Day, UC San Francisco

Integrative Genomic Analysis with GenePattern, UC San Francisco

Jun: Career Development Seminar Series, UC San Diego

Introduction to Cytoscape and Network Biology for Beginners, UC San Francisco

Cytoscape Workshop, UC San Diego

Integrative Genomic Analysis with GenePattern, UC San Francisco

Cytoscape Automation in R and Python for Bioinformaticians, UC San Francisco

Sep: Integrative Genomic Analysis with GenePattern, UC San Diego

Oct: Taste for the Cure: A Taste of Science, JCC, San Francisco

Nov: Bay Area Science Festival Explorer Tour, UC San Francisco

2019

Jan: Ensembl Tutorial, UC San Diego

Ensembl Tutorial, UC San Francisco

Feb: Introduction to Cytoscape and Network Biology, UC San Francisco

Integrative Genomic Analysis with GenePattern, UC San Diego

Mar: San Francisco STEM Career Day, UC San Francisco

Integrative Genomic Analysis with GenePattern, UC San Francisco

Jul: Grant Writing and Science Presentation Workshop, Makerere University, Uganda

Oct: Taste for the Cure: A Taste for Science, JCC, San Francisco

Bay Area Science Festival: Cancer Cell Map Initiative- Lab Explorer Tour, UC San Francisco

Nov: Grant Writing and Science Presentation Workshop, Jagiellonian University, Poland

2020

Jan: Ensembl Tutorial, UC San Diego

Analyze Your Data using Networks with NDEx and Cytoscape, UC San Francisco

Single-cell Analysis with GenePattern Notebook Environment, UC San Diego

Oct: Bay Area Science Festival: Cancer Cell Map Initiative (virtual)

2021

Oct: UCSC Genome Browsing Workshop, UC San Diego

Nov: Human Protein Atlas Workshop, UC San Diego

Dec: Single-cell Analysis with GenePattern Notebook Environment, UC San Diego

2022

Jan: Cytoscape Workshop (virtual)

Apr: Bay Area Science Festival, Oracle Park, San Francisco

STEM Frenzy Festival, San Francisco Public Library

2023

Jan: Ensembl Workshop, UC San Diego

2024

Apr: Systems Biology for Infectious Diseases Workshop, Gladstone Institutes

May: Visualizing and Analyzing Data with Networks, UC San Francisco

Oct: Science Communication Workshop, UC San Francisco

2025

Apr: Structural Biology & Proteomics Workshop, UC San Francisco

QBI Startup Workshop ft. Innovation Ventures, UC San Francisco

2026

Apr: Systems Biology for Infectious Diseases Workshop, Gladstone Institutes

May: Visualizing and Analyzing Data With Networks and the Cytoscape Software Ecosystem



"By bringing in experts from different biological and technological disciplines who provide real examples of research applications and stories of demonstrated pitfalls, tips and tricks, we aim to inspire potential new directions and solutions for trainees' projects."

– Robyn Kaake, Workshop Leader



"Young people often ask the type of questions that scientists have forgotten to ask. Their curiosity is contagious, and reminds me why I enjoy this work despite its hard parts. Watching someone realize that every discovery begins with a super simple question like 'why?' or 'how?' feels like a great privilege!"

– Manon Eckhardt, Workshop Leader



"I think training is incredibly important at every level. Here at QBI, we have so many opportunities for learning, and even small activities can have a real impact on trainees, not just in their careers, but in their day-to-day lives in the lab, inspiring them to become better scientists. It's been rewarding to be both on the receiving end of that support and to now mentor younger scientists."

– Nadia Arang, Workshop Participant

Instructor & Contributor Acknowledgments:
Workshops across QBI's training programs have been developed and delivered over the years through the contributions of a broad network of instructors, collaborators, and institutional partners, including Cecilia Lindskog Bergström, Anthony Castanza, Jing Chen, Barry Demchak, Manon Eckhardt, Jacqueline Fabius, Dylan Fong, Astrid Gall, Olivier Harismendy, Erin Haskell, Trey Ideker, Kristen Jepsen, Edwin Juarez, Robyn Kaake, Aleksandra Karolak, Nevan Krogan, Robert Kuhn, Ted Liefeld, Ben Moore, John Morris, Celine Perier, Alexander Pico, Dexter Pratt, Michael Reich, Alexander Wenzel, and members of the CCMI Team, UCSF Carol Franc Buck Breast Care Center, UCSF Science and Health Education Partnership (SEP), and UCSF Innovation Ventures, among others.



COMMUNITY ENGAGEMENT

Events

QBI's events, outreach programs, and media, led by Gina Nguyen and Alexa Rocourt in collaboration with Andrea Bolanos and successive cohorts of media and events interns, are central to advancing the institute's mission and serve as key channels for engaging its community. Through an expanding portfolio of symposia, seminars, salons, public conversations, science-art initiatives, informal networking events, and digital communications, QBI creates multiple pathways for engagement with researchers, trainees, partners, supporters, and the broader public. As the institute has evolved, these efforts have grown substantially in scale, global reach, and accessibility, advancing scientific exchange, fostering collaboration, supporting the next generation of scientists, and broadening public understanding of biomedical research. Collectively, these programs have engaged 96 UCSF faculty members through scientific meetings and collaborative events.

Symposia

The QBI Symposia Series has become a central engine for scientific exchange, bringing together investigators across disciplines, institutions, and continents to accelerate discovery in quantitative and systems-level biology. Since its inception, the series has fostered not only the exchange of emerging ideas and advances, but also new collaborations, training opportunities, and translational pathways across areas such as infectious disease, cancer biology, structural biology, epigenetics, computational biology, and emerging technologies, including artificial intelligence in biomedical research. Over the past decade, the series has grown substantially in both scale and scope, with 29 symposia delivered—more than double the number held during the first five years of the institute. This expansion reflects QBI's increasingly global and interdisciplinary network, with programming spanning partnerships across Europe, Africa, the Middle East, and North America, and addressing topics ranging from molecular systems and structural proteomics to precision medicine, host–pathogen interactions, and population-level disease dynamics. Developed in close collaboration with international partners, these meetings have reinforced QBI's role as a convening hub for cross-border scientific dialogue and collaboration.

The series has also demonstrated adaptability and resilience in response to global challenges. During the COVID-19 pandemic, QBI rapidly transitioned its programming online, enabling continued scientific exchange at scale and significantly broadening participation. Early virtual symposia attracted over 800 attendees, setting a new benchmark for reach and accessibility.

Across its programming, the Symposia Series has consistently contributed to tangible scientific outcomes, including joint research initiatives, collaborative grant submissions, and faculty and trainee exchange programs. It has also served as an important platform for emerging scientists, with growing participation of women researchers as both speakers and organizers, alongside dedicated opportunities for trainees through the QBI Internship Symposium, where early-career scientists present their research in a professional symposium setting.

As of July 2026, QBI has organized 48 symposia, which have featured 71 distinct UCSF faculty members, with an additional 6 planned for the second half of 2026. Collectively, these efforts reflect the series' role as both a scientific catalyst and a community-building platform, strengthening connections across the global biosciences ecosystem while supporting the next generation of researchers.



Faranak Fattahi, Isha Jain, and Balyn Zaro, QBI/Systems Biology Ireland Symposium, Dublin, 2023



QBI/Rezo Therapeutics Separating the Signal from the Noise: AI in Biology Symposium, San Francisco, 2025



QBI/Rezo Therapeutics Mass Spectrometry Symposium, San Francisco, 2024



Chromatin Symposium: From Bench to the Bedside, San Francisco, 2024



David Agard, QBI/Freie Universität Berlin Integrative Mechanistic Biology Symposium, UCSF, 2024



Lakshmi Subramanian, Psychiatric Cell Map Initiative Symposium, UCSF, 2019





Dorothea Fiedler, QBI/Freie Universität Berlin Integrative Mechanistic Biology Symposium, UCSF, 2024



Markus Ralser, QBI/Freie Universität Berlin Integrative Mechanistic Biology Symposium, 2024



Genentech Hall atrium, UCSF, 2022



Panel discussion ft. Leana King, Yanabah Jaques, Krystal Tsosie, Andrea Gomez, and Marlena Robbins, Full Circle of Native and Indigenous Scientists in Quantitative Biology Symposium, UCSF, 2025



Oliver Daumke, QBI/Freie Universität Berlin Integrative Mechanistic Biology Symposium, UCSF, 2024



Bay Area Symposium on Chemical Biology, UCSF, 2022



Elizabeth Blackburn, Quantitative Biology of the Cancer Cell Symposium, UCSF, 2020



QBI/Freie Universität Berlin Integrative Mechanistic Biology Symposium, ATWater Tavern, San Francisco, 2024



Full Circle of Native and Indigenous Scientists in Quantitative Biology Symposium, Spark Social SF, 2023



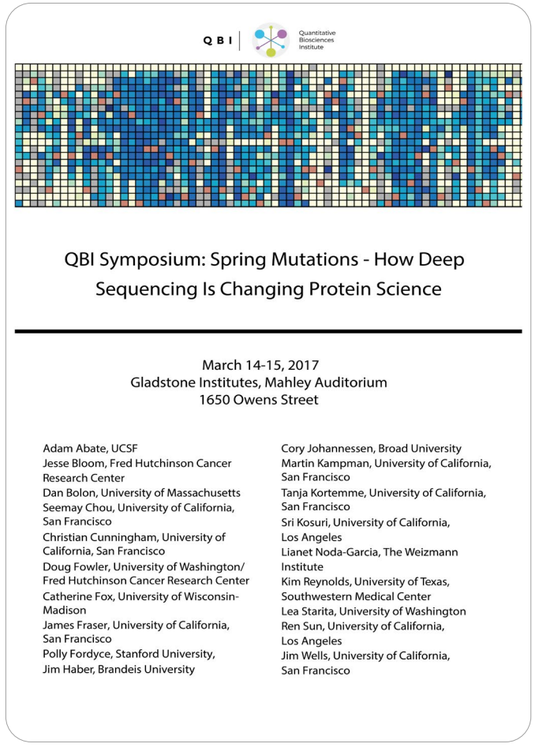
Tanja Kortemme and Nevan Krogan, Artificial Intelligence Across Biological Scales Symposium, UCSF, 2023



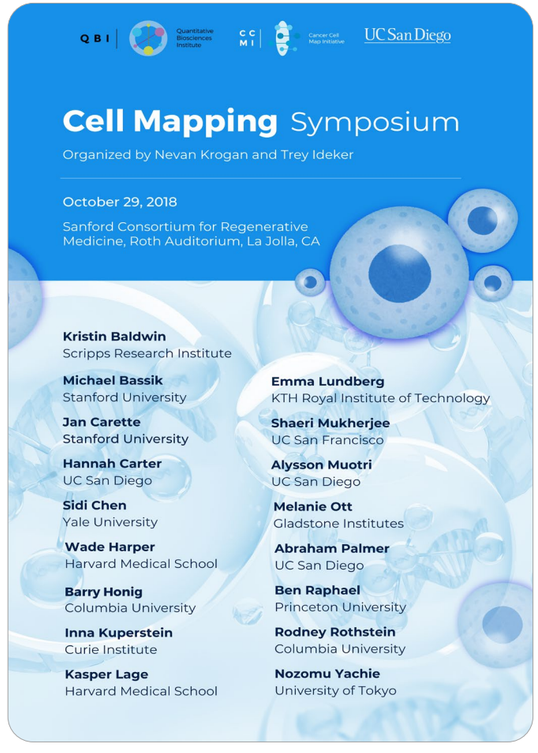
Sharmilla Majumdar, Artificial Intelligence Across Biological Scales Symposium, UCSF, 2023

Scenes from QBI symposia over the years, bringing together international speakers across diverse research areas, convening thousands of participants from both the scientific community and the public, and fostering broad scientific exchange and engagement.

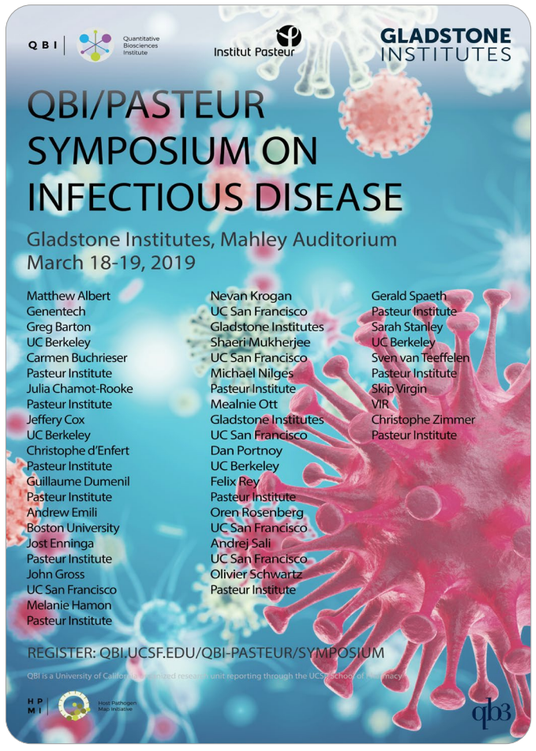
Symposia: 2017-2026













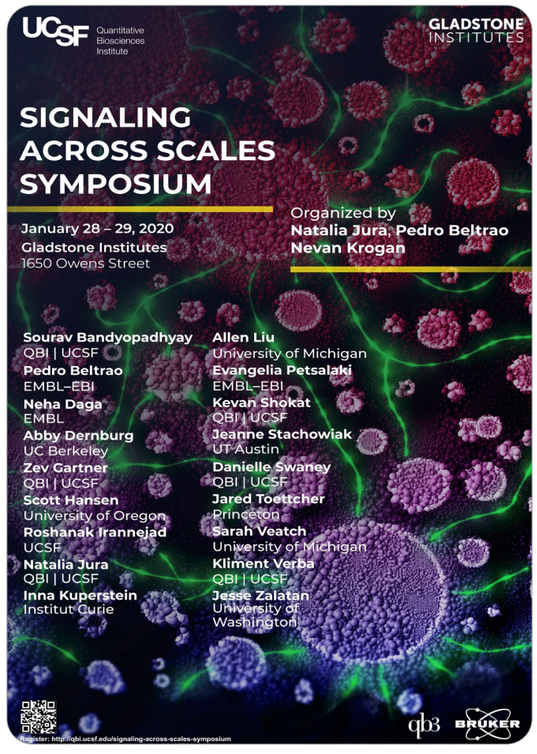





UCSF Quantitative Biosciences Institute
Institut Curie
PSL
Q-life
QBI/ INSTITUT CURIE/ Q-LIFE SYMPOSIUM
QUANTITATIVE APPROACHES TO CANCER RESEARCH
Organized by Aura Carreira, Bruno Goud, Nevan Krogan
Olivier Ayrault Institut Curie
Sourav Bandyopadhyay UCSF/QBI
Emmanuel Barillot Institut Curie/Q-life
Renata Basto Institut Curie/Q-life
Aura Carreira Institut Curie
Emmanuel Farge Institut Curie/Q-life
Jennifer Grandis UCSF/QBI
Anne Houdusse Institut Curie/Q-life
Isha Jain UCSF/QBI
Natalia Jura UCSF/QBI
Nevan Krogan UCSF/QBI/ Gladstone Institute
Rushika Perera UCSF/QBI
Leila Perie Institut Curie/Q-life
Matthieu Piel Institut Curie/Q-life
Raphael Rodriguez Institut Curie/Q-life
Davide Ruggero UCSF/QBI
Kevan Shokat UCSF/QBI
Danielle Swaney UCSF/QBI
Celine Vallot Institut Curie/Q-life
Danijela Vignjevic Institut Curie/Q-life
September 5 – 6, 2019 | Institut Curie
Amphi. C. BURG, 12 rue Lhomond – 75005 Paris
Register: qbi.ucsf.edu/qbi-curie-sep2019/
qb3

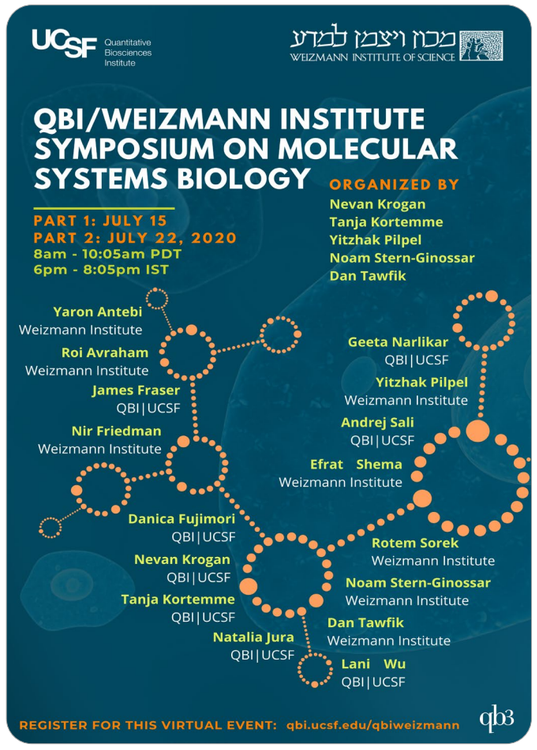

UCSF Quantitative Biosciences Institute
GLADSTONE INSTITUTES
PSYCHIATRIC CELL MAP INITIATIVE SYMPOSIUM
Organized by Jeremy Willsey, Hao Li and Nevan Krogan
Casey Gifford Gladstone Institutes UC San Francisco
Ruth Huttenhain UC San Francisco
Martin Kampmann UC San Francisco
Aimee Kao UC San Francisco
Saul Kato UC San Francisco
Mustafa Khokha Yale University
Hao Li UC San Francisco
Dan Lowenstein UC San Francisco
Frank McCormick UC San Francisco
Lennart Mucke Gladstone Institutes UC San Francisco
Tom Nowakowski UC San Francisco
Anca Pasca Stanford University
Katie Pollard Gladstone Institutes UC San Francisco
Sara Brin Rosenthal UC San Diego
Matthew State UC San Francisco
Donna Werling UW-Madison
Helen Willsey UC San Francisco
Jeremy Willsey UC San Francisco
NOVEMBER 13 – 15, 2019
GLADSTONE INSTITUTES
1650 OWENS STREET
Register: http://qbi.ucsf.edu/pcmisymposium
PCMI Psychiatric Cell Map Initiative
qb3

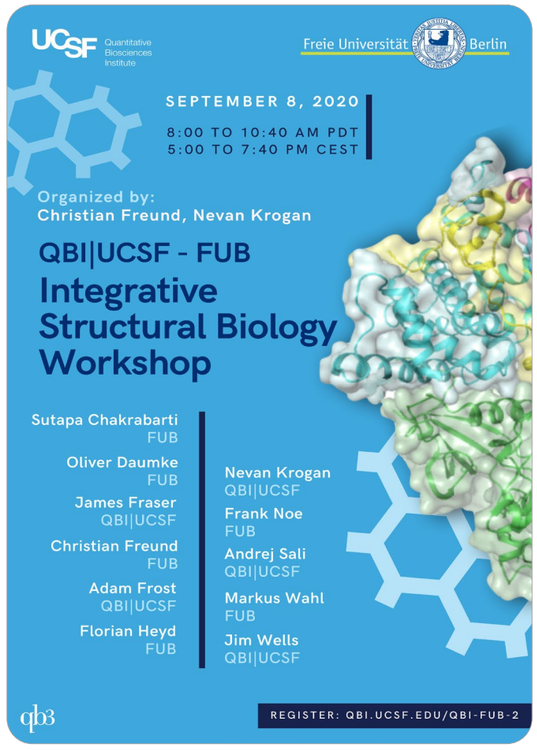

UCSF Quantitative Biosciences Institute
TEL AVIV UNIVERSITY אוניברסיטת תל אביב
QBI |UCSF – TAU SYMPOSIUM
COMPUTATIONAL BIOLOGY & DRUG DISCOVERY
Organized by Nevan Krogan, Ron Shamir and Ehud Gazit
December 4 – 5, 2019
9:00 am – 5:00 pm
The Steinhardt Museum of Natural History, Tel Aviv University
Nadav Ahituv QBI | UCSF
Steven Altschuler QBI | UCSF
Roey Amir TAU
Michelle Arkin QBI | UCSF
Gil Ast TAU
Karen Avraham TAU
Sourav Bandyopadhyay QBI | UCSF
Nir Ben-Tal TAU
Judith Berman TAU
Elhanan Borenstein TAU
Ran Elkon TAU
James Fraser QBI | UCSF
Irit Gat-Viks TAU
Tanja Kortemme QBI | UCSF
Nevan Krogan QBI | UCSF
Martin Kupiec TAU
Saharon Rosset TAU
Andrej Sali QBI | UCSF
Ronit Satchi-Fainaro TAU
Rada Savic QBI | UCSF
Doron Shabat TAU
Ron Shamir TAU
Roded Sharan TAU
Yoel Shkolnisky TAU
Noam Shomron TAU
Adi Stern TAU
Jack Taunton QBI | UCSF
Tamir Tuller TAU
Miguel Weil TAU
Haim Wolfson TAU
Lani Wu QBI | UCSF
Jimmie Ye UCSF
Register: http://bit.ly/2C5k3GU
qb3
Edmond J. Safra Center for Bioinformatics
BLAVATNIK CENTER for Drug Discovery

