Yale SCHOOL OF MEDICINE

Chair, Department of Cell Biology
Yale School of Medicine
New Haven, Connecticut

THE SEARCH

Yale School of Medicine (YSM) seeks a strategic and collaborative leader to serve as Chair of the Department of Cell Biology. This is an exciting opportunity for a highly accomplished and ambitious cell biologist to lead a productive, energetic, and collaborative department with key strengths in the discovery of fundamental mechanisms that govern life at the cellular and sub-cellular level. In addition to conducting world-leading research, the Department aims to apply the knowledge from its fundamental discoveries to provide a mechanistic basis for understanding human development, physiology, and disease. The members of the Department aim to achieve these goals within an inclusive and diverse academic environment that fosters collaboration, mentorship, and support for the research and educational missions.

The Department of Cell Biology is home to a highly talented and diverse faculty who are currently and historically world leaders in the field. The next Chair will inherit a department with a proud and robust history of rigorous science. They must be a highly engaged mentor and champion, sustaining the success of faculty at all levels and roles, and democratically fostering collaboration and shared leadership. Cell biology is intertwined with the other biological sciences, including neuroscience, molecular biochemistry and biophysics, medicine, and biomedical engineering, and the Department has become a natural academic home for faculty jointly appointed in other departments and centers. The Chair must be skilled in management to elevate faculty and staff across multiple affiliations.

The Chair will work in partnership with the Dean to strategically grow the Department's top-tier science and diversity of discipline and background to continue its reputation for cutting-edge research and its commitment to excellence. The Chair will be a transformative leader who appreciates the Department's history, sets forth a broad vision, and nurtures an equitable and inclusive culture that supports gender and racial diversity. YSM seeks a leader with impeccable scientific taste and an eagerness to harness the current success of the department and translate that work into an even more successful and productive future.

The incoming Chair will have the opportunity to develop a clear vision for the Department of Cell Biology and will be afforded resources to see that through to fruition through faculty hires and additional space. The Chair will be responsible for continuing the Department's research momentum through the recruitment of faculty with varied research interests and diverse backgrounds, as well as an approach to science that continues to advance the field. This momentum can also be bolstered through the Chair's efforts to serve as a catalyst for collaboration throughout YSM. Acting as a bridge within the Department and across the institution, the Chair will ensure that the Department maintains its reputation as a leader in research.

Yale School of Medicine has retained Isaacson, Miller to assist with this important recruitment. Inquiries, nominations, and applications should be directed confidentially to Isaacson, Miller as indicated at the end of this document.

YALE SCHOOL OF MEDICINE

Founded in 1810, Yale School of Medicine (YSM) is the sixth oldest medical school in the country and a leading institution for biomedical research, education, and advanced clinical care. YSM's standing rests on its impressive history of attracting top-tier scientists in both the basic science and clinical departments, a prized medical education system that prioritizes self-directed learning, and a close partnership with the Yale New Haven Health System for clinical care. YSM currently ranks seventh among medical schools receiving funds from the National Institutes of Health (NIH) and sixth for number of grants per faculty member. More than 1,600 Yale physicians provide care to patients from across the region and around the world.

YSM educates and nurtures creative future leaders in medicine, public health, and biomedical science, promoting curiosity and critical inquiry in an inclusive environment enriched by diversity. A total of 1,827 students are currently enrolled at YSM, including 359 medical students and 415 PhD students. YSM houses 5,009 faculty and 1,704 postdoctoral fellows and associates in 34 academic departments. There are 11 basic science departments and 18 clinical departments. Yale has 66 faculty members belonging to the National Academy of Sciences, 55 members belonging to the National Academy of Medicine or both academies, seven Howard Hughes Medical Institute (HHMI) Investigators, four Lasker Award recipients, and four Nobel Laureates, including James Rothman, the former Cell Biology chair. YSM is home to many of the PhD programs in Yale's combined program in the Biological and Biomedical Sciences (BBS) and to a host of joint degree programs with other Yale schools, reflecting the highly interdisciplinary tradition of the university.

Research at the medical school covers a broad spectrum, from fundamental studies in the life sciences, including cell biology, genetics, immunobiology, microbial pathogenesis, neuroscience, pharmacology, physiology, biophysics, and biochemistry, to translational and clinical studies aimed at improving the diagnosis and treatment of human diseases. Important research collaborations bring together scientists of all types on the medical campus, Science Hill, and the West Campus. Yale's impressive array of research institutes and core facilities are designed to promote collaboration and interdisciplinary dialogue. To this end, many YSM faculty have secondary appointments in departments across the university.

The Department of Cell Biology is integrated within the interdisciplinary biological and biomedical sciences, and research is conducted throughout the Yale University campus with laboratories and core facilities located at the School of Medicine in the Sterling Hall of Medicine and the Boyer Center for Molecular Medicine and at Yale's West Campus in the Integrated Science and Technology Center. Two newly constructed buildings and building renovations scheduled to open in 2025 and 2026 add state-of-the-art facilities to the Yale campus. The Boyer Center for Molecular Medicine at the School of Medicine brings together both basic and clinical scientists in areas such as molecular genetics, molecular oncology and development, and