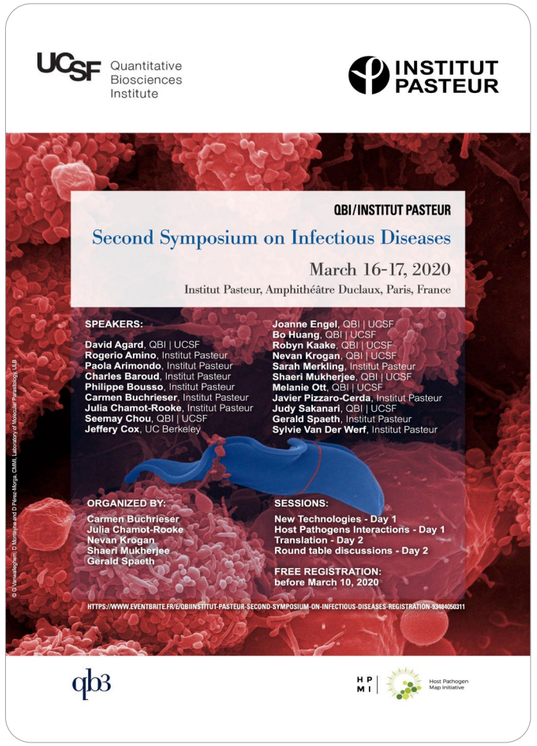

UCSF Quantitative Biosciences Institute
GLADSTONE INSTITUTES
SIGNALING ACROSS SCALES SYMPOSIUM
January 28 – 29, 2020
Gladstone Institutes
1650 Owens Street
Organized by
Natalia Jura, Pedro Beltrao
Nevan Krogan
Sourav Bandyopadhyay QBI | UCSF
Pedro Beltrao EMBL–EBI
Neha Daga EMBL
Abby Dernburg UC Berkeley
Zev Gartner QBI | UCSF
Scott Hansen University of Oregon
Roshanak Irannejad UCSF
Natalia Jura QBI | UCSF
Inna Kuperstein Institut Curie
Allen Liu University of Michigan
Evangelia Petsalaki EMBL–EBI
Kevan Shokat QBI | UCSF
Jeanne Stachowiak UT Austin
Danielle Swaney QBI | UCSF
Jared Toettcher Princeton
Sarah Veatch University of Michigan
Kliment Verba QBI | UCSF
Jesse Zalatan University of Washington
Register: http://qbi.ucsf.edu/signaling-across-scales-symposium
qb3
BRUKER


UCSF Quantitative Biosciences Institute
QUANTITATIVE BIOLOGY OF THE CANCER CELL SYMPOSIUM
Organized by
Davide Ruggero
Sourav Bandyopadhyay
February 24
February 25 , 2020
Byers Auditorium
Ruedi Aebersold ETH Zurich
Reuven Agami Netherlands Cancer Institute
Samuel Bakhoum Memorial Sloan Kettering Cancer Center
Sourav Bandyopadhyay UC San Francisco
Maria Barna Stanford University
Rene Bernards Netherlands Cancer Institute
Andrea Bild City of Hope
Angela Brooks UC Santa Cruz
Heather Christofk UC Los Angeles
Ralph DeBerardinis University of Texas, Southwestern
Hani Goodarzi UC San Francisco
Or Gozani Stanford University
Emma Lundberg Science for Life Laboratory
Christine Mayr Memorial Sloan Kettering Cancer Center
Rushika Perera UC San Francisco
Davide Ruggero UC San Francisco
Robert Schneider New York University
Raffaella Sordella Cold Spring Harbor Laboratory
Stephen Taylor University of Manchester
Laura Van't veer UC San Francisco
Kris Wood Duke University
Register: http://qbi.ucsf.edu/cancercellsymposium
BRUKER
nanoString TECHNOLOGIES
qb3


UCSF Quantitative Biosciences Institute
QCRG COVID-19 RESEARCH SYMPOSIUM
Elizabeth Fischer NIH/NIAID
Andrea Gamarnik Fundación Instituto Leloir
Adolfo Garcia-Sastre Icahn School of Medicine at Mount Sinai Hospital
Christiane Gerke Institut Pasteur
Christian Happi Redeemer's University
Nevan Krogan QBI|UCSF
Melanie Ott QBI|UCSF Gladstone Institutes
Devi SenGupta Gilead Sciences
Kevan Shokat QBI|UCSF
Viviana Simon Icahn School of Medicine at Mount Sinai Hospital
Adi Stern Tel Aviv University
Danielle Swaney QBI|UCSF
JOIN US FOR A VIRTUAL SYMPOSIUM
JUNE 19, 2020
8 AM - 12 PM
REGISTER AND ACCESS ZOOM LINK
https://qbi.ucsf.edu/qcrgsymposium
BRUKER
ThermoFisher SCIENTIFIC
HPMI Host Pathogen Map Initiative
qb3


UCSF Quantitative Biosciences Institute
מכון ויצמן למדע WEIZMANN INSTITUTE OF SCIENCE
QBI/WEIZMANN INSTITUTE SYMPOSIUM ON MOLECULAR SYSTEMS BIOLOGY
ORGANIZED BY
Nevan Krogan
Tanja Kortemme
Yitzhak Pilpel
Noam Stern-Ginossar
Dan Tawfik
PART 1: JULY 15
PART 2: JULY 22, 2020
8am - 10:05am PDT
6pm - 8:05pm IST
Yaron Antebi Weizmann Institute
Roi Avraham Weizmann Institute
James Fraser QBI|UCSF
Nir Friedman Weizmann Institute
Danica Fujimori QBI|UCSF
Nevan Krogan QBI|UCSF
Tanja Kortemme QBI|UCSF
Natalia Jura QBI|UCSF
Geeta Narlikar QBI|UCSF
Yitzhak Pilpel Weizmann Institute
Andrej Sali QBI|UCSF
Efrat Shema Weizmann Institute
Rotem Sorek Weizmann Institute
Noam Stern-Ginossar Weizmann Institute
Dan Tawfik Weizmann Institute
Lani Wu QBI|UCSF
REGISTER FOR THIS VIRTUAL EVENT: qbi.ucsf.edu/qbiweizmann
qb3

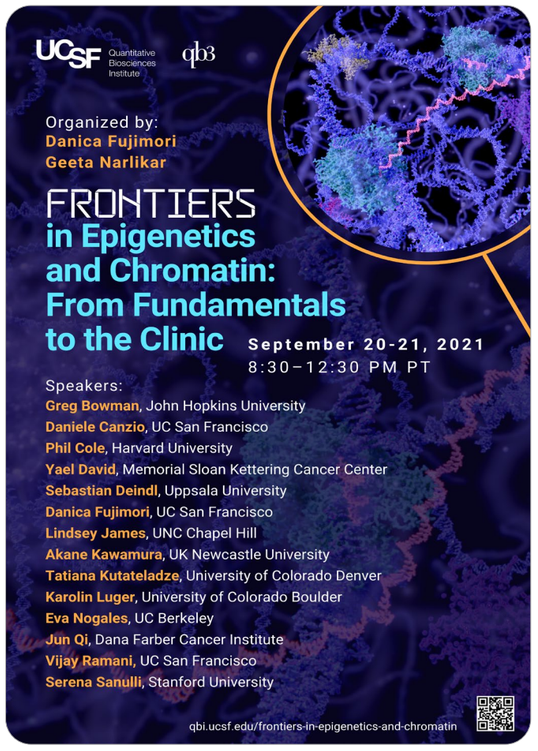

UCSF Quantitative Biosciences Institute
Freie Universität Berlin
SEPTEMBER 8, 2020
8:00 TO 10:40 AM PDT
5:00 TO 7:40 PM CEST
Organized by:
Christian Freund, Nevan Krogan
QBI|UCSF - FUB
Integrative Structural Biology Workshop
Sutapa Chakrabarti FUB
Oliver Daumke FUB
James Fraser QBI|UCSF
Christian Freund FUB
Adam Frost QBI|UCSF
Florian Heyd FUB
Nevan Krogan QBI|UCSF
Frank Noe FUB
Andrej Sali QBI|UCSF
Markus Wahl FUB
Jim Wells QBI|UCSF
qb3
REGISTER: QBI.UCSF.EDU/QBI-FUB-2


UCSF Quantitative Biosciences Institute
INSTITUT PASTEUR
QBI/INSTITUT PASTEUR
Second Symposium on Infectious Diseases
March 16-17, 2020
Institut Pasteur, Amphithéâtre Duclaux, Paris, France
SPEAKERS:
David Agard, QBI | UCSF
Rogerio Amino, Institut Pasteur
Paola Arimondo, Institut Pasteur
Charles Baroud, Institut Pasteur
Philippe Bousso, Institut Pasteur
Carmen Buchrieser, Institut Pasteur
Julia Chamot-Rooke, Institut Pasteur
Seemay Chou, QBI | UCSF
Jeffery Cox, UC Berkeley
Joanne Engel, QBI | UCSF
Bo Huang, QBI | UCSF
Robyn Kaake, QBI | UCSF
Nevan Krogan, QBI | UCSF
Sarah Merkling, Institut Pasteur
Shaeri Mukherjee, QBI | UCSF
Melanie Ott, QBI | UCSF
Javier Pizzaro-Cerda, Institut Pasteur
Judy Sakanari, QBI | UCSF
Gerald Spaeth, Institut Pasteur
Sylvie Van Der Werf, Institut Pasteur
ORGANIZED BY:
Carmen Buchrieser
Julia Chamot-Rooke
Nevan Krogan
Shaeri Mukherjee
Gerald Spaeth
SESSIONS:
New Technologies - Day 1
Host Pathogens Interactions - Day 1
Translation - Day 2
Round table discussions - Day 2
FREE REGISTRATION:
before March 10, 2020
HTTPS://WWW.EVENTBRITE.FR/E/QBIINSTITUT-PASTEUR-SECOND-SYMPOSIUM-ON-INFECTIOUS-DISEASES-REGISTRATION-93484250311
qb3
HPMI
Host Pathogen Map Initiative


UCSF Quantitative Biosciences Institute
SYSTEMS BIOLOGY IRELAND
ORGANIZED BY:
Walter Kolch
Nevan Krogan
QBI/SBI SYMPOSIUM ON MOLECULAR NETWORKS OF CANCER AND OTHER DISEASES
Michelle Arkin
QBI | UCSF
Alan Ashworth
QBI | UCSF
Trever Bivona
QBI | UCSF
Donal Brennan
SBI | UCD
Jonathan Bond
SBI | UCD
Charles Craik
QBI | UCSF
Liam Gallagher
UCD
Kathy Giacomini
QBI | UCSF
Christina Kiel
SBI | UCD
Antoinette Perry
UCD
Maria Prencipe
UCD
Susan Quinn
UCD
Oleksii Ruhklenko
SBI | UCD
Colm Ryan
SBI | UCD
Kevan Shokat
QBI | UCSF
Danielle Swaney
QBI | UCSF
Ariane Watson
SBI | UCD
Bayln Zaro
QBI | UCSF/CVRI
OCTOBER 29–30, 2020
8-10 AM PDT
4-6 PM IST
REGISTER FOR THIS EVENT:
qbi.ucsf.edu/qbi-sbi-symposium
qb3

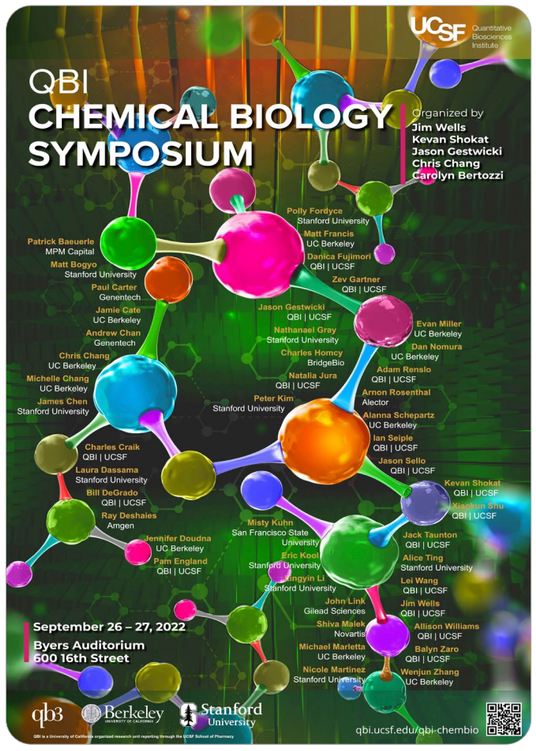

UCSF Quantitative Biosciences Institute
AMBASSADE DE FRANCE AUX ÉTATS-UNIS
QBI/ SCIENTIFIC DEPARTMENT OF THE EMBASSY OF FRANCE IN THE US
AI, BIG DATA, & HEALTH
NOVEMBER 9 - 10 | 12-13, 2020
VIRTUAL
Precision Medicine
Imaging
Identifying common bimolecular mechanisms
Protein folding & interactions
This science fair aims to bring together different actors from industry, academia and government from the United States and France to talk about Big Data and AI applications for health.
qbi.ucsf.edu/qbi-frenchconsulate-sciencefair
qb3


UCSF Quantitative Biosciences Institute
PSL QLife
Second-Annual QBI|UCSF - PSL|QLife Symposium
Complex Biological Phenomenon and Quantitative Approaches
December 1-2, 2020
8:00 am PT | 5:00 pm CET
Organized by Drs. Bruno Goud & Nevan Krogan
David Agard
QBI|UCSF
William DeGrado
QBI|UCSF
Sophie Dumont
QBI|UCSF
Hana El-Samad
QBI|UCSF
Olivier Espeli
Collège de France
Gilles Gasser
Chimie ParisTech
PSL University
Michael Keiser
QBI|UCSF
Wallace Marshall
QBI|UCSF
Geeta Narlikar
QBI|UCSF
Leïla Perié
Institut Curie
Clotilde Policar
Ecole Normale Supérieure
PSL University
Fekrije Selimi
Collège de France
Nathalie Spassky
Ecole Normale Supérieure
Maria Teresa Teixeira
IBPC
Marie-Hélène Verlhac
CIRB | Collège de France
Lani Wu
QBI|UCSF
qbi.ucsf.edu/qbi-psl-qlife-2020
horizon qb3


UCSF Quantitative Biosciences Institute
qb3
Organized by:
Danica Fujimori
Geeta Narlikar
FRONTIERS in Epigenetics and Chromatin: From Fundamentals to the Clinic
September 20-21, 2021
8:30–12:30 PM PT
Speakers:
Greg Bowman, John Hopkins University
Daniele Canzio, UC San Francisco
Phil Cole, Harvard University
Yael David, Memorial Sloan Kettering Cancer Center
Sebastian Deindl, Uppsala University
Danica Fujimori, UC San Francisco
Lindsey James, UNC Chapel Hill
Akane Kawamura, UK Newcastle University
Tatiana Kutateladze, University of Colorado Denver
Karolin Luger, University of Colorado Boulder
Eva Nogales, UC Berkeley
Jun Qi, Dana Farber Cancer Institute
Vijay Ramani, UC San Francisco
Serena Sanulli, Stanford University
qbi.ucsf.edu/frontiers-in-epigenetics-and-chromatin


UCSF Quantitative Biosciences Institute
A FULL CIRCLE OF
NATIVE AND INDIGENOUS SCIENTISTS IN QUANTITATIVE BIOLOGY
NOVEMBER 18–19, 2021
10:00 AM - 5:00 PM
Rosanna Alegado
University of Hawaii
Matt Anderson
Ohio State College of Medicine
Keolu Fox
University of California, San Diego
Andrea Gomez
University of California, Berkeley
Kat Milligan-Myhre
University of Connecticut
Clifton Poodry
University of Oregon;
University of California, Santa Cruz
Judith Simcox
University of Wisconsin
Margaret Werner-Washburne
University of New Mexico
Native Quantitative Biologist Trainees
REGISTER: qbi.ucsf.edu/native-and-indigenous-symposium
UCSF
hhmi Howard Hughes Medical Institute


UCSF Quantitative Biosciences Institute
CONSULAT GÉNÉRAL DE FRANCE A SAN FRANCISCO
AMBASSADE DE FRANCE AUX ÉTATS-UNIS
QBI/ SCIENTIFIC DEPARTMENT OFTHE EMBASSY OF FRANCE IN THE US PRESENT
RESHAPING SCIENCE & HEALTH
by Collaborating Between Borders and Disciplines
November 30 –December 3, 2021
The aim of the conference is to feature different actors from industry, academia, and government from the United States and France to discuss how strengthening the interfaces among experts in different disciplines and countries impacts the progress of healthcare.
qbi.ucsf.edu/qbi-frenchconsulate-sciencefair2021
qb3


UCSF Quantitative Biosciences Institute
QBI
CHEMICAL BIOLOGY SYMPOSIUM
Organized by
Jim Wells
Kevan Shokat
Jason Gestwicki
Chris Chang
Carolyn Bertozzi
Polly Fordyce
Stanford University
Matt Francis
UC Berkeley
Danica Fujimori
QBI | UCSF
Zev Gartner
QBI | UCSF
Jason Gestwicki
QBI | UCSF
Nathanael Gray
Stanford University
Charles Hornoy
BridgeBio
Natalia Jura
QBI | UCSF
Peter Kim
Stanford University
Evan Miller
UC Berkeley
Dan Nomura
UC Berkeley
Adam Renslo
QBI | UCSF
Arnon Rosenthal
Alector
Alanna Schepartz
UC Berkeley
Ian Seiple
QBI | UCSF
Jason Sello
QBI | UCSF
Kevan Shokat
QBI | UCSF
Jonathan Shu
QBI | UCSF
Jack Taunton
QBI | UCSF
Alice Ting
Stanford University
Lei Wang
QBI | UCSF
Jim Wells
QBI | UCSF
Allison Williams
QBI | UCSF
Balyn Zaro
QBI | UCSF
Wenjun Zhang
UC Berkeley
Patrick Baeuerle
MPM Capital
Matt Bogyo
Stanford University
Paul Carter
Genentech
Jamie Cate
UC Berkeley
Andrew Chan
Genentech
Chris Chang
UC Berkeley
Michelle Chang
UC Berkeley
James Chen
Stanford University
Charles Craik
QBI | UCSF
Laura Dassama
Stanford University
Bill DeGrado
QBI | UCSF
Ray Deshaies
Amgen
Jennifer Doudna
UC Berkeley
Pam England
QBI | UCSF
Misty Kuhn
San Francisco State University
Eric Kool
Stanford University
Jingyin Li
Stanford University
John Link
Gilead Sciences
Shiva Malek
Novartis
Michael Marletta
UC Berkeley
Nicole Martinez
Stanford University
September 26 – 27, 2022
Byers Auditorium
500 16th Street
qb3
Berkeley
Stanford University
qbi.ucsf.edu/qbi-chembio


UCSF Quantitative Biosciences Institute
SECOND ANNUAL
FULL CIRCLE OF NATIVE AND INDIGENOUS SCIENTISTS IN QUANTITATIVE BIOLOGY
JANUARY 26-27, 2023
Faith Bowman
University of Utah
David Burgess
Boston College
Jycole Bush
Fort Lewis College
Kristy Carpenter
Stanford University
Lucas Cheadle
Cold Spring Harbor Laboratory
Katrina Claw
University of Colorado Anschutz Medical Campus
Wilfred Denetclaw
San Francisco State University
Jaime Fuentes
University of Michigan
Yanabah Jaques
UC Berkeley
Leana King
UC Berkeley
Joslynn Lee
Fort Lewis College
James Letts
UC Davis
Katelyn McKown
Stanford University
Kristy Red-Horse
Stanford University; Howard Hughes Medical Institute
Carissa Sherman
University of Colorado Anschutz Medical Campus
GILEAD
CZ BIOHUB
UCSF

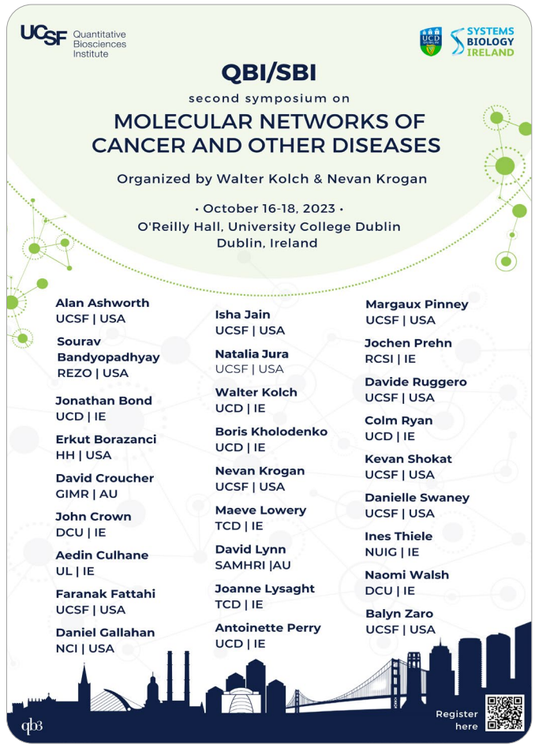

UCSF Quantitative Biosciences Institute
INSTITUT PASTEUR
Institut Pasteur – Quantitative Biosciences Institute
Mini Symposium on Emerging Infectious Diseases
Organized by Carla Saleh, Nevan Krogan
February 28, 2023 | 9:00 AM – 12:00 PM
Byers Auditorium, UCSF Mission Bay
Caroline Demangel
Institut Pasteur
Melanie Hamon
Institut Pasteur
Shaeri Mukherjee
QBI | UCSF
Melanie Ott
QBI | UCSF
George Scangos
VIR
Olivier Schwartz
Institut Pasteur
Gerald Spaeth
Institut Pasteur
Kliment Verba
QBI | UCSF
VIEW AGENDA


INSTITUT PASTEUR
UCSF Quantitative Biosciences Institute
APRIL 12-13, 2023
Institut Pasteur, Amphitheatre Francois Jacob
Paris, France
INSTITUT PASTEUR/ UCSF QBI
third annual
SYMPOSIUM ON INFECTIOUS DISEASES
Organized by Carla Saleh & Nevan Krogan
Aude Bernheim
Institut Pasteur
Laurent Debarbieux
Institut Pasteur
William Degrado
QBI|UCSF
Darragh Duffy
Institut Pasteur
Iuliana Ene
Institut Pasteur
Lucy Glover
Institut Pasteur
John Gross
QBI|UCSF
Bolyn Hubby
Vir Biotechnology
Robyn Kaake
QBI|UCSF
Marc Lecuit
Institut Pasteur
Liliana Mancio
Institut Pasteur
Sarah Hélène Merkling
Institut Pasteur
Shaeri Mukherjee
QBI|UCSF
Laurence Mulard
Institut Pasteur
Lluis Quintana-Murci
Institut Pasteur
Celine Perier
Institut Pasteur
Carla Saleh
Institut Pasteur
Rada Savic
QBI|UCSF
Jason Sello
QBI|UCSF
Ian Sieple
QBI|UCSF
Kliment Verba
QBI|UCSF
Balyn Zaro
QBI|UCSF
REGISTER
LabEx IBEID


UCSF Quantitative Biosciences Institute
TEL AVIV UNIVERSITY
MAY 16-17, 2023
UCSF MISSION BAY
Byers Auditorium, Genentech Hall
9:00 AM
QBI UCSF – TAU
second symposium on
COMPUTATIONAL BIOLOGY & DRUG DISCOVERY
Organized by:
Kathy Giacomini
Nevan Krogan
Aldema Sas-Chen
Ron Shamir
Nadal Ahituv
QBI|UCSF
Michelle Arkin
QBI|UCSF
Nir Ben-Tal
TAU
Elhanan Borenstein
TAU
Ignacia Echeverria
QBI|UCSF
Ran Elkon
TAU
James Fraser
QBI|UCSF
Ehud Gazit
TAU
Kathy Giacomini
QBI|UCSF
Tzachi Hagai
TAU
Yoni Haitin
TAU
Tanja Kortemme
QBI|UCSF
Martin Kupiec
TAU
Vered Padler-Karavani
TAU
Margaux Pinney
QBI|UCSF
Rina Rosin-Arbesfeld
TAU
Aldema Sas-Chen
TAU
Ron Shamir
TAU
Brian Shoichet
QBI|UCSF
Noam Shomron
TAU
Marina Sirota
QBI|UCSF
Tamir Tuller
TAU
REGISTER

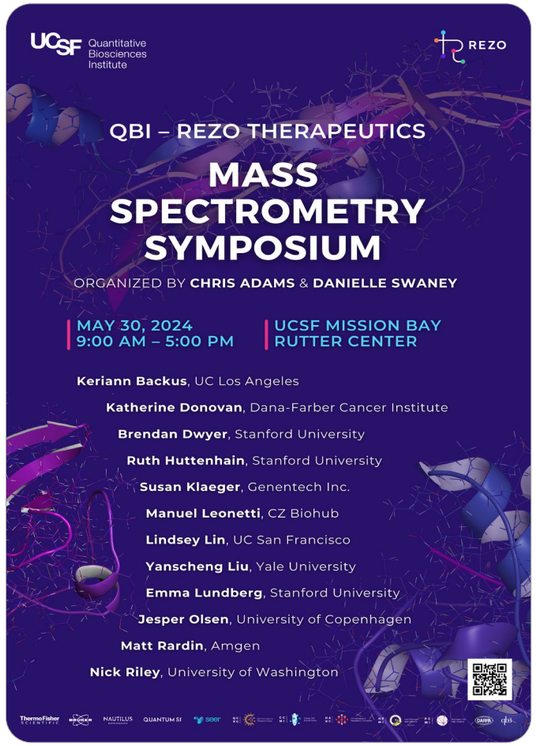

UCSF Quantitative Biosciences Institute
QBI INTERNSHIP SYMPOSIUM
JOLIE BILODEAU
Gordan Lab
ANJELO EVANS
Hultquist Lab
ABHIMANYU GHOSH
Fraser Lab
NHI NHI LY
Fraser Lab
BELEN MAGUINA VELOZ
Fujimori Lab
ANGELICA MARQUEZ
Krogan Lab
FELIPE MORFIN
Nagarajan Lab
SIMRUN PARULEKAR
Marson Lab
MISHELLE TABORGA
Krogan Lab
JANE TON
Kastner Lab
VI TRUONG
Theodoris Lab
AUGUST 17, 2023 | 1 – 4 PM
BYERS AUDITORIUM, GENENTECH HALL & ZOOM
Join us afterwards for a reception. Light refreshments will be served.
REGISTRATION & EVENT DETAILS
HARC HIV Accessory & Regulatory Complexes
CCMI Cancer Cell Map Initiative
QCRG QBI Coronavirus Research Group


UCSF Quantitative Biosciences Institute
Optimizing the Transition From Science to Drugs
An event with expert, renowned speakers who will contribute to candid discussions between academia, industry and venture capitalists.
Vineeta Agarwala, MD, PhD
General Partner, a16z
Hal Barron, MD
CEO, Altos Lab
Jennifer Doudna, PhD
Professor, UC Berkeley
Matt Jacobson, PhD
Professor, UCSF
Nevan Krogan, PhD
Director, QBI
Ron Leuty
Senior Reporter, SF Business Times
Catherine Lucey, MD
Executive Vice Chancellor & Provost, UCSF
George Scangos, PhD
Biotech Veteran
Carol Suh
Partner, ARCH Venture Partners
Herbert "Skip" Virgin, MD, PhD
Professor, Washington University
October 6, 2023 | 10:00 AM – 1:00 PM PT
Mission Bay Conference Center, UCSF
a16z Bio+Health
LEARN MORE AND REGISTER:

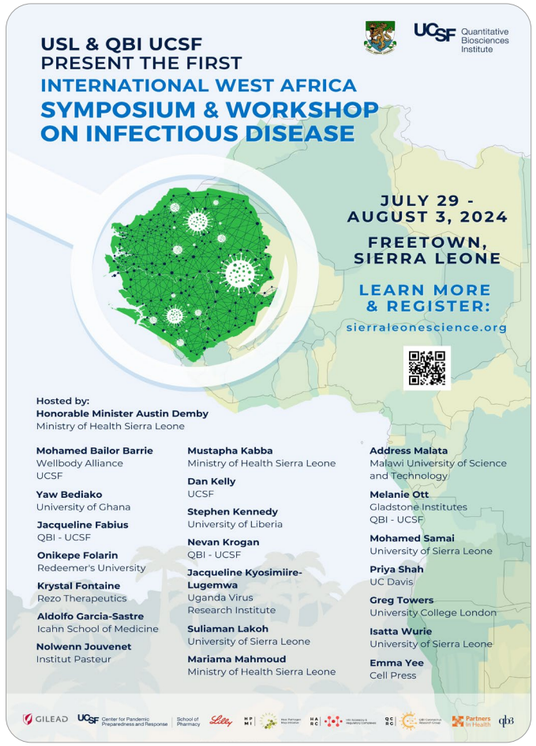

UCSF Quantitative Biosciences Institute
SYSTEMS BIOLOGY IRELAND
QBI/SBI
second symposium on
MOLECULAR NETWORKS OF CANCER AND OTHER DISEASES
Organized by Walter Kolch & Nevan Krogan
• October 16-18, 2023 •
O'Reilly Hall, University College Dublin
Dublin, Ireland
Alan Ashworth
UCSF | USA
Sourav Bandyopadhyay
REZO | USA
Jonathan Bond
UCD | IE
Erkut Borazanci
HH | USA
David Croucher
GIMR | AU
John Crown
DCU | IE
Aedin Culhane
UL | IE
Faranak Fattahi
UCSF | USA
Daniel Gallahan
NCI | USA
Isha Jain
UCSF | USA
Natalia Jura
UCSF | USA
Walter Kolch
UCD | IE
Boris Kholodenko
UCD | IE
Nevan Krogan
UCSF | USA
Maeve Lowery
TCD | IE
David Lynn
SAMHRI |AU
Joanne Lysaght
TCD | IE
Antoinette Perry
UCD | IE
Margaux Pinney
UCSF | USA
Jochen Prehn
RCSI | IE
Davide Ruggero
UCSF | USA
Colm Ryan
UCD | IE
Kevan Shokat
UCSF | USA
Danielle Swaney
UCSF | USA
Ines Thiele
NUIG | IE
Naomi Walsh
DCU | IE
Balyn Zaro
UCSF | USA
Register here


UCSF Quantitative Biosciences Institute
PSL
eLife
INSTITUT PASTEUR
ARTIFICIAL INTELLIGENCE ACROSS BIOLOGICAL SCALES SYMPOSIUM
December 5 – 6, 2023
UCSF Mission Bay
Organized by:
Laura Cantini
Bruno Goud
Tanja Kortemme
Nevan Krogan
Kliment Verba
Thomas Walter
Jean-Baptiste Masson
Institut Pasteur
Ali Bashir
Rezo Therapeutics
Massimiliano Bonomi
Institut Pasteur
Irène Buvat
Institut Curie
Laurence Calzone
Institut Curie
Laura Cantini
Institut Pasteur/PSL
Jan Christoph
UCSF
Steve Finkbeiner
UCSF/ Gladstone Institutes
Michael Keiser
QBI - UCSF
Tanja Kortemme
QBI - UCSF
Sharmila Majumdar
QBI - UCSF
Philippe Nghe
ESPCI Paris - PSL
Hervé Turlier
Collège de France
Kliment Verba
QBI - UCSF
Aleksandra Walczak
Ecole Normale Supérieure
Thomas Walter
Mines Paris - PSL
EVENT DETAILS

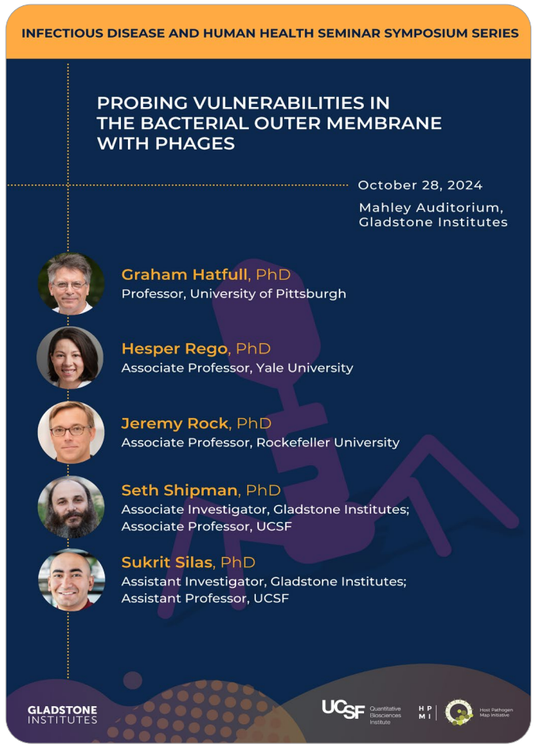

UCSF Quantitative Biosciences Institute
HealthAI
2023 SYMPOSIUM
A French-American innovation event presented by QBI UCSF and the Embassy of France in the United States
DECEMBER 6 & 7 | UCSF MISSION BAY
Laurence Calzone, Institut Curie
Ron Dror, Stanford University
Hubert Etienne, Meta
Antoine Forget, UCSF
Keolu Fox, UCSD/Indigenous Futures Institute
James Fraser, UCSF
Kathy Giacomini, UCSF
Lisiena Hysenaj, Parvus Therapeutics
Michael Keiser, UCSF
Hocine Lourdani, Deepcell
Julien Mamet, Core Biotherapeutics
Dereck Paul, Glass Health
Valentina Pedoia, UCSF
Jean-Frédéric Petit-Nivard, Owkin
Mina Pichavant, HIMC Stanford University
Romain Piraccio, UCSF
Zahra Timsah, IQVIA
Thomas Walter, Institut Curie
qbi.ucsf.edu/francoamerican-healthai


UCSF Quantitative Biosciences Institute
REZO
QBI – REZO THERAPEUTICS
MASS SPECTROMETRY SYMPOSIUM
ORGANIZED BY CHRIS ADAMS & DANIELLE SWANEY
MAY 30, 2024
9:00 AM – 5:00 PM
UCSF MISSION BAY
RUTTER CENTER
Keriann Backus, UC Los Angeles
Katherine Donovan, Dana-Farber Cancer Institute
Brendan Dwyer, Stanford University
Ruth Huttenhain, Stanford University
Susan Klaeger, Genentech Inc.
Manuel Leonetti, CZ Biohub
Lindsey Lin, UC San Francisco
Yanscheng Liu, Yale University
Emma Lundberg, Stanford University
Jesper Olsen, University of Copenhagen
Matt Rardin, Amgen
Nick Riley, University of Washington

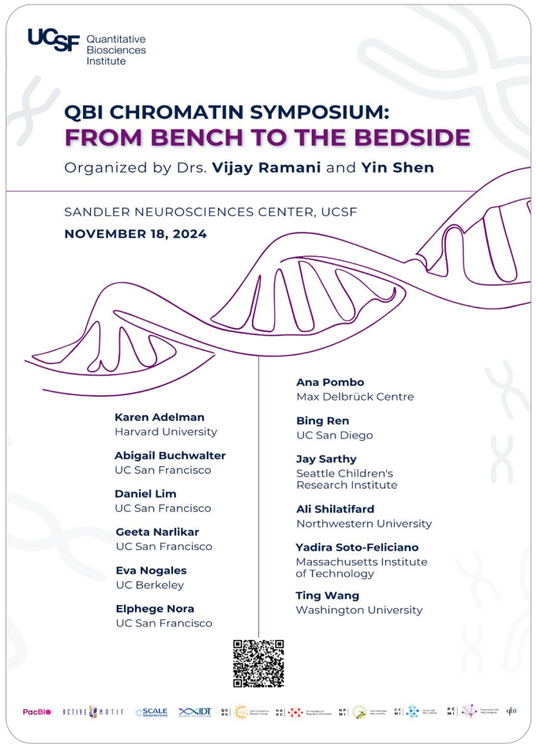

Freie Universität Berlin
UCSF Quantitative Biosciences Institute
MDC
CHARITÉ
MAX PLANCK INSTITUTE FOR MOLECULAR GENETICS
QBI – BERLIN
INTEGRATIVE MECHANISTIC BIOLOGY MEETING
JUNE 4 – 5, 2024
UCSF MISSION BAY, SAN FRANCISCO
Organized by Christian Freund, Natalia Jura, and Nevan Krogan
Eva Absmeier, FU Berlin
David Agard, QBI - UCSF
Michelle Arkin, QBI - UCSF
Francesca Bottanelli, FU Berlin
Cecilia Clementi, FU Berlin
Oliver Daumke, MDC
Bill DeGrado, QBI - UCSF
Dorothea Fiedler, FMP
Christian Freund, FU Berlin
Volker Haucke, FMP
Natalia Jura, QBI - UCSF
Einar Krogsaeter, QBI - UCSF
Fan Liu, FMP
Aashish Manglik, QBI - UCSF
Dan Minor, QBI - UCSF
Markus Ralser, Charité
Stephan Sigrist, FU Berlin
Daniel Southworth, QBI - UCSF
Jeannette Tenthorey, QBI - UCSF
Kliment Verba, QBI - UCSF
Jim Wells, QBI - UCSF
Catera Wilder, QBI - UCSF
Allison Williams, QBI - UCSF


USL & QBI UCSF
PRESENT THE FIRST
INTERNATIONAL WEST AFRICA
SYMPOSIUM & WORKSHOP
ON INFECTIOUS DISEASE
UCSF Quantitative Biosciences Institute
JULY 29 - AUGUST 3, 2024
FREETOWN, SIERRA LEONE
LEARN MORE & REGISTER:
sierraleonescience.org
Hosted by:
Honorable Minister Austin Demby
Ministry of Health Sierra Leone
Mohamed Bailor Barrie, Wellbody Alliance, UCSF
Yaw Bediako, University of Ghana
Jacqueline Fabius, QBI - UCSF
Onikepe Folarin, Redeemer's University
Krystal Fontaine, Rezo Therapeutics
Aldolfo Garcia-Sastre, Icahn School of Medicine
Nolwenn Jouvenet, Institut Pasteur
Mustapha Kabba, Ministry of Health Sierra Leone
Dan Kelly, UCSF
Stephen Kennedy, University of Liberia
Nevan Krogan, QBI - UCSF
Jacqueline Kyosimiire-Lugemwa, Uganda Virus Research Institute
Suliaman Lakoh, University of Sierra Leone
Mariama Mahmoud, Ministry of Health Sierra Leone
Address Malata, Malawi University of Science and Technology
Melanie Ott, Gladstone Institutes, QBI - UCSF
Mohamed Samai, University of Sierra Leone
Priya Shah, UC Davis
Greg Towers, University College London
Isatta Wurie, University of Sierra Leone
Emma Yee, Cell Press


UCSF Quantitative Biosciences Institute
QBI INTERNSHIP SYMPOSIUM
AUGUST 15 | 1:00 – 4:30 PM
BYERS AUDITORIUM, UCSF
2024
JUDITH ADOMAKO, Hultquist Lab
GRACIE BITTING, Gross Lab
CHARLOTTE CARMANY, Ruggero Lab
MATTHEW CHEKAY, Krogan Lab
COCO CHIANG, QBI Intern
MARCO MARTINS GAMA, Krogan Lab
IDAN KASHANI, Fraser Lab
JUSTICE LU, Sali Lab
ISA MAHMOOD, Krogan Lab
RISHIMA TEWARI, Krogan Lab
ALLIE WILLIS, Krogan Lab
Join us afterwards for a reception. Light refreshments will be served.


INFECTIOUS DISEASE AND HUMAN HEALTH SEMINAR SYMPOSIUM SERIES
PROBING VULNERABILITIES IN THE BACTERIAL OUTER MEMBRANE WITH PHAGES
October 28, 2024
Mahley Auditorium, Gladstone Institutes
Graham Hatfull, PhD
Professor, University of Pittsburgh
Hesper Rego, PhD
Associate Professor, Yale University
Jeremy Rock, PhD
Associate Professor, Rockefeller University
Seth Shipman, PhD
Associate Investigator, Gladstone Institutes; Associate Professor, UCSF
Sukrit Silas, PhD
Assistant Investigator, Gladstone Institutes; Assistant Professor, UCSF
GLADSTONE INSTITUTES
UCSF Quantitative Biosciences Institute


UCSF Quantitative Biosciences Institute
UNIVERSITY OF TORONTO
PRIME NEXT-GENERATION PRECISION MEDICINE
QBI UCSF – PRiME joint symposium on
QUANTITATIVE APPROACHES TO DRUG DISCOVERY & PRECISION MEDICINE
Organized by Nevan Krogan, Brian Shoichet, Molly Shoichet
Cheryl Arrowsmith, PRiME – U of T / SGC
Gary Bader, PRiME – U of T
Robert Batey, PRiME – U of T
Michael Brudno, PRiME – U of T
Carolyn Cummins, PRiME – U of T
James Fraser, QBI – UCSF
Nevan Krogan, QBI – UCSF
Tanja Kortemme, QBI – UCSF
Brian Shoichet, QBI – UCSF
Molly Shoichet, PRiME – U of T
Matthew State, QBI – UCSF
David Uehling, PRiME – U of T / OICR
Lani Wu, QBI – UCSF
Balyn Zaro, QBI – UCSF
NOVEMBER 8, 2024
UCSF MISSION BAY, SAN FRANCISCO


UCSF Quantitative Biosciences Institute
QBI CHROMATIN SYMPOSIUM:
FROM BENCH TO THE BEDSIDE
Organized by Drs. Vijay Ramani and Yin Shen
SANDLER NEUROSCIENCES CENTER, UCSF
NOVEMBER 18, 2024
Karen Adelman, Harvard University
Abigail Buchwalter, UC San Francisco
Daniel Lim, UC San Francisco
Geeta Narlikar, UC San Francisco
Eva Nogales, UC Berkeley
Elphege Nora, UC San Francisco
Ana Pombo, Max Delbrück Centre
Bing Ren, UC San Diego
Jay Sarthy, Seattle Children's Research Institute
Ali Shilatifard, Northwestern University
Yadira Soto-Feliciano, Massachusetts Institute of Technology
Ting Wang, Washington University

Symposia: 2017-2026 (continuation)





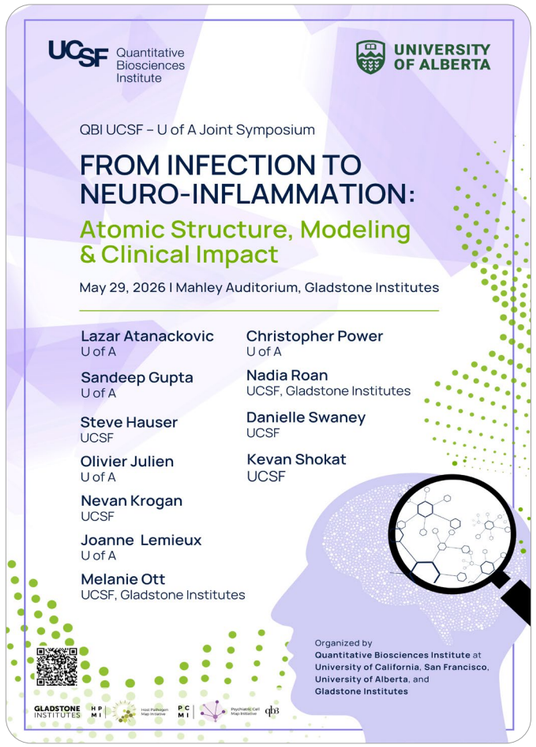












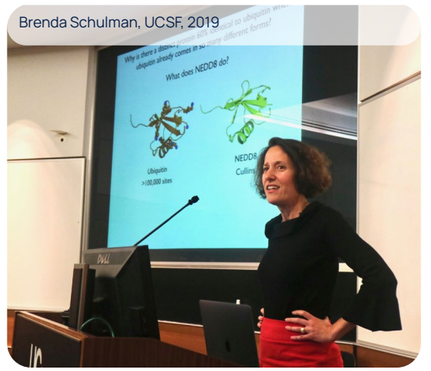


Allison Williams, UCSF, 2024





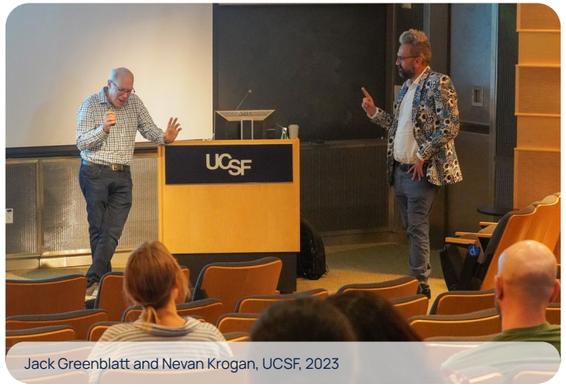
Ron Aoyama, UCSF, 2025



Brenda Schulman, UCSF, 2019



Jennie Lill, UCSF, 2026



Jack Greenblatt and Nevan Krogan, UCSF, 2023



Ewa Karolina Bomba-Warczak, UCSF, 2025



Ryan Potts, UCSF, 2025



Alan Ashworth, UCSF, 2024

Seminars

The QBI Seminar Series, launched in 2017, serves as a central mechanism for scientific exchange within QBI, bringing world-renowned speakers to campus through invitations hosted by faculty across diverse research areas. The series functions as a key mechanism for sustained intellectual exchange, enabling visiting scientists to engage directly with the broader UCSF community while also fostering targeted interactions with faculty whose research aligns with their expertise. These engagements frequently serve as the starting point for longer-term collaborations, joint projects, and institutional partnerships.

A notable example of this long-term impact includes early engagement with collaborators such as Christian Freund from Freie Universität Berlin, whose initial QBI seminar in 2019 preceded a deepening research relationship that has since expanded into an active collaborative program supported by international research funding and faculty exchange (detailed on page 116).

During the COVID-19 pandemic, the series rapidly transitioned to a virtual format, maintaining continuity of scientific dialogue while expanding accessibility to a global audience. What began as a primarily in-person initiative has since evolved into a hybrid and internationally accessible platform for ongoing exchange.

Since its inception, the seminar series has grown substantially in scale and reach—from 37 seminars recorded by 2020 to 143 seminars over its first decade. This nearly fourfold increase in programming reflects sustained demand and the expanding network of scientific partnerships engaged through QBI. Throughout this growth, the series has remained a consistent entry point for collaboration, mentorship, and scientific alignment across disciplines and institutions.



Mehdi Bouhaddou, UCSF, 2026

Scenes from seminars over the years, featuring focused lectures from invited speakers disease areas, followed by discussions that foster the exchange of ideas, and new research connections within the QBI community.

Seminars: 2018-2026

2018

Jan: Francis Stewart (TU Dresden)

Feb: Patrick Cramer (Max Planck Institute)

May: Rafick-Pierre Sékaly (Emory University)

Jun: Christian Ottmann (Eindhoven University of Technology)

Sep: Jinwoo Ahn (University of Pittsburgh); Yvan Nicolet (Institut de Biologie Structurale)

Oct: Charles L. Cywin (National Institute of Neurological Disorders and Stroke)

Nov: Ali Shilatifard (Northwestern University); Jesse Bloom (Fred Hutchinson Cancer Research Center)

Dec: Jackie Kyosiimire-Lugemwa (Uganda Virus Research Institute)

2019

Jan: Alice Telesnitsky (University of Michigan)

Feb: Stephen Michnick (Université de Montréal)

Mar: Michelle Farkas (University of Massachusetts); Michael Rust (University of Chicago); Aseem Ansari (University of Wisconsin–Madison)

May: Sonja Lorenz (University of Würzburg)

Jun: Gonçalo Bernardes (University of Cambridge)

Jul: Daniela Rubio and Jenny Shapiro (Premise Data); Stephen H. Waterman (Centers for Disease Control and Prevention)

Oct: Christian Freund (Freie Universität Berlin); David Komander (Walter and Eliza Hall Institute)

Nov: Jason Swedlow (University of Dundee)

Dec: Bruno Correia (École Polytechnique Fédérale de Lausanne)

2020

Feb: Christian Happi (Redeemer's University); Nels Elde (University of Utah); Wojciech Galej (European Molecular Biology Laboratory)

Mar: Pat Eyers (University of Liverpool)

May: Gira Bhabha (NYU Grossman School of Medicine)

Jun: Vivek Malhotra (Centre for Genomic Regulation)

Jul: Damian Ekiert (NYU Grossman School of Medicine); Willow Coyote-Maestas (UC San Francisco)

Sep: Pascale Guiton (California State University, East Bay); Roland Dunbrack (Fox Chase Cancer Center)

Oct: Michael Rape (UC Berkeley)

Nov: James Murphy (Walter and Eliza Hall Institute)

Dec: Sumit Chanda (Scripps Research Institute)

2021

Jan: Blanton Tolbert (Case Western Reserve University)

Feb: Rebecca Scheck (Tufts University); Polly Fordyce (Stanford University)

Mar: Yael David (Memorial Sloan Kettering Cancer Center)

Apr: Yong Zi Tan (Nanyang Technological University)

Sep: Peter J. Hotez (Baylor College of Medicine)

Oct: Pedro Beltrao (European Bioinformatics Institute)

Nov: Julio Saez-Rodriguez (Heidelberg University); Trevor Bedford (Fred Hutchinson Cancer Research Center)

Dec: Michaela Gack (Cleveland Clinic); Michelle Farkas (University of Massachusetts Amherst)

2022

Jan: Tanja Kortemme (UC San Francisco); Marco Vignuzzi (Institut Pasteur)

Feb: Michael Cohen (Oregon Health & Science University)

Mar: Trever Bivona (UC San Francisco); Maria-Carla Saleh (Institut Pasteur); Christian Ottmann (Eindhoven University of Technology)

May: Iris J.G. Salomon (University of Washington); Brad Pollock (UC Davis); Yury Polikanov (University of Illinois Chicago); Theodore Lampidis (University of Miami); Nihal Altan-Bonnet (National Heart, Lung, and Blood Institute)

Jun: John Bridgeland (Civic Enterprises)

Sep: William Weiss (UC San Francisco); John Walter (Independent artist)

Oct: Erica J. Stewart (UC San Francisco); Alexander Hoffmann (UC Los Angeles); Britt Glaunsinger (UC Berkeley); Stacy Horner (Duke University)

Nov: Max Krummel (UC San Francisco)

Dec: Joanne Lemieux (University of Alberta); Dario Alessi (University of Dundee); Faranak Fattahi (UC San Francisco)

2023

Jan: Silke Stertz (University of Zurich); Koh Fujinaga (UC San Francisco); Sanjeeva Srivastava (Indian Institute of Technology Bombay)

Feb: Brad Jones (Weill Cornell Medicine)

Mar: Xiulei Mo (Emory University)

Apr: Anthony Fehr (University of Kansas); Jan E. Carette (Stanford University); Lars Plate (Vanderbilt University); Paul Sauer (UC Berkeley); Erica Ollmann Saphire (La Jolla Institute for Immunology)

May: Bram Koster (Leiden University Medical Center)

Jun: Dan Barouch (Harvard Medical School); Luc Brunsveld (Eindhoven University of Technology)

Aug: Jun Wang (Rutgers University); Ron Shamir (Tel Aviv University); Dan Anderson (Eikon Therapeutics); Iuliana Ene (Institut Pasteur)

Sep: Dan Faissol and Kate Arridlt (Lawrence Livermore National Laboratory); Pedro Beltrao (ETH Zurich)

Oct: Lukas Käll (KTH Royal Institute of Technology); Jack Greenblatt (University of Toronto); Gary Pielak (University of North Carolina at Chapel Hill); Luke Chao (Massachusetts General Hospital / Harvard Medical School)

Nov: Noam Stern-Ginossar (Weizmann Institute); Sergei Kotelnikov (Stony Brook University)

Dec: Ya-Chi Ho (Yale University School of Medicine)

2024

Jan: Reidun Twarock (University of York); Harold Pimentel (UC Los Angeles); Najma Rachidi (Institut Pasteur); Kevin Lou (UC San Francisco)

Feb: Angela Rasmussen (Vaccine and Infectious Disease Organization / University of Saskatchewan); Alex Chavez (UC San Diego)

Mar: Joshua Rosenthal (Marine Biological Laboratory); Caroline Demeret (Institut Pasteur); Carol Robinson (University of Oxford); Zach Sweeney (QBI); Satya Dandekar (UC Davis); Lara Szewczak (Cell Press)

Apr: Anastassia Komarova (Institut Pasteur); Regis Grailhe (Institut Pasteur Korea / University of Science & Technology); Tania Lupoli (New York University)

May: Mary Estes (Baylor College of Medicine); Raghavan Varadarajan (Indian Institute of Science); Davey Smith (UC San Diego)

Jun: Yuling Luo (Alamar Biosciences)

Aug: Justin English (University of Utah School of Medicine)

Sep: Victoria Sanz-Moreno (Institute of Cancer Research); Lise Musset (Institut Pasteur, French Guiana); Thuong Nguyen (Oxford University Clinical Research Unit in Vietnam); Clare Jolly (University College London); Celeste Karch (Washington University School of Medicine)

Oct: Daniel Paull (The New York Stem Cell Foundation)

Nov: Ivo Boneca (Institut Pasteur, Paris); Marc Lavigne (Institut Pasteur); Liliana Brown (National Institute of Allergy and Infectious Diseases)

2025

Jan: Ryan Potts (Amgen)

Feb: Ron Aoyama (Gilead Sciences); Janina Sörmann (University of Copenhagen); Yury Polikanov (University of Illinois Chicago)

Mar: Ewa Bomba-Warczak (University of Pennsylvania); Mohammed Andres Mostajo-Radji (Millennium Institute for Integrative Biology)

Apr: Jonathan Patrick Schlebach (Purdue University); Hoai Nguyen (Vietnam National University Ho Chi Minh City

Aug: Ludovic Deriano (Institut Pasteur)

Nov: Andy Kilianski (Advanced Research Projects Agency for Health); Arun Prasad Pandurangan (University of Cambridge); Rafael Couñago (UNC Eshelman School of Pharmacy); James Haber (Brandeis University)

2026

Jan: Søren Brunak (University of Copenhagen)

Mar: Jennie Lill and Tess Branon (Genentech)

Apr: Mehdi Bouhaddou (UC Los Angeles); Janet Iwasa (University of Utah); Christopher Overall (University of British Columbia)

Jun: Raphaël Laurenceau (Institut Pasteur)



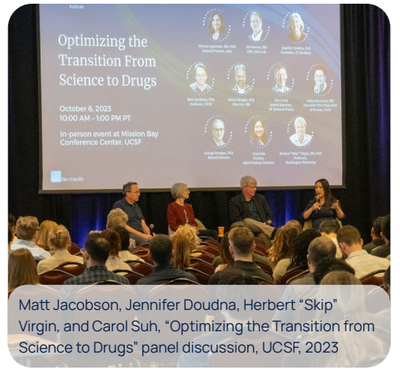
Catherine Lucey and Hal Barron, "Optimizing the Transition from Science to Drugs" panel discussion, UCSF, 2023



Victoria Colliver and Matthew State, The Night of Science – "Fact, fiction and the future of Autism Spectrum Disorder Research", Manny's, San Francisco, 2026



Manny Yekutiel, The Night of Science, Manny's, San Francisco, 2026



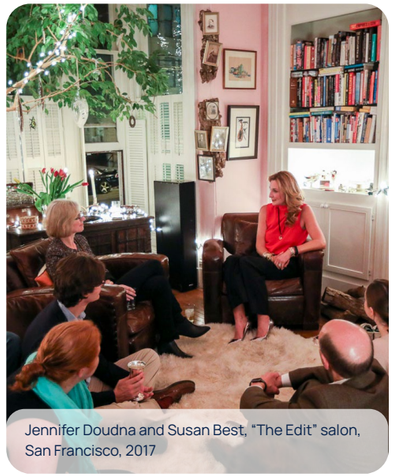
Matt Jacobson, Jennifer Doudna, Herbert "Skip" Virgin, and Carol Suh, "Optimizing the Transition from Science to Drugs" panel discussion, UCSF, 2023



Nevan Krogan, Laura van 't Veer, and Trey Ideker, "The Elusive Cure" salon, Washington, D.C., 2017



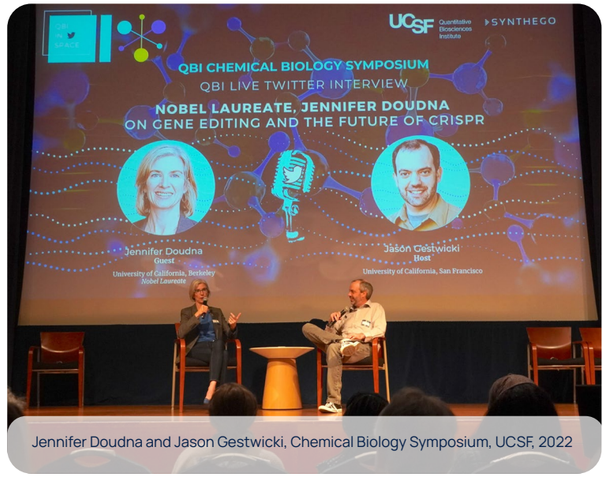
"Optimizing the Transition from Science to Drugs" panel discussion, UCSF, 2023



Jennifer Doudna and Susan Best, "The Edit" salon, San Francisco, 2017



Alan Ashworth, "The Elusive Cure" salon, San Francisco, 2017



Jennifer Doudna and Jason Gestwicki, Chemical Biology Symposium, UCSF, 2022

Salons & Fireside Chats

The QBI Salon/Fireside Chat series was originally developed in partnership with POSTHOC, founded by Susan MacTavish Best, as a curated platform to convene scientists and cross-sector audiences in intimate, discussion-driven settings. These gatherings, held in San Francisco and Washington D.C., were designed to bring leading researchers in cancer, psychiatry, and infectious diseases into direct conversation with engaged participants across science, policy, and innovation communities. Earlier salons featured prominent scientific voices and public dialogues, including "The Genetic Puzzle" with Matthew State on autism research, "The Elusive Cure" with Alan Ashworth on cancer biology, a multi-speaker Washington D.C. salon featuring Trey Ideker, Nevan Krogan, and Laura van't Veer on systems biology and translational research, "The Edit" with Jennifer Doudna on CRISPR genome engineering, and "Looking Beyond DNA to See Cancer with New Clarity," a QBI TV panel discussion featuring Elizabeth Blackburn, Trey Ideker, and Nevan Krogan on emerging systems-level approaches to understanding and treating cancer.

While the original salon format has evolved beyond its initial form, its core purpose—creating open, interdisciplinary spaces for dialogue around science and society—has expanded into a broader ecosystem of conversational programming formats. These newer initiatives retain the emphasis on focused scientific exchange while increasing accessibility and global reach.

This includes an evolving portfolio of online fireside-style discussions such as *Infectious Insights*, *Scientific Collaborations Across Borders*, and QBI in [Twitter] Space, as well as thematic series like *A Year in Review: QCRG Women in Science*. Across these formats, conversations typically begin with one to three invited speakers or discussants and then open into broader public dialogue, enabling real-time engagement with global audiences.

Building on this trajectory, QBI has also launched the *Night of Science* series, a public-facing program designed to make science more accessible, relevant, and deeply human, hosted at Manny's—a Mission District café, bookstore, and civic gathering space in San Francisco founded by Manny Yekutiel. The inaugural event featured Matthew State, a leading expert in psychiatry and psychiatric genetics, who delivered a flash talk titled "Fact, Fiction, and the Future of Autism Spectrum Disorder Research."

Over the course of its first decade, QBI has hosted 23 salons, fireside chats, and panel discussions. Together, these initiatives reflect a continued commitment to creating accessible, high-quality spaces for scientific conversation that bridge disciplines, geographies, and communities.

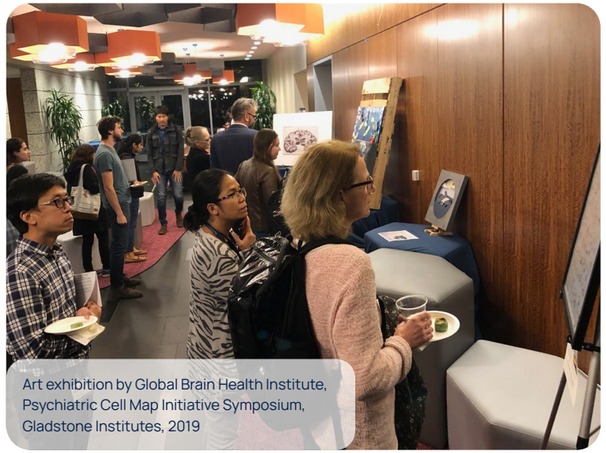
Educational Art Exhibits

QBI has integrated art exhibitions and creative programming to complement scientific events, broaden participation, and create more welcoming spaces for dialogue across disciplines and communities. Art installations and live panel discussions have been paired with scientific programming, in collaboration with the Institute for Global Health Sciences, the Global Brain Health Institute, and partners such as USAID.

These events create more informal, social settings that encourage exchange across disciplines and open up new conversations among researchers, students, artists, and community members. By bringing visual and narrative art into scientific contexts, QBI helps make complex biomedical topics more accessible and invites reflection on the human dimensions of research. Programming has explored themes spanning infectious and neurological diseases, including Lyme disease, Zika virus, and Dengue fever, as well as neurodevelopmental and brain health topics such as Autism Spectrum Disorder. An exhibition centered on autism featured works by autistic artists, offering an opportunity to engage with the topic through creative expression and personal perspectives.



"Stronger There, Safer Here", photo exhibition by USAID, UCSF, 2019


Art exhibition by Global Brain Health Institute, Psychiatric Cell Map Initiative Symposium, Gladstone Institutes, 2019


"Lounge Ligands" art exhibition by John Walter, UCSF, 2022


Joseph Guglielmo, Susan Levings, and Jeff Beck, "Stronger There, Safer Here", photo exhibition by USAID, UCSF, 2019

Artist-in-Residence Program

In 2022, QBI launched its Artist-in-Residence Program with John Walter, a visiting visual artist based in London with a longstanding interest in HIV, infectious diseases and a commitment to expanding the public understanding of virology through art. Working alongside UCSF scientists studying viruses, cancer, and small-molecule interactions, John developed two exhibitions, "Lounge Ligands" and "Node Mulch" during his residency. His work, spanning painting, drawing, sculpture, costume, virtual reality, and video, connected scientific ideas with broader cultural themes and offered new ways for audiences to engage with research. His distinctive aesthetic exposed the community to exuberant use of color, humor and hospitality.



John Walter
(Inaugural Artist-in-Residence)
2022

Scan to learn more about John's work



"Node Mulch", art exhibition by John Walter, SOMArts Cultural Center, 2023


"Node Mulch", art exhibition by John Walter, SOMArts Cultural Center, 2023


"Lounge Ligands" art exhibition by John Walter, UCSF, 2022


"Lounge Ligands" art exhibition by John Walter, UCSF, 2022

Scenes from art exhibits over the years, featuring science-inspired works exploring topics including autism, Zika virus, and dengue, alongside installations and creative contributions from QBI's Artist-in-Residence program.

Social Hours

Created in response to faculty interest in more informal opportunities for connection, the QBI Social Hour Series was among QBI's earliest community-building programs designed to bring scientists together outside traditional academic settings. As of July 2026, QBI has hosted 37 Social Hour events, reflecting sustained demand for spaces that encourage relationship-building across labs and disciplines.

The series began as a unique format in which nominated postdoctoral scholars delivered five-minute flash presentations highlighting research from different laboratories in a casual local venue, creating an engaging environment for networking, idea-sharing, and cross-disciplinary exchange.

During the pandemic, QBI adapted this community-focused model into virtual gatherings, retreats, and town halls hosted on emerging digital platforms such as Discord, ensuring continued connection during a period of physical separation.

Following the return to in-person programming, QBI renewed the series with a focus on convening members of the QBI Coronavirus Research Group (QCRG), whose investigators were awarded $67.5 million from NIAID to establish one of the first AViDD Centers supporting pandemic preparedness and antiviral drug discovery. Monthly gatherings provided trainees from multiple working groups with opportunities to present research progress, strengthen collaboration, and build community across teams.

This spirit of accessible scientific communication also extended into QBI TV through the companion series *60 Seconds: A QCRG Minute*, which translated rapidly evolving COVID-19 research into concise, one-minute updates to help the broader community engage with timely scientific developments.


Gilles DeGotte, SF Kebab, 2024

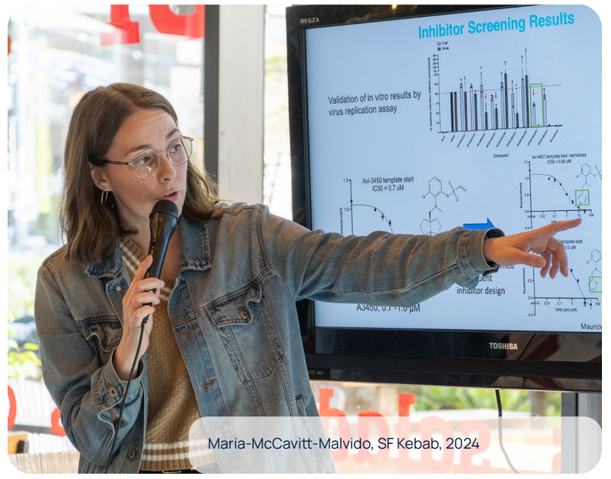

Simone Anguera and Andrea Bolanos, SF Kebab, 2023


Sam Krishnan, SF Kebab, 2025


Peggy Ackerberg, Ujjwal Rathore, Maxwell Bennet, and Margaret Soucheray


Kenneth Huang and Eli Draizen, SF Kebab, 2023


"Bob Stroud and the Jailbirds" band, SF Kebab, 2024



Maria-McCavitt-Malvido, SF Kebab, 2024


Alyssa Hoffert, Rithika Adavikolanu, and Weicheng Li, SF Kebab, 2023


QCRG-AViDD community, SF Kebab, 2024


Robert Stroud and Nevan Krogan, SF Kebab, 2025


Wayne Ngo and Syed Abdullah, SF Kebab, 2023




Michelle Arkin and Charles Craik, Oda, 2022

Scenes from social hours over the years, bringing together scientists, trainees, and collaborators in informal settings designed to encourage networking, research exchange, community-building, and cross-disciplinary connection beyond traditional academic spaces.

YouTube (QBI TV)

Subscribers: 800+

Views: 115K+

Impressions: 1.7M+

Content: Seminars • Symposia recordings • Short documentaries • Fireside conversations • Educational videos

Focus: Long-form scientific communication and educational storytelling

Audience: Researchers, trainees, academic community, industry partners, and global public interested in science

Instagram

Followers: 780+

Content: Visual storytelling • Event promotion • Community highlights • Behind-the-scenes science

Focus: Visual engagement and humanizing science

Audience: Broader public, trainees, students, and community followers

Facebook

Followers: 500+

Content: Event updates • Community posts • Institutional announcements

Focus: Community outreach and information sharing

Audience: Broader public, alumni, and community networks

LinkedIn

Followers: 1.6K+

Content: Seminars • Institutional updates • Research highlights • Event announcements • Professional news

Focus: Academic and professional engagement

Audience: Researchers, collaborators, institutions, and industry partners

X (Twitter)

Followers: 2K+

Content: Research updates • Event highlights • Publications • Community news

Focus: Rapid scientific communication and visibility

Audience: Scientific community, collaborators, and broader public science audience

Blueksy Social

Followers: 75+

Content: Research updates • Event highlights • Publications • Community news

Focus: Early-stage platform presence and experimentation

Audience: Early adopters, researchers community

Scan to connect to QBI socials

Communications

Social Media

QBI is active across LinkedIn, Instagram, Facebook, X, and Bluesky, where we share updates from events, research highlights, and community initiatives. On YouTube (QBI TV), we host seminar and symposium recordings, short documentaries, fireside conversations, and educational videos featuring scientists across our network. The channel supports broader access to QBI content beyond in-person events and extends the visibility of its scientific and community programming.

Across platforms, QBI emphasizes making complex scientific research accessible in plain language while highlighting the people behind the science. We use our digital channels to share the impact of research, promote public events, and encourage broader community engagement and participation.

Information Resources

A targeted newsletter reaching more than 1,300 subscribers complements these channels by delivering curated updates on events, initiatives, and scientific developments directly to the community. Guided by an editorial calendar, campaigns are distributed on a regular basis and tailored to specific audiences, keeping readers informed about upcoming events, institutional milestones, and opportunities for engagement while reinforcing QBI's visual identity through thoughtful design, imagery, and links to additional content.

The QBI website serves as the institute's primary information hub, bringing together events, news, and scientific content in a single accessible platform. Recently refreshed through a comprehensive redesign and rebrand, the site establishes a modern, user centered foundation for QBI's digital presence over the next decade.

Scan to visit the QBI website

Press

Amid heightened global attention to science driven by the COVID-19 pandemic, QBI established and expanded a strong media presence that has evolved into a sustained platform for communicating our scientific mission, partnerships, and institutional leadership.

As collaborations expanded and new initiatives launched, our press strategy evolved alongside them — highlighting breakthrough discoveries, elevating scientific and executive leadership, and amplifying major milestones ranging from global convenings and partnerships to strategic appointments and large-scale research efforts. Over time, this visibility extended beyond infectious disease to include QBI's growing work in cancer, autism, and other areas of biomedical research.

To support this momentum, we developed a more coordinated communications approach that combined press releases, social media amplification, partner cross-promotion, and institutional storytelling to extend the reach and longevity of each announcement. Since 2020, QBI has issued 12 press releases, held two press conferences, and generated 517 media placements across 339 media outlets.

Of the 339 media outlets, our work was featured in 305 general-interest outlets such as the *New York Times*, *ABC News*, *Bloomberg*, *Wall Street Journal*, *Financial Times*, *Los Angeles Times*, *San Francisco Chronicle*, *Washington Post*, *CNN* and *USA Today*, and in 34 industry outlets including *STAT*, *Fierce Biotech*, *Endpoints*, *GEN*, *BioWorld*, and *Chemical Engineering News*. In addition to extensive national and international media coverage, QBI has received editorial attention from scientific journals, including *Cell*, *Nature*, *PNAS*, and *Science*.

In total, QBI press efforts generated over 2B views and reached audiences in the biomedical, technology, and investment communities. This sustained visibility has helped position the organization as a central hub for interdisciplinary collaboration at the intersection of biology and data science and has increased inbound interest from potential partners, collaborators, and funders.

Press Impact & Reach

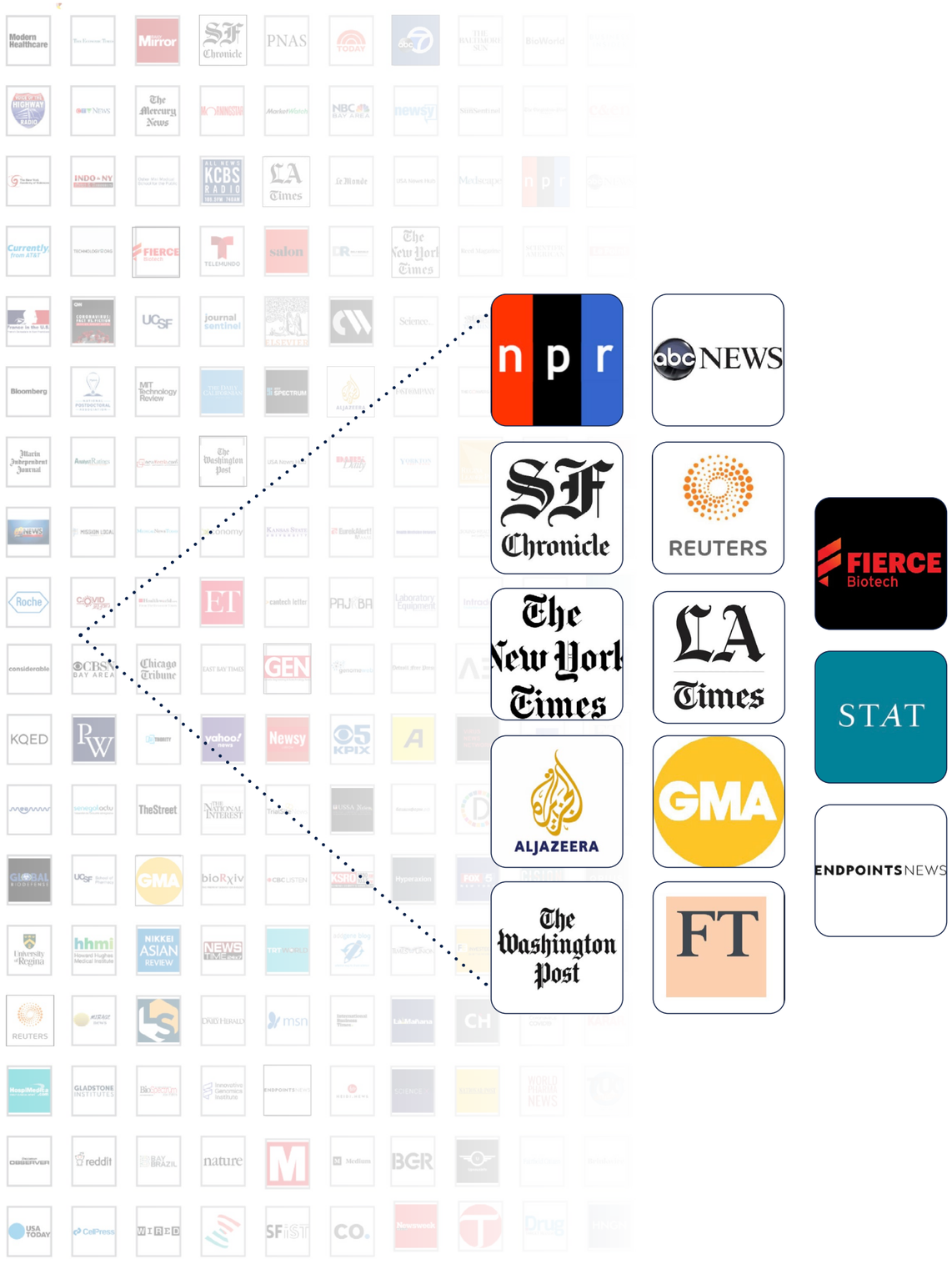
since 2020

515+ media placements

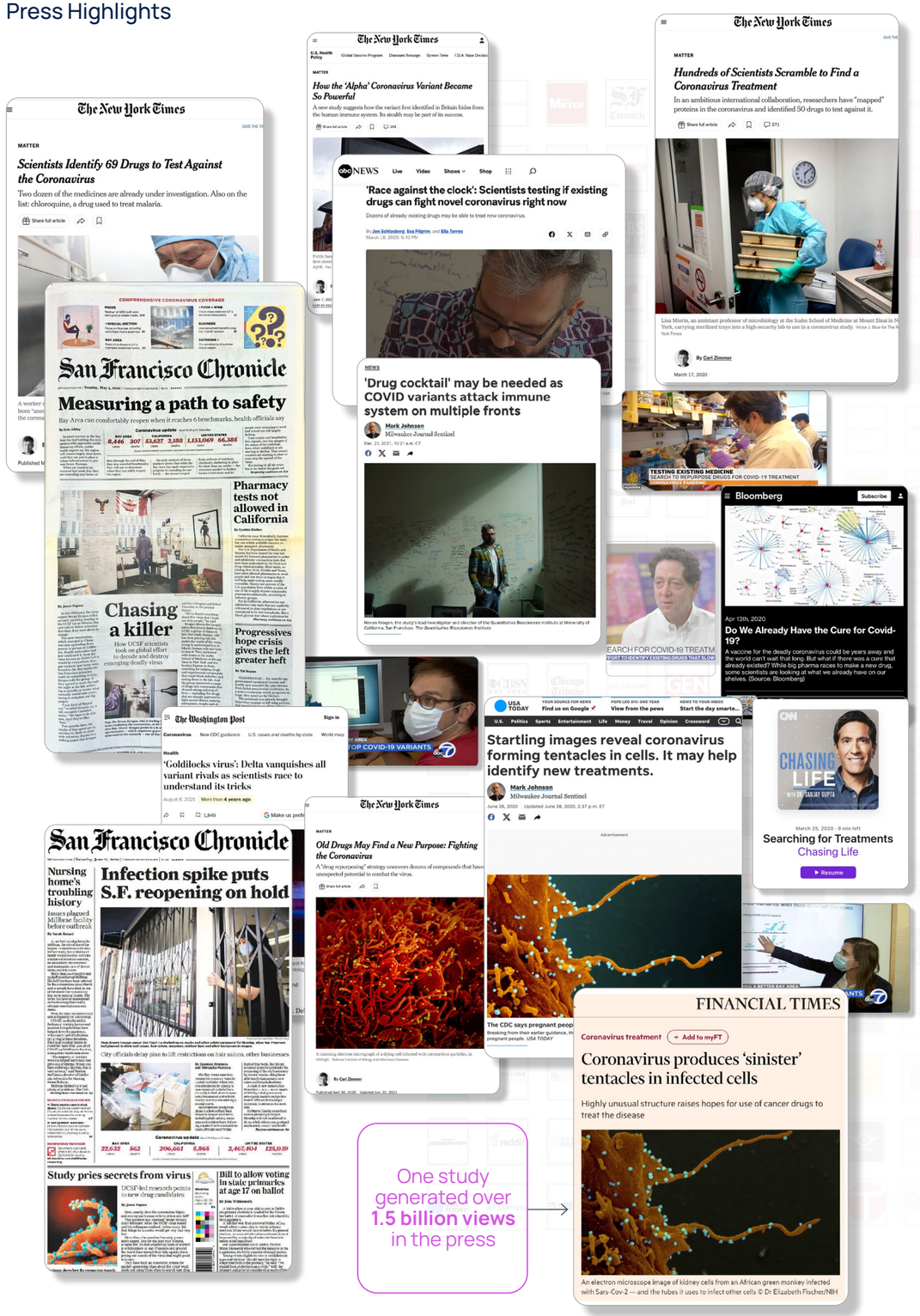
Featured across **330+** general-interest and industry outlets including:

NYT, *Washington Post*, *Financial Times*, *USA Today*, *ABC News*, *Bloomberg*, *CNN*, *STAT*, *Fierce Biotech*, and more.

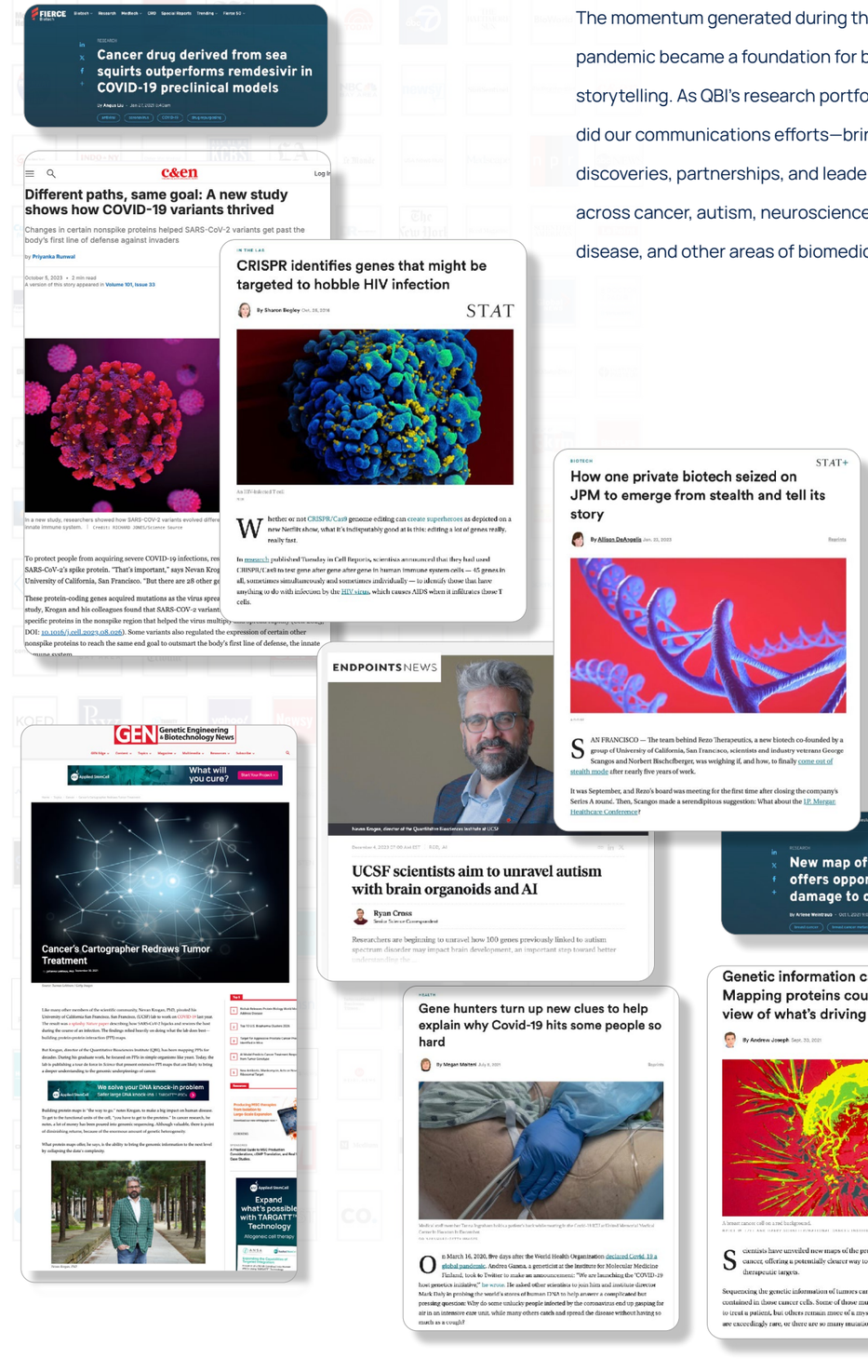
2B+ total views in biomedical, technology, and investment communities.



Press Highlights



One study generated over **1.5 billion views** in the press



The momentum generated during the COVID-19 pandemic became a foundation for broader scientific storytelling. As QBI's research portfolio expanded, so did our communications efforts—bringing visibility to discoveries, partnerships, and leadership initiatives across cancer, autism, neuroscience, infectious disease, and other areas of biomedical research.

GLOBAL NETWORK



In the last decade QBI has built its international network through a bottom-up, science-first approach, starting with scientific exchange and growing into lasting collaboration. Partnerships often begin with introductory visits and shared research discussions, evolve through joint symposia, and mature into formal collaborations supported by joint projects and funding initiatives.

Today, QBI brings together a global network of partners to advance biomedical discovery through shared data and cross-continental expertise. These collaborations enable large-scale studies and international convenings, while helping attract top talent and competitive funding worldwide.

Designed as a bi-directional model, the network creates mutual benefit—expanding QBI's scientific reach while also providing partners with access to advanced computational tools, structural biology capabilities, and opportunities for growth. The result is a collaborative ecosystem where knowledge, technology, and talent move more fluidly across institutions, accelerating discovery and reinforcing QBI's role as a global hub for innovation.

Freie Universität Berlin

The partnership between QBI and Freie Universität Berlin (FUB), co-directed by Nevan Krogan and Christian Freund, has grown steadily since its launch in 2019, when a first joint symposium brought researchers together around a shared commitment to advancing biomedical research. What began as scientific exchange across quantitative biosciences, biochemistry, biophysics, and structural biology has evolved into a sustained effort supporting joint discovery, shared training, and ongoing knowledge exchange between institutions.

Early momentum was strengthened in 2020 through a $600K collaborative funding initiative that supported five pilot projects in integrative structural biology. These projects enabled transatlantic research teams to explore new interdisciplinary approaches at the interface of systems and structural biology, laying important groundwork for longer-term collaboration.

The relationship continued to deepen with a second major bilateral symposium held in San Francisco in 2024, which brought together dozens of leading researchers from both institutions. This gathering further aligned scientific priorities, expanded cross-institutional networks, and reinforced the shared commitment to long-term collaboration, alongside formalization of the partnership through a Memorandum of Understanding (MOU).

Most recently, in 2025, the collaboration entered a new phase with an Einstein Foundation award supporting Nevan Krogan as an Einstein Visiting Fellow at Freie Universität Berlin, in close partnership with Christian. The fellowship is evolving through ongoing discussions with Günter Ziegler, President of FUB, Christian, and other collaborators to define the scientific framework for the program and advance a broader vision for a long-term Berlin–San Francisco research axis.

The fellowship established a dedicated joint working group spanning both institutions, bringing together postdoctoral fellow Xiao Jakob Schmitt, PhD students Helena Rheinbay and Rona Schein, scientific coordinator Francesco Cannizzaro, and program manager Celine Perier. The team focuses on integrative proteomic and structural approaches to autism and epilepsy, developing technology-driven research pipelines that combine expertise in structural proteomics, mass spectrometry, cryo-electron microscopy, and AI-based analysis of complex biological systems. By integrating experimental and computational strengths from QBI and FUB, the partnership aims to generate broadly applicable biological insights, using autism as a model for developing and validating new approaches.

This growing body of joint work continues to strengthen long-term scientific ties between QBI and FUB, while building a more durable framework for shared funding, exchange, and discovery across institutions.



Berlin, Germany

Partnership focus: **Integrative structural biology & computational discovery**

Scan to learn more about this collaboration

Partnership Evolution



Jan 21, 2025

QBI Director Receives the Einstein Fellowship Award

The Einstein Foundation awarded Nevan Krogan the Einstein Visiting Fellowship at FUB, in collaboration with Christian Freund to establish a lab in Germany and deepen scientific collaboration between the two institutions, with support from Günter Ziegler, President of FUB.

June 4-5, 2024

Integrative Mechanistic Biology Meeting

QBI and FUB convened in San Francisco for their second joint symposium, building on their inaugural Berlin meeting to strengthen ties, highlight advances in integrative mechanistic biology, and progress partnerships across institutions.





Dec 9, 2020

Integrative Structural Biology Trainees Workshop

QBI and FUB hosted a virtual Trainees Workshop in Integrative Structural Biology, highlighting collaborative research and connecting early-career scientists from both institutions.

Nov 8, 2019

Collaborative Integrative Structural Biology RFA

QBI and FUB launched a $600K collaborative request for applications to support bold, cross-institutional pilot projects in integrative structural biology, strengthening scientific exchange and accelerating discovery between UCSF and FUB.





Aug 20, 2019

Partnership Formalized

QBI and FUB formalized their partnership through a Memorandum of Understanding following a visit by FUB President Günter Ziegler to San Francisco, establishing a framework for long-term collaboration.

May 27-29, 2019

Inaugural Symposium

QBI and FUB hosted their inaugural symposium in Berlin, bringing together leading scientists from both cities to explore collaborative opportunities, share research, and lay the groundwork for ongoing partnerships.



Leadership



Christian Freund
Professor, FUB



Nevan Krogan
Director, QBI UCSF

Program Management



Francesco Cannizzaro
Scientific Coordinator, FUB



Celine Perier
Director of International Partnerships, QBI UCSF

Scientific Team



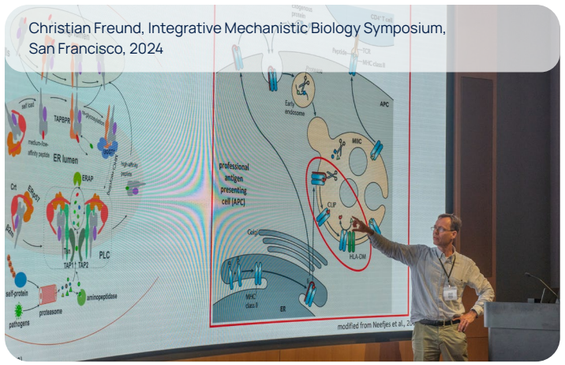
Xiao Jacob Schmitt
Postdoctoral Fellow, FUB



Helena Rheinbay
PhD Student, FUB



Rona Schein
PhD Student, QBI UCSF



Christian Freund, Integrative Mechanistic Biology Symposium, San Francisco, 2024



QBI/FUB collaborators, Reichstag Building, Berlin, 2019

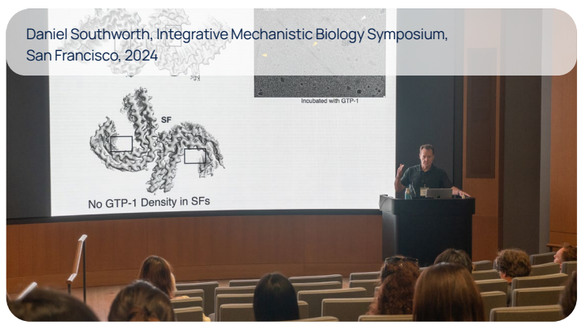




Kliment Verba, Cecilia Clementi, Markus Ralser, David Agard, and Michelle Arkin, Integrative Mechanistic Biology Symposium, San Francisco, 2024



William DeGrado and Nevan Krogan, San Francisco, 2024



Daniel Southworth, Integrative Mechanistic Biology Symposium, San Francisco, 2024



Allison Williams, Integrative Mechanistic Biology Symposium, San Francisco, 2024



Steffen Dähn, Christian Freund, John Young, Britta Piel, Nevan Krogan, Günter Ziegler, Vanesa Saric, Celine Perier, Berlin, 2025



QBI/FUB researchers, Integrative Mechanistic Biology Symposium, San Francisco, 2024



Orli Kadoch and Catera Wilder, San Francisco, 2024



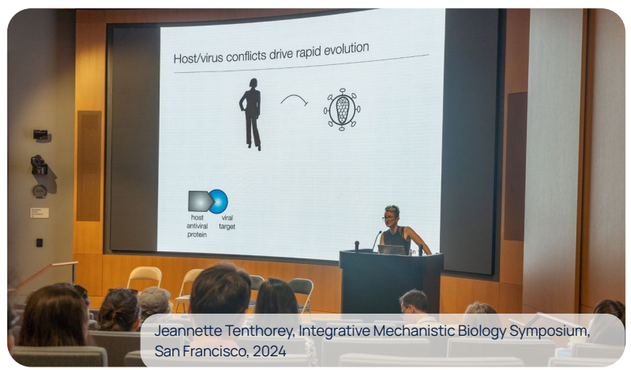
Steffen Dähn, Stephan Sigrist, Christian Freund, Jacqueline Fabius, and Nevan Krogan, San Francisco, 2024



QBI/Freie Universität Inaugural Symposium, Berlin, 2019



Ignacia Echeverria, Natalia Jura, and Francesca Bottanelli, San Francisco, 2024



Jeannette Tenthorey, Integrative Mechanistic Biology Symposium, San Francisco, 2024



Celine Perier, Markus Wahl, Dorothea Fiedler, Volker Haucke, Oliver Daumke, Nevan Krogan, Stephan Sigrist, John Young, and Christian Freund, Berlin, 2025

Moments from the QBI–FUB collaboration, highlighting joint symposia, research activities, training opportunities, and scientific exchange that have helped advance the partnership over the years.

Institut Pasteur

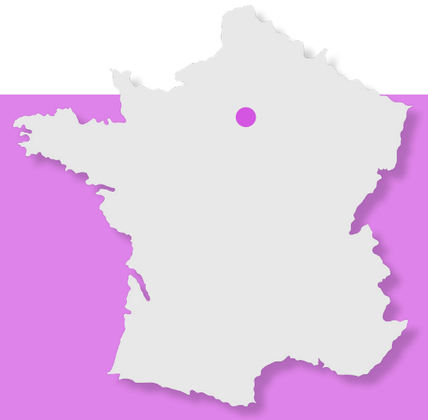
QBI's partnership with Institut Pasteur (Paris) has grown into one of its most productive and enduring international alliances, currently co-directed by Olivier Schwartz, Mélanie Hamon, Nevan Krogan, and Melanie Ott and managed by Celine Perier. Institut Pasteur is a world-leading research institute dedicated to advancing fundamental and translational science in microbiology, immunology, and global health, with a strong emphasis on understanding disease mechanisms and developing diagnostics, vaccines, and therapeutic strategies. The scientific alignment between both institutions has enabled a shared focus on applying systems-level and quantitative approaches to infectious disease biology, particularly in the context of viral emergence and host response.

The collaboration began in 2019 through a joint symposium focused on quantitative approaches to infectious disease and was formally institutionalized in 2022, establishing a framework for joint training, coordinated research programs, and shared funding strategies between San Francisco and Paris. Led by colleagues at UCSF and Institut Pasteur, the partnership has generated more than 20 collaborative research projects, a dozen publications in leading scientific journals, and numerous scientific exchanges spanning influenza, SARS-CoV-2, HIV, autism, and other areas of biomedical research.

In 2024, the Gladstone Institutes joined the initiative, expanding its expertise in virology, immunology, and vaccine development and leading to the formation of the Institut Pasteur–UCSF–Gladstone Institutes Initiative. The collaboration entered a new phase in 2026 with the launch of a joint Pasteur International Unit (PIU), co-directed by Melanie H. and Nevan Krogan, with core team members Ben Polacco, Anjan Venkatesh, Carmen Buchrieser, and Shaeri Mukherjee. Focused on developing AI-powered maps of host–pathogen interactions, the PIU represents a long-term commitment to collaborative discovery, training, and global health research across Paris and San Francisco.

In recognition of these contributions to transatlantic scientific collaboration, Nevan Krogan was awarded the Legion of Honor by the President of the French Republic, as well as the Louis Pasteur Medal in 2022.

The collaboration continues to evolve toward a more integrated discovery platform focused on emerging infectious diseases, with emphasis on pathogen biology, host response mechanisms, and quantitative systems approaches. Together, QBI and Institut Pasteur are advancing a shared vision of global, team-based science that connects fundamental discovery to translational impact in infectious disease research.



Paris, France

Partnership focus: Systems biology of host–pathogen interactions

Scan to learn more about this collaboration

Partnership Evolution



Jul 10, 2023–Dec 12, 2024

Mini-Sabbatical Program

QBI and IP launched a Faculty Mini-Sabbatical Program that enables top academic talent to spend a few months at the partner institution in San Francisco or Paris, fostering collaboration, knowledge exchange, and scientific partnerships.



Apr 12–13, 2023

Third Symposium

QBI and IP scientists gathered in Paris for the third annual infectious disease symposium, building deeper cross-continental collaborations and exchanging research insights through talks and interactive sessions.



Feb 28, 2023

Mini Symposium

QBI and IP convened a mini-symposium in San Francisco to advance collaborative research on emerging infectious diseases, strengthen scientific ties, and lay the groundwork for a joint Center on Emerging Infectious Diseases.



Oct 21, 2022

Formation of Global Alliance on Emerging Infectious Diseases

QBI and IP announced plans to establish the Institut Pasteur–UCSF QBI Center of Excellence in Emerging Infectious Diseases to unite expertise across continents to tackle global infectious disease challenges.



Oct 12-13, 2020

Second Symposium

A virtual QBI–IP symposium convened researchers to deepen collaboration and explore quantitative strategies for studying infectious disease and host–pathogen interactions.



Mar 18–19, 2019

Inaugural Symposium

QBI and IP launched a collaborative effort to apply quantitative science to infectious disease and host–pathogen biology.

Leadership



Olivier Schwartz
Professor, IP



Melanie Hamon
Professor, IP



Nevan Krogan
Director, QBI UCSF



Melanie Ott
Professor, Gladstone

Program Management



Celine Perier
Director of International Partnerships, QBI UCSF



QBI and IP researchers, Eiffel Tour, Paris, 2023



Nevan Krogan and Stewart Cole, MOU signing, Paris, 2022



QBI and IP researchers, Mini Symposium on Emerging Infectious Diseases, San Francisco, 2023



Welcome reception at Villa M Hotel, Third QBI–Institut Pasteur Symposium on Infectious Diseases, Paris, 2023



Christophe D'Enfert, Paris, 2023



QBI and IP collaboration leaders and finance teams, San Francisco, 2023



Nevan Krogan, Legion of Honor Award, Paris, 2022



QBI and IP researchers, Third QBI–Institut Pasteur Symposium on Infectious Diseases, Paris, 2023



Carla Saleh, Stewart Cole, Nevan Krogan, and Jacqueline Fabius, Paris, 2022

Olivier Schwartz, Melanie Hamon, John Young, Yasmine Belkaid, Nevan Krogan, Celine Perier, and Vanesa Saric, Paris, 2025





Kliment Verba and Timothy Wai, Paris, 2023



Gerald Spaeth and Najma Rachidi, Paris, 2023





John Gross, Paris, 2023

Moments from the QBI–IP collaboration, highlighting strategic meetings, joint symposia, collaborative research, scientific exchange, and the community that helps shape the partnership.

Institut Curie – PSL/Q-Life

QBI and Institut Curie, together with PSL/Q-Life, have established a long-standing collaboration in quantitative biology and systems-level cancer research, co-directed by Bruno Goud and Nevan Krogan. The partnership is grounded in a shared commitment to integrating physics, mathematics, computation, and molecular biology to understand cellular organization, tumor progression, and disease dynamics through quantitative and interdisciplinary approaches.

Q-Life, Institut Curie's quantitative biology initiative embedded within the PSL ecosystem, provides a unique interdisciplinary environment that unites physicists, biologists, mathematicians, chemists, and computational scientists to advance systems-level approaches to cancer and complex biological systems. This scientific alignment with QBI has enabled the development of a transatlantic framework for collaborative discovery in cancer biology.

The collaboration began through early scientific exchanges between QBI leadership and Institut Curie investigators, including Aura Carreira, around shared interests in applying quantitative approaches to cancer research. This led to the inaugural joint symposium in Paris in 2019, which brought together researchers from UCSF, Institut Curie, and PSL/Q-Life to define shared priorities in systems biology, cancer mechanisms, and computational approaches to complex biological systems.

Building on this foundation, QBI and Institut Curie formalized their collaboration through a Memorandum of Understanding and launched a joint funding mechanism to support cross-institutional pilot projects. This seed funding enabled interdisciplinary teams to develop collaborative research programs at the interface of systems biology, cancer progression, and quantitative modeling.

The partnership has since expanded through a series of joint symposia and scientific workshops, including meetings focused on complex biological systems and artificial intelligence across biological scales. These activities have strengthened cross-institutional networks and reinforced a shared commitment to developing quantitative frameworks for understanding cancer biology.

Partnership Evolution



Dec 5–6, 2023

Third Symposium

QBI and PSL/Q-Life brought together interdisciplinary researchers to explore how AI can advance understanding of biological processes across scales. Building on a thriving partnership, the event sparked new cross-institutional ideas and laid more groundwork for future breakthroughs.



Apr 26, 2022

Collaborative Workshop

A QBI–PSL/Q-Life committee hosted a virtual workshop to convene funded collaborators from both institutions to present research updates, exchange ideas, and deepen scientific connections across disciplines.



Dec 1–2, 2020

Second Symposium

Hosted online during the pandemic, the second joint QBI–PSL/Q-Life symposium reinforced the growing partnership between the institutions, spotlighting collaborative research at the intersection of quantitative science and complex biology.



Aug 1, 2020

Collaborative Research Funding Call

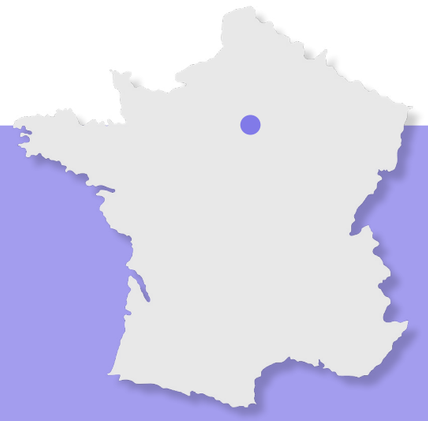
QBI and PSL/Q-Life awarded four collaborative pilot projects, each bringing together researchers from San Francisco and Paris to explore bold, original approaches to complex biological problems over the course of a year.



Sep 4–5, 2019

Inaugural Symposium

QBI and PSL/Q-Life held their first joint symposium in Paris to explore how quantitative approaches can transform cancer research. The meeting catalyzed new collaborations and laid the foundation for a multi-institutional partnership designed to advance joint research, training, and international exchange.



Paris, France

Partnership focus: **Quantitative systems biology of cancer**

Scan to learn more about this collaboration

Leadership



Bruno Goud
Professor, Institut Curie



Nevan Krogan
Director, QBI UCSF



Minh-Hà Pham, Bruno Goud, Aura Carreira, and Nevan Krogan, MOU signing, Paris, 2019



Kevan Shokat, Davide Ruggero, and Rushika Perera, Quantitative Approaches to Cancer Research Symposium, Paris, 2019



Michael Keiser, Artificial Intelligence Across Biological Scales Symposium, San Francisco, 2023



QBI and PSL/Q-Life researchers, Artificial Intelligence Across Biological Scales Symposium, San Francisco, 2023



Bruno Goud and Nevan Krogan, Quantitative Approaches to Cancer Research Symposium, Paris, 2019



Artificial Intelligence Across Biological Scales Symposium, San Francisco, 2023



QBI and PSL/Q-Life researchers, Quantitative Approaches to Cancer Research Symposium, Paris, 2019



QBI researchers, Institut Curie, Paris, 2019



Léa Wurges, Aida Shams, and Melissa Dewulf, Quantitative Approaches to Cancer Research Symposium, Paris, 2019



Hervé Turlier, Artificial Intelligence Across Biological Scales Symposium, San Francisco, 2023



Quantitative Approaches to Cancer Research Symposium, Paris, 2019

Moments from the QBI–Institut Curie–PSL/Q-Life collaboration, highlighting joint symposia, research activities, and scientific exchange that have helped advance the partnership over the years.

University College Dublin

QBI and University College Dublin (UCD), through Systems Biology Ireland (SBI), have developed a transatlantic collaboration centered on network biology, systems-level disease modeling, and quantitative approaches to cancer and complex diseases. The partnership, co-directed by Walter Kolch and Nevan Krogan, is grounded in complementary strengths, combining QBI's large-scale experimental platforms with SBI's expertise in computational modeling, network reconstruction, and machine learning.

Together, QBI and SBI are advancing a shared framework for studying molecular networks underlying cancer, inflammation, and other complex diseases, integrating experimental and computational approaches to move beyond single-pathway analyses toward systems-level understanding and therapeutic target discovery

Formalized through a five-year Memorandum of Understanding in 2019, the collaboration has been sustained through joint symposia and scientific exchange, connecting research communities across San Francisco and Dublin and aligning priorities in network biology and quantitative disease research.

More recently, the partnership has progressed into coordinated research funding through a joint RFA supporting projects in network biology and drug discovery. With $150K jointly committed, three collaborative teams were funded to address key challenges including therapeutic resistance in cancer and molecular mechanisms of neurodegenerative disease. This initiative reflects a shift toward deeper, project-based integration and is designed to catalyze larger-scale international funding efforts.

Together, QBI and UCD are establishing a sustained platform for systems-level discovery, integrating computational and experimental approaches to better understand complex disease networks and translate these insights into new therapeutic strategies.



Dublin, Ireland

Partnership focus: **Network biology of cancer and complex disease**

Scan to learn more about this collaboration

Partnership Evolution



Apr 11, 2024

Collaborative Grants

QBI and SBI launched a collaborative RFA to fund projects in network biology and drug/drug target discovery. Three research teams were awarded one-year grants, each pairing investigators from UCSF and UCD to advance innovative, high-impact projects.

Oct 16–18, 2023

Second Symposium

QBI and SBI gathered researchers from the US, Ireland, and beyond at University College Dublin to explore molecular networks in cancer and other diseases.



Oct 15, 2021–Nov 08, 2022

Joint Seminar Series

QBI and SBI hosted an online seminar series exploring molecular networks in cancer and other diseases, connecting researchers across San Francisco and Dublin.

Oct 29–30, 2020

Inaugural Symposium

QBI and SBI launched their inaugural joint symposium virtually to explore how molecular networks shape cancer and other complex diseases. The meeting brought together researchers from the US and Ireland to share in systems biology, quantitative modeling, and translational science, while strengthening a growing transatlantic partnership following the signing of a five-year MOU.



Sep 20, 2019

Establishment of a Collaborative Foundation

QBI at and UCD formalized a five-year Memorandum of Understanding to strengthen scientific ties between San Francisco and Dublin, expanding opportunities for collaborative research, training, and innovation.

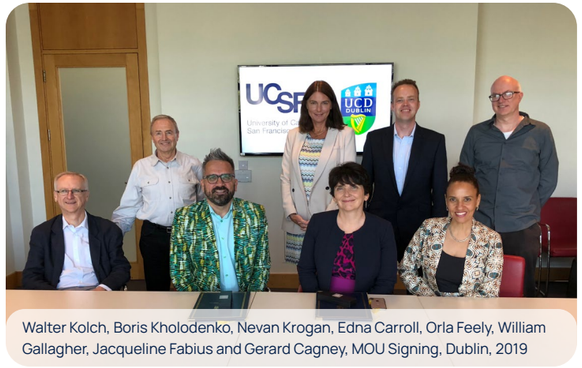
Leadership



Walter Kolch
Director, SBI UCD



Nevan Krogan
Director, QBI UCSF



Walter Kolch, Boris Kholodenko, Nevan Krogan, Edna Carroll, Orla Feely, William Gallagher, Jacqueline Fabius and Gerard Cagney, MOU Signing, Dublin, 2019



Jacqueline Fabuis, Catherine Lucey, Orla Feely, and Nevan Krogan, Krogan's UCSF office, San Francisco, 2023



Helen Roche, QBI/SBI Symposium on Molecular Networks of Cancer and Other Diseases, Dublin, 2023



Walter Kolch, QBI/SBI Symposium on Molecular Networks of Cancer and Other Diseases, Dublin, 2023



Walter Kolch, Kevan Shokat, and Nevan Krogan, Guinness Storehouse, Dublin, 2023

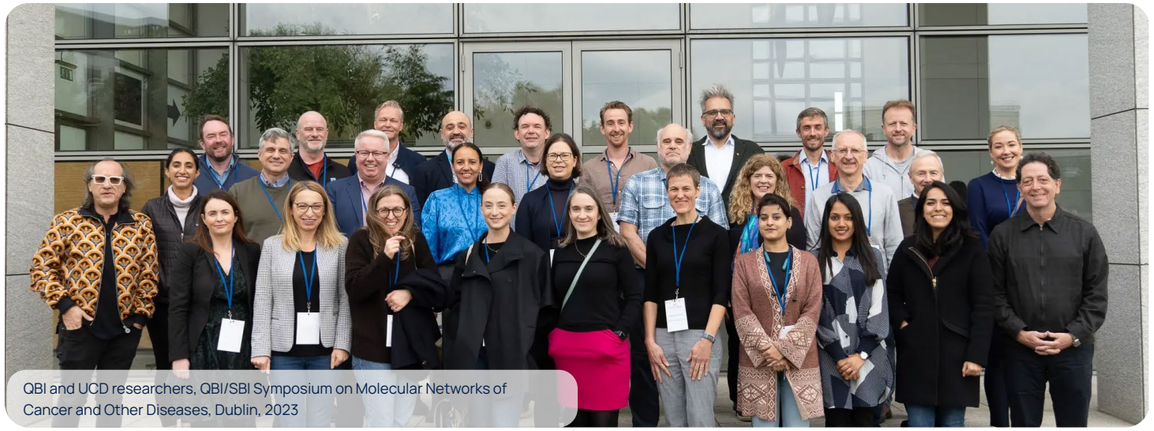


Triona McCormack, Daniel Gallahan, Patricia Clarke, Siobhan Roche, Mark Lawler, and Hannah Dueck, "Forward Looking" panel discussion, Dublin, 2023





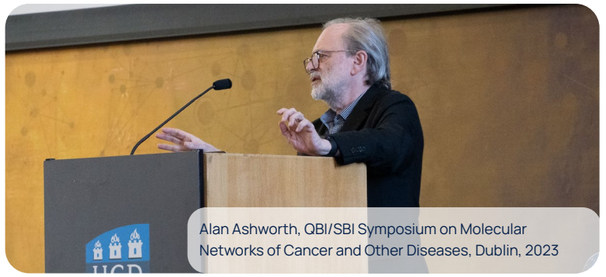
Paddy O'Leary, Richa Tiwari, Nadia Arang, Soraya Epp, Tania Dias, Teerna Bhattacharyya, and Anjan Venkatesh, "Early Career Researcher Flashtalks" Dublin, 2023



QBI and UCD researchers, QBI/SBI Symposium on Molecular Networks of Cancer and Other Diseases, Dublin, 2023



Eadaoin McKiernan, Nevan Krogan, Walter Kolch, Jacqueline Fabius, Boris Kholodenko, Dublin, 2023



Alan Ashworth, QBI/SBI Symposium on Molecular Networks of Cancer and Other Diseases, Dublin, 2023



Sourav Bandyopadhyay and Natalia Jura, QBI/SBI Symposium on Molecular Networks of Cancer and Other Diseases, Dublin, 2023



Nevan Krogan and Gerard Cagney, Dublin, 2023



Krystal Fontaine

Darby Davenport



Representatives from QBI, SBI and NCI, Dublin, 2023



Antoinette Perry, QBI/SBI Symposium on Molecular Networks of Cancer and Other Diseases, Dublin, 2023

Moments from the QBI–SBI collaboration, highlighting joint symposia, training opportunities, and scientific exchange that have helped advance the partnership over the years.

Tel Aviv University

QBI and Tel Aviv University (TAU), through the Edmond J. Safra Center for Bioinformatics and the Blavatnik Center for Drug Discovery, have developed a transatlantic collaboration centered on computational biology, data integration, and drug discovery. The partnership, co-directed by Ron Shamir and Nevan Krogan, brings together complementary strengths, combining QBI's large-scale experimental data generation with TAU's expertise in computational modeling, bioinformatics, and network-based analysis to better understand disease mechanisms and identify new therapeutic strategies.

Together, QBI and TAU are advancing an integrated framework for translating complex biological data into actionable insight, with a focus on uncovering disease biology and accelerating drug target discovery across multiple disease areas. By bridging experimental and computational approaches, the collaboration addresses a central challenge in modern biomedicine: transforming large-scale datasets into predictive models of disease and treatment.

The collaboration was formalized in 2019 through a joint symposium on computational biology and drug discovery, building on longstanding scientific relationships between investigators at both institutions. Since then, ongoing scientific exchange has helped align research priorities and strengthen connections between computational and experimental research communities in San Francisco and Tel Aviv.

In 2022 the partnership has expanded into coordinated research funding through a joint seed grant program, with $300K jointly committed to support cross-institutional teams. Five collaborative projects were funded, bringing together researchers to address diverse challenges including neurodegenerative disease, antiviral immunity, COVID-19 drug target discovery, protein engineering, and precision therapeutics. By pairing complementary expertise across institutions, the program supports high-risk, high-impact research while laying the foundation for larger-scale translational and funding opportunities.

Across these efforts, QBI and TAU are building a sustained platform for computationally driven discovery, integrating quantitative data generation with advanced modeling approaches to accelerate biological insight and therapeutic development—an effort further strengthened by a $6M philanthropic gift received in December 2025, to support high-risk, early-stage collaborative research on cancer and neurodegenerative diseases. The program supports collaborative research grants, seed funding for early-stage projects, trainee and faculty exchanges, and conferences rotating between Tel Aviv and San Francisco.

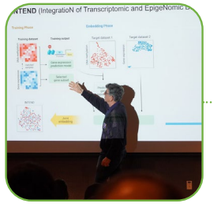


Tel Aviv, Israel

Partnership focus: **Bioinformatics and translational drug discovery**

Scan to learn more about this collaboration

Partnership Evolution



Dec 16, 2025

6 Million Gift for Research

QBI and TAU received a philanthropic gift to support high-risk, early-stage collaborative research on cancer and neurodegenerative diseases by leveraging the complementary strengths of UCSF and TAU, and to support hands-on training, and recurring joint conferences.

May 16-17, 2023

Second Symposium

QBI and TAU hosted their second joint symposium in San Francisco to further advance collaboration in computational biology and drug discovery and strengthen ongoing research connections to support the continued growth of their partnership.





Jan 21, 2021

Joint Seed Grant Program

QBI and TAU awarded $300K in joint seed grants to foster new partnerships in computational biology and drug discovery. The program connected researchers across institutions, supporting innovative projects designed to accelerate translational research and therapeutic development.

Dec 4–5, 2019

Inaugural Symposium

QBI and TAU launched their collaboration with an inaugural symposium in Israel in computational biology and drug discovery, bringing together interdisciplinary researchers to explore data-driven approaches to therapeutic development.



Leadership



Ron Shamir
Professor, TAU

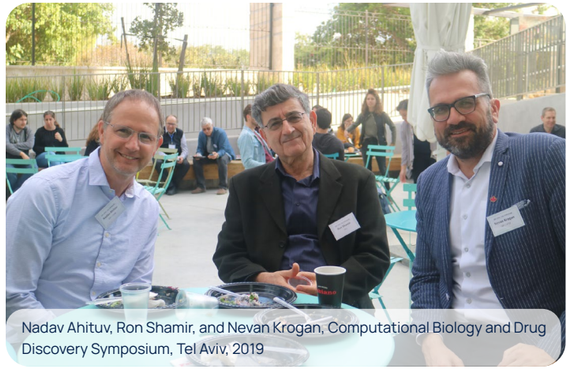


Nevan Krogan
Director, QBI UCSF

Program Management



Celine Perier
Director of International Partnerships, QBI UCSF



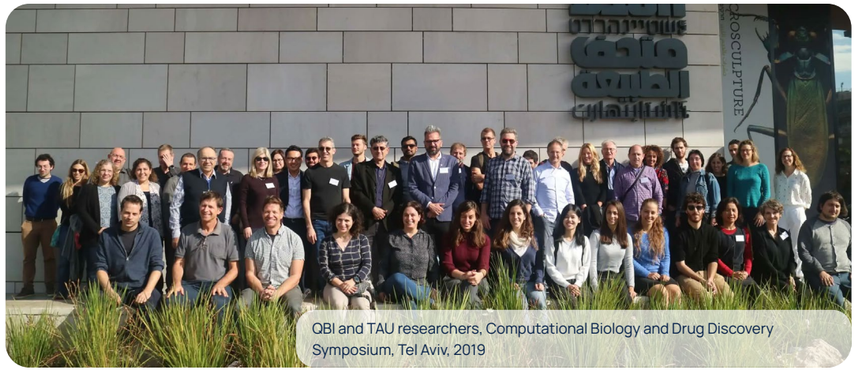
Nadav Ahituv, Ron Shamir, and Nevan Krogan, Computational Biology and Drug Discovery Symposium, Tel Aviv, 2019



Tanja Kortemme, Jack Taunton, Sourav Bandyopadhyay, Computational Biology and Drug Discovery Symposium, Tel Aviv, 2019



Ran Elkon, second Computational Biology and Drug Discovery Symposium, San Francisco, 2023



QBI and TAU researchers, Computational Biology and Drug Discovery Symposium, Tel Aviv, 2019



Andrej Sali, Computational Biology and Drug Discovery Symposium, Tel Aviv, 2019



Ron Shamir and Nevan Krogan, MOU signing, Tel Aviv, 2019



Lani Wu and Steven Altschuler, Computational Biology and Drug Discovery Symposium, Tel Aviv, 2019



Nevan Krogan, Ron Shamir, Kathy Giacomini, and Jacqueline Fabius, second Computational Biology and Drug Discovery Symposium, San Francisco, 2023



QBI and TAU researchers, second Computational Biology and Drug Discovery Symposium, San Francisco, 2023



Noam Shomron, Gina Nguyen, Margaux Pinney, Marina Sirota, and Nir Ben-Tal, DeGrado residence, San Francisco, 2023



Nevan Krogan and William DeGrado, DeGrado residence, San Francisco, 2023



Rina Rosin-Arbesfeld, second Computational Biology and Drug Discovery Symposium, San Francisco, 2023



Michelle Arkin and Martin Kupiec, second Computational Biology and Drug Discovery Symposium, San Francisco, 2023



Haim Wolfson, second Computational Biology and Drug Discovery Symposium, San Francisco, 2023



Aldema Sas-Chen and Vered Padler-Karavani, second Computational Biology and Drug Discovery Symposium, San Francisco, 2023

Moments from the QBI–TAU collaboration, highlighting milestones, joint symposia, scientific exchange, and community-building across both institutions over the years.

University of Alberta

QBI has established a partnership with the University of Alberta (U of A), co-led by Joanne Lemieux, Olivier Julien, Kliment Verba, Nevan Krogan, and Melanie Ott, and managed by Celine Perier. Formalized through a Memorandum of Understanding in 2025, the collaboration brings together complementary strengths in virology, systems biology, and machine learning to investigate complex disease mechanisms, with a particular focus on neuroinflammation and infectious disease.

A central aim of this effort is to develop AI-driven, high-resolution molecular maps that define how infection and inflammation impact the nervous system across conditions such as multiple sclerosis, HIV-associated neurocognitive disorders, and Long COVID. By integrating multi-omics data with structural and clinical insights, the partnership seeks to uncover new therapeutic targets and advance a more comprehensive understanding of disease biology.

Beyond research, the collaboration supports joint symposia, trainee exchange, and shared funding initiatives, strengthening cross-institutional training and scientific exchange.

Partnership Evolution

May 29, 2026

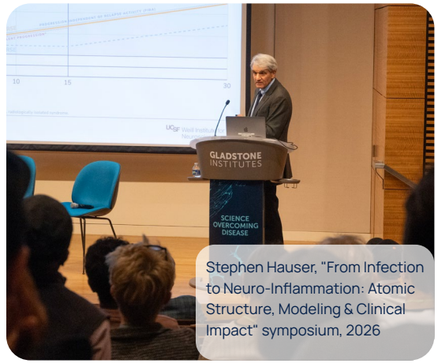
Inaugural Symposium

QBI, U of A and Gladstone Institutes hosted a joint symposium in San Francisco exploring structural biology and computational approaches to infection and neuro-inflammation.

Dec 8, 2025

Partnership Formalized

Following an inaugural gathering in San Francisco focused on AI and biomedical research, QBI and U of A established a collaboration to advance AI-driven approaches to human health.



Stephen Hauser, "From Infection to Neuro-Inflammation: Atomic Structure, Modeling & Clinical Impact" symposium, 2026

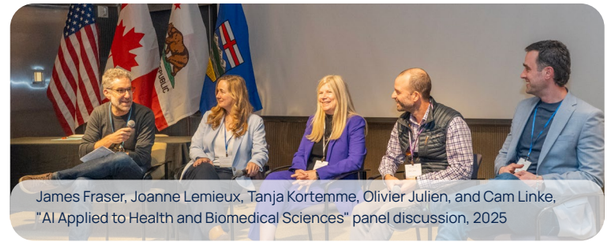


Richard Sutton, Keynote Speaker, "Blueprints of Tomorrow: AI and Human Health", 2025


Canadian Consulate in San Francisco and researchers from QBI/UCSF and U of A, 2025



Symposium speakers, "From Infection to Neuro-Inflammation: Atomic Structure, Modeling & Clinical Impact" symposium, 2026


James Fraser, Joanne Lemieux, Tanja Kortemme, Olivier Julien, and Cam Linke, "AI Applied to Health and Biomedical Sciences" panel discussion, 2025


Poster session, "From Infection to Neuro-Inflammation: Atomic Structure, Modeling & Clinical Impact" symposium, 2026



Sam Hawgood and Bill Flanagan, MOU signing, 2025


Members of the Canadian Consulate in San Francisco, QBI/UCSF, U of A, and Alberta Machine Intelligence Institute (Amii) at the MOU signing event, 2025

Moments from the QBI–U of A collaboration, highlighting the launch of the partnership, strategic meetings, and an inaugural symposium.



Alberta, Canada

Partnership focus: AI-driven systems biology of neuroinflammatory disease

Scan to learn more about this collaboration

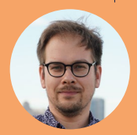
Leadership


Joanne Lemieux
Professor, U of A


Olivier Julien
Associate Professor, U of A


Nevan Krogan
Director, QBI UCSF


Melanie Ott
Professor, Gladstone


Kliment Verba
Assistant Professor, QBI UCSF

Program Management


Celine Perier
Director of International Partnerships, QBI UCSF

University of Toronto

QBI has initiated collaboration with the University of Toronto (U of T) through its Precision Medicine Initiative (PRiME), an interdisciplinary program integrating genomics, bioengineering, molecular chemistry, and computational approaches to accelerate advances in human health. This partnership, co-led by Molly Shoichet, Brian Shoichet and Nevan Krogan, is centered on the intersection of quantitative biology, drug discovery, and precision medicine, with an emphasis on translating fundamental insights into next-generation diagnostics and therapeutics. A joint symposium held in 2024 brought together researchers from both institutions to explore emerging opportunities in AI-driven drug discovery and personalized medicine, while establishing a foundation for future collaborative research and training. Together, these efforts reflect a growing alignment between QBI and PRiME in developing integrated, data-driven approaches to disease biology and therapeutic innovation.

Partnership Evolution

Nov 8, 2024

Inaugural Symposium

QBI and PRiME hosted their first symposium in San Francisco exploring quantitative biology, AI-driven drug discovery, and precision medicine, laying the foundation for future collaboration.

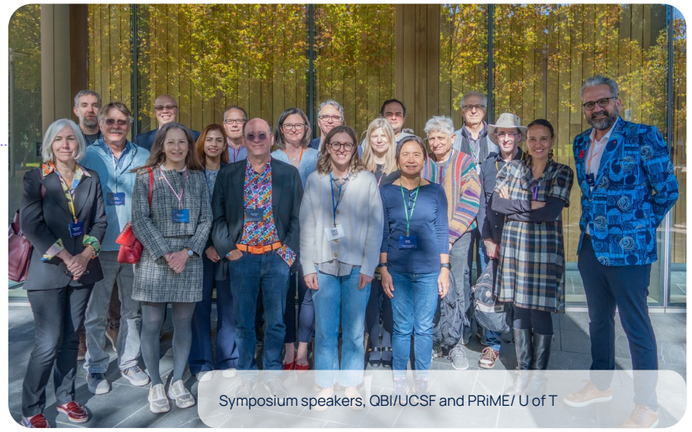

Matthew State


Molly and Brian Shoichet


Regis Kelly

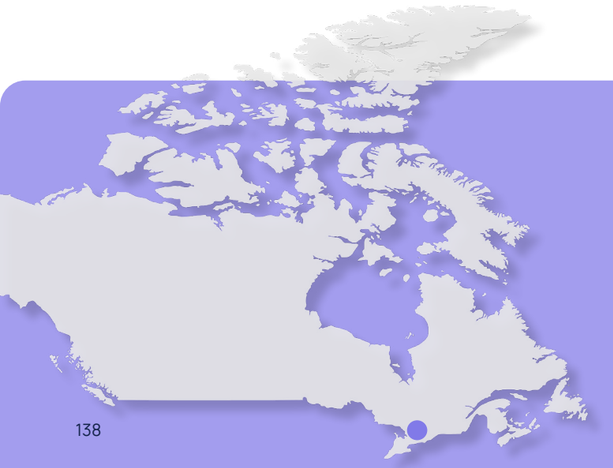

Brian Shoichet, Douglas Crawford, Craig Muir, Greg Yap, Spiro Liras, Rami Hannoush, and Molly Shoichet




Symposium speakers, QBI/UCSF and PRiME/ U of T



Moments from the QBI– U of T/PRiME Quantitative Approaches to Drug Discovery and Precision Medicine Symposium in San Francisco in 2024, highlighting scientific exchange.



Toronto, Canada

Partnership focus: **Precision medicine and drug discovery**

Scan to learn more about this collaboration

Leadership


Molly Shoichet
Professor, U of T


Brian Shoichet
Professor, QBI UCSF


Nevan Krogan
Director, QBI UCSF

University of Copenhagen

QBI and the Center for Protein Design (CPD) at the University of Copenhagen have established a strategic transatlantic partnership to pioneer the next frontier in protein engineering, structural biology, and drug discovery, co-directed by Nevan Krogan and CPD Director Dek Woolfson and managed by Celine Perier. CPD focuses on developing advanced computational and experimental methods to program sequence-to-structure and function relationships into entirely new, functional designed proteins; bridging academic discovery and industrial application to address diverse global challenges. The scientific alignment with QBI is complementary: where QBI brings disease-agnostic network mapping, large-scale proteomics, and systems-level understanding of how proteins interact in healthy and diseased states, CPD contributes world-leading expertise in de novo protein design, molecular engineering, and programmable interaction systems.

Together, the two institutions are working toward a paradigm shift in the field: moving beyond the design of individual protein binders toward the engineering of functional interaction networks that control biological processes with molecular precision

A first joint symposium is planned for November 2026, convening a curated group of leaders across protein design, structural biology, chemical biology, and drug discovery. The meeting is structured around a central question: can we move from designing individual protein binders to engineering functional interaction networks that control biological processes at scale? Beyond presentations and open scientific discussions, the symposium is designed to move from collective insight to tangible action, laying the programmatic foundation for a long-term partnership between San Francisco and Copenhagen.

Partnership Evolution

Nov 17-18, 2026

Inaugural Symposium

QBI and CPD announced plans for a joint symposium focused on protein engineering, computational biology, and the design of functional interaction networks for therapeutic discovery.

Sept 2025

Scientific Exchange

QBI visited leading Danish research and innovation institutions, including the University of Copenhagen's Center for Protein Design, the BioInnovation Institute, Statens Serum Institut, and the Novo Nordisk Foundation, to explore opportunities in protein engineering, translational science, and global health collaboration.



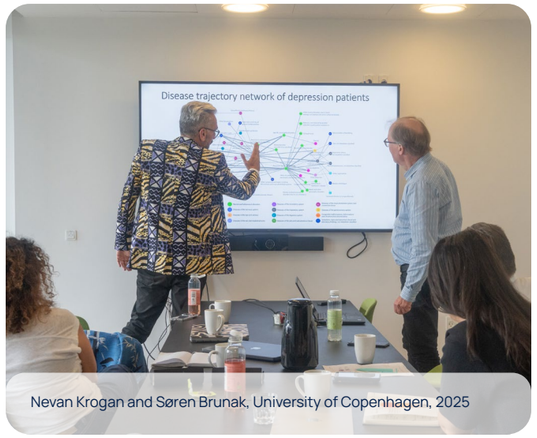
Vanesa Saric, Andreas Zaby, Nevan Krogan and Celine Perier, SPRIND, 2025



Christian Malherbe, Celine Perier, Nevan Krogan, Tamar Szeps-Znaider, Cathal Mahon, BioInnovation Institute, 2025



Christian Malherbe, Kristian Strømgaard, Dan Stærk, Nevan Krogan, Lise Arleth, Dek Woolfson, Celine Perier, and Vanesa Saric, University of Copenhagen, 2025



Nevan Krogan and Søren Brunak, University of Copenhagen, 2025



Center for Protein Design construction visit, 2025



QBI group meets with Christian Østergaard Andersen, Tyra Grove Krause, Henrik Ullum, and Mikkel Lyndrup, Statens Serum institute, 2025



Copenhagen, Denmark

Partnership focus: **De novo protein design, protein-protein interaction engineering, and translational drug discovery**

Scan to learn more about this collaboration

Leadership



Dek Woolfson
Director, CPD



Nevan Krogan
Director, QBI UCSF



Tanja Kortemme
Professor, UCSF

Program Management



Celine Perier
Director of International Partnerships, QBI UCSF

Africa

Building a Network of Scientific Exchange Across Africa

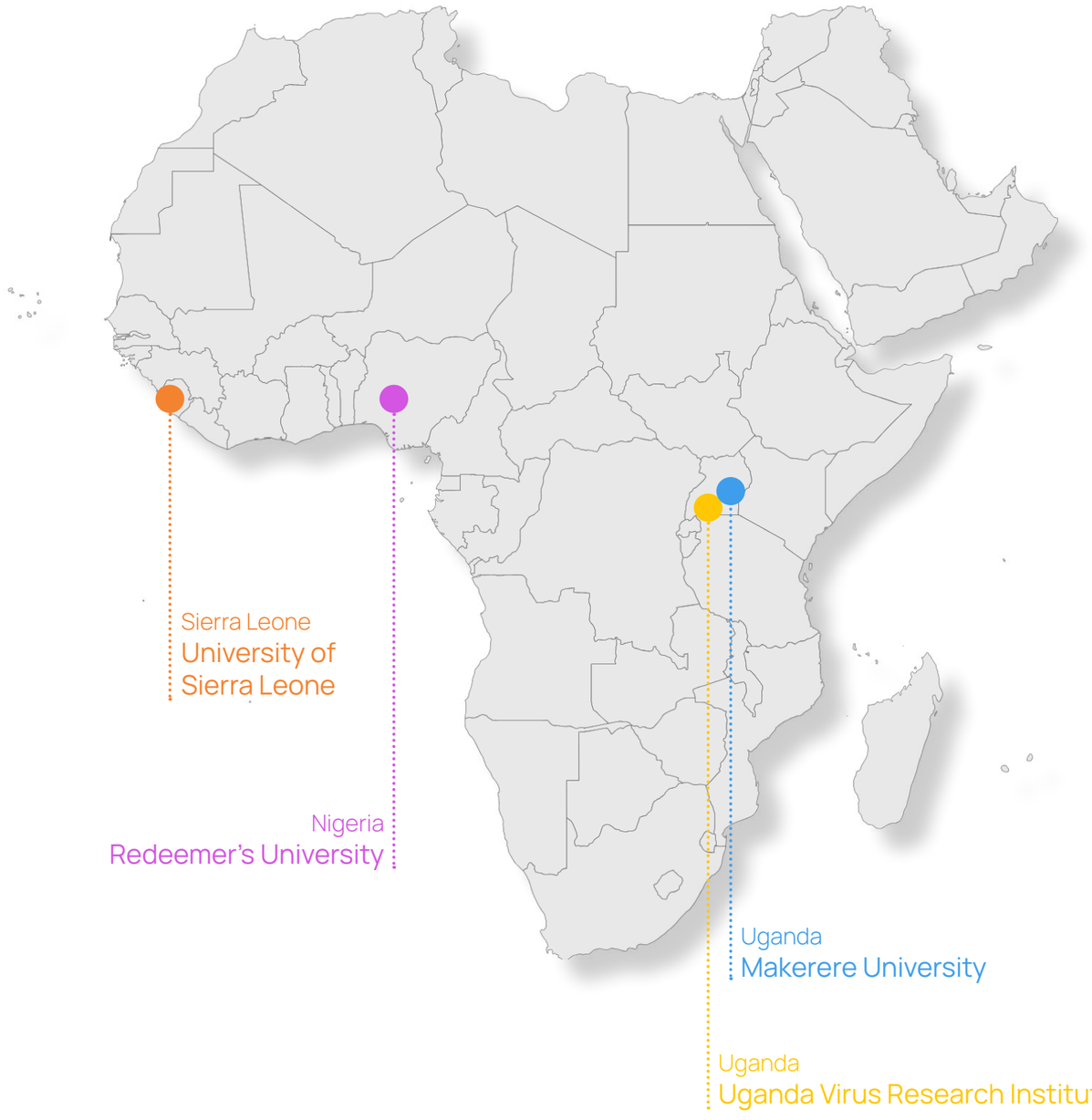
QBI's partnerships in Africa began not as a single program, but through a series of connected scientific relationships emerging across different countries and research communities. Over time, these individual threads formed the foundation of a broader continental network.

Early engagement began through the QBI International Visiting Scholar Program, which brought Jacqueline Kyosimiire-Lugemwa from the Uganda Virus Research Institute to UCSF for advanced training in experimental and computational methods. Her time at QBI combined mentorship, technical training, and integration into the broader scientific community, establishing one of the earliest sustained institutional connections between QBI and researchers in East Africa.

In parallel, new connections began forming in West Africa through scientific leadership exchange. In Ghana, collaboration with Yaw Bediako of the University of Ghana expanded engagement into biomedical research initiatives, reflecting growing cross-institutional scientific exchange.

A separate but pivotal connection emerged in Sierra Leone through physician and global health leader Bailor Barrie. Introduced to QBI director Nevan Krogan through their shared connection with Paul Farmer, Bailor Barrie became a key scientific and clinical link in the region. This relationship was further strengthened when Nevan Krogan and Jacqueline Fabius, then Chief Operating Officer of QBI, traveled to Sierra Leone to visit Bailor in Freetown and Kono, where early discussions helped establish the foundation for joint research engagement in the region.

Alongside these emerging connections, collaborations with virologist Christian Happi of Redeemer's University in Nigeria expanded engagement across infectious disease research and molecular virology, further linking West African research communities into a growing international network.



Across Uganda, Ghana, Nigeria, and Sierra Leone, these relationships began to form a distributed but increasingly interconnected scientific community—linked through shared training, reciprocal visits, and emerging research collaboration.

These parallel threads ultimately converged into a coordinated regional effort that brought these individuals together in a shared scientific event in Sierra Leone.

Sierra Leone

West Africa Symposium on Infectious Diseases: A Regional Scientific Convening

In 2024, QBI co-hosted the "First International West Africa Symposium & Workshops on Infectious Diseases" in Freetown, Sierra Leone—transforming years of collaboration into a large-scale regional platform for training, exchange, and scientific connection.

The symposium was organized in collaboration with the Sierra Leone Ministry of Health and Sanitation, the University of Sierra Leone, Partners In Health, and regional scientific partners including Redeemer's University in Nigeria and leading investigators such as Christian Happi.

The program brought together more than 450 researchers from over a dozen African countries and combined hands-on training, mentorship, and technical workshops spanning clinical research design, molecular biology, grant writing, and bioinformatics.

As part of the program, participants also traveled to Kono for a clinical site visit that highlighted the connection between discovery research and frontline healthcare delivery, offering direct exposure to clinical and public health work in the region.

A key emphasis was placed on early-career investigators, with travel support and structured networking opportunities designed to expand access, strengthen collaboration, and build a growing pipeline of scientific leaders across the region. The success and scale of this convening directly informed the creation of a new initiative designed to sustain and expand this model across Africa.

Scan to explore the documentary, podcast, and more from this event.

Kono:
Clinical Site Visit,
Bridging the gap between discovery research and the clinic



Freetown:
- 2-Day Symposium
- 5-Day Workshop



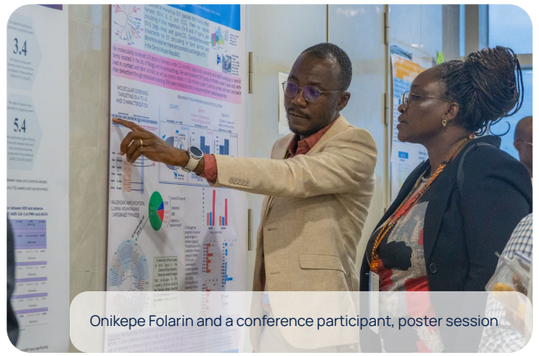


Nevan Krogan, Austin Demby (Minister of Health in Sierra Leone), Sam Krishnan, Bailor Barrie, and Mustapha Kabba





Mary Fullah, Dan Okoro, Tom Sesay, Edward Kommwa, and Safula Mansaray, "Addressing Maternal & Child Health Alongside Infectious Disease" panel discussion



Onikepe Folarin and a conference participant, poster session



Emma Yee (Cell Press Scientific Editor), keynote symposium speaker



Microbial Sequencing Bioinformatics Workshop



Bailor Barrie and symposium speakers, Kono clinic site visit

Scenes from the 2024 West Africa Symposium & Workshops on Infectious Diseases in Sierra Leone, including scientific talks, workshop participants, poster sessions, panel discussions, and a clinical site visit to Kono.

The Paul Farmer African Initiative for Research (PFAIR)

Expanding the Model

In response to the momentum generated by the West Africa symposium, QBI established the Paul Farmer African Initiative for Research (PFAIR) as a long-term framework to deepen and expand scientific collaboration across the continent.

PFAIR was created to strengthen mentorship, research capacity, knowledge exchange, and international training opportunities for African scientists, with a particular emphasis on supporting African investigators to lead future scientific initiatives.

The initiative also serves as a platform to support sustained fundraising and institutional partnerships, enabling the expansion of regional programming across additional African countries.

Building on this model, the West Africa symposium series will continue with its next iteration planned for 2027 in Nigeria, further extending QBI's regional training and capacity-building network.

Beyond convening and training, QBI's Africa-linked partnerships extend into deeply integrated collaborative research programs. Through major NIH-supported consortia—including the Childhood "Omics" and Mycobacterium tuberculosis-derived BiOsignatures (COMBO) project and the Host Pathogen Variation & TB Pathogenesis initiative—QBI investigators work with Ugandan collaborators to apply advanced molecular and computational approaches to clinical cohorts, embedding African institutions directly within discovery science.

Across these efforts, QBI has demonstrated that scientific excellence and global partnership are mutually reinforcing. Its Africa-linked collaborations span training, leadership exchange, convening, and joint discovery science—positioning African institutions and investigators as central contributors to global infectious disease research and strengthening the international ecosystem for outbreak preparedness, discovery science, and translational impact.

A Sustainable Multi-Component Program

Convening

Scientific symposia and workshops in Africa bi-annually (next event: Nigeria, 2027)

Training & Mentorship

Virtual mentorship for PhD students and early-career scientists

Research exchange opportunities

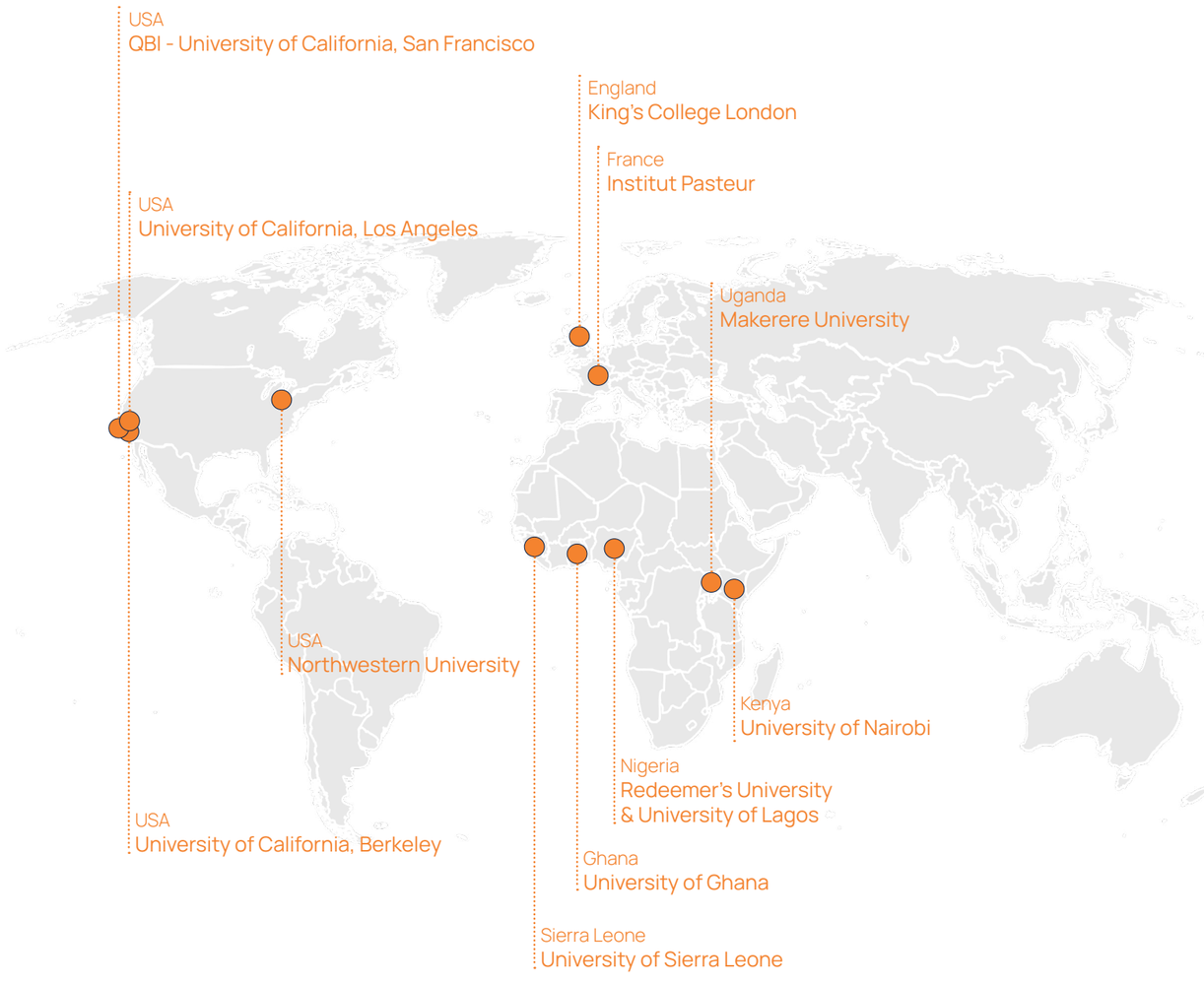
Postdoctoral fellowship programs

Collaborative Research

Joint RFAs connecting African institutions with global partners

Cross-institutional infectious disease research initiatives

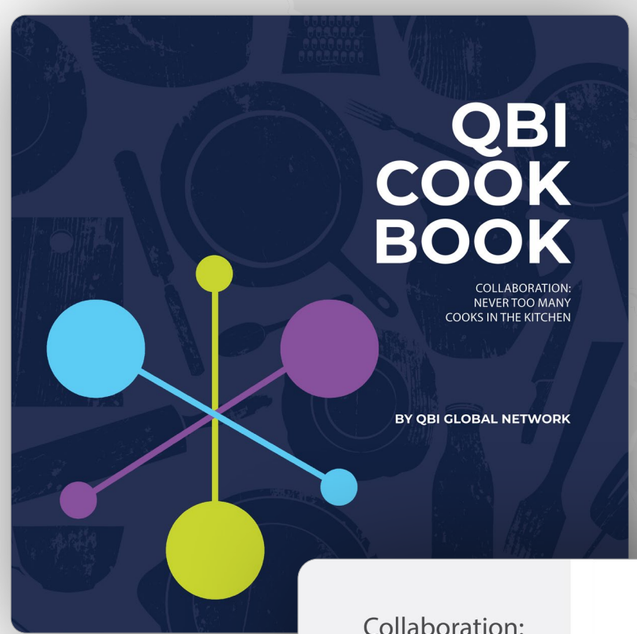
A Growing Consortium

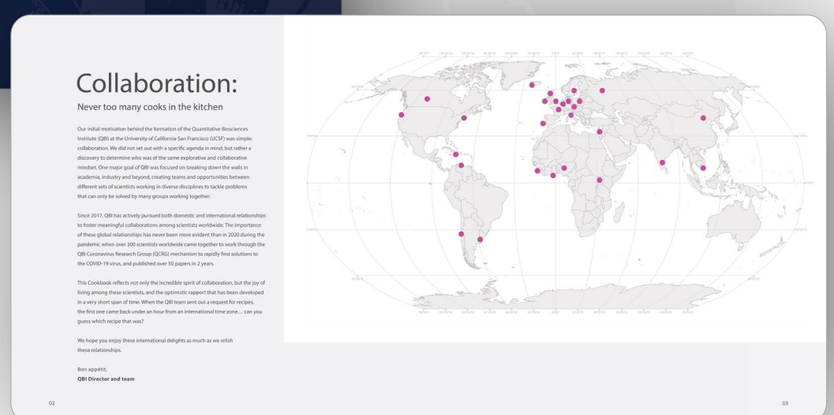


Beyond Science: A Taste of the QBI Network

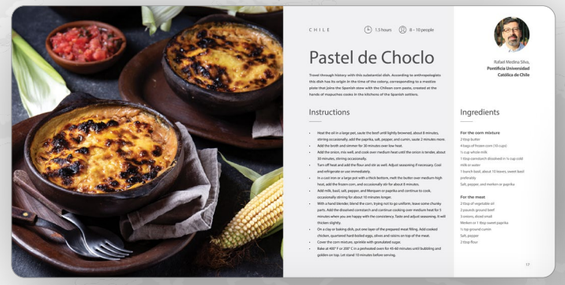
The QBI Cookbook

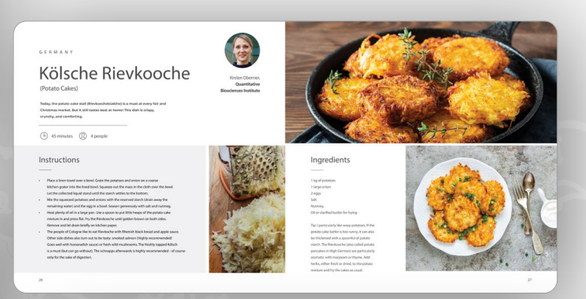
Over the past decade, QBI built a global community of collaborators spanning continents, disciplines, and cultures. Along the way, scientific partnerships grew into friendships that extended beyond the laboratory. To celebrate the people behind these connections, QBI created a cookbook in 2023 and distributed it to its community, featuring recipes contributed by team members and collaborators around the world. More than a collection of dishes, it reflects the diverse cultures, traditions, and relationships that help shape the QBI network.

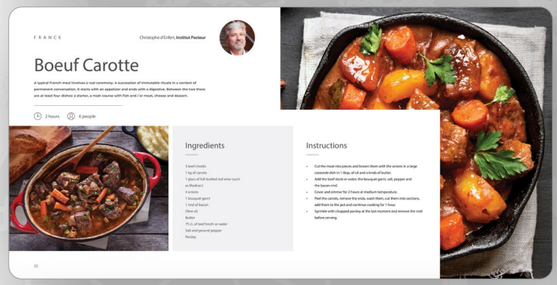


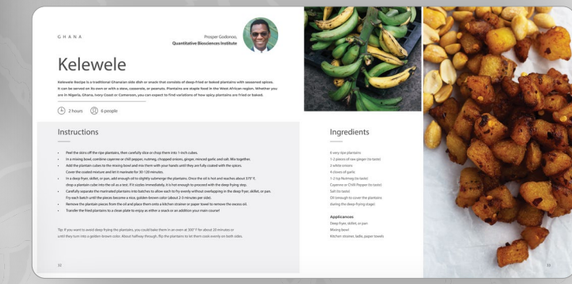


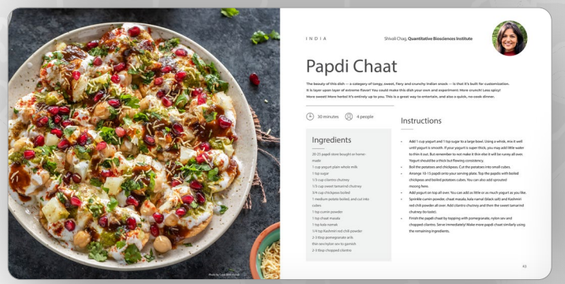
Scan to explore the QBI Cookbook and get cooking—there are never too many cooks in the kitchen!



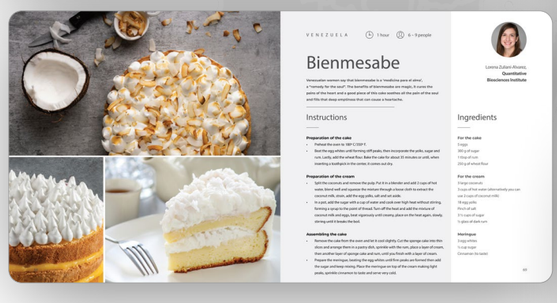


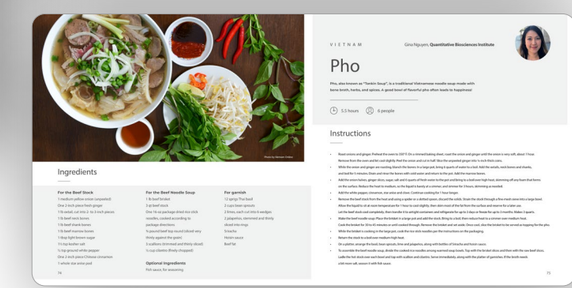














LOOKING AHEAD

The first decade of QBI demonstrated what becomes possible when people from around the world come together around a shared goal: understanding disease through collaboration, innovation, and discovery.

As biomedical research enters a new era, the questions facing science are becoming increasingly complex. Advances in artificial intelligence, single-cell biology, structural proteomics, genome engineering, and computational modeling are transforming how discoveries are made and how quickly they can be translated into impact. At the same time, many of the world's most pressing health challenges—from cancer and neuropsychiatric disorders to infectious diseases and future pandemics—demand approaches that cross traditional disciplinary, institutional, and geographic boundaries.

QBI was built for this moment.

Over the past ten years, the institute has developed a model that brings together diverse expertise, shared technologies, and collaborative networks to tackle biological questions at scale. What began as a vision centered at UCSF has grown into a global scientific community connected across institutions, disciplines, and continents. By combining technological innovation with a culture of openness and partnership, QBI has helped demonstrate how team-based science can accelerate discovery and expand what is possible in biomedical research. This approach continues to foster connections between academia and industry, helping move fundamental discoveries toward real-world applications.

The institute's next chapter will continue to be guided by the principles that shaped its first decade: investing in transformative technologies, fostering interdisciplinary collaboration, strengthening global partnerships, and creating opportunities for the next generation of scientists. Emerging advances in artificial intelligence and quantitative biology will further connect computational prediction with experimental validation, helping transform biological data into deeper understanding, new therapeutic opportunities, and tangible benefits for human health.

Equally important will be the people who make this work possible. Students, trainees, postdoctoral scholars, scientific and administrative staff, faculty, and collaborators around the world will continue to drive the creativity, curiosity, and collective effort that define QBI's community. Their ideas, expertise, and willingness to work across disciplines remain the institute's greatest strength.

The story of QBI has never been about a single laboratory, technology, or scientific breakthrough. It has been about building an ecosystem where discoveries emerge from unexpected connections—between fields, institutions, technologies, and people. Perhaps most importantly, QBI's first decade has demonstrated the power of team science as a framework for tackling the complexity of human disease.

Ten years ago, QBI set out to reimagine how science could be done. Today, that vision has grown into a worldwide community united by a shared commitment to understanding biology and improving human health. As the institute enters its second decade, the foundation is in place for even greater discoveries ahead.

The first ten years established what QBI could become. The next ten years will help define what biomedical research can be.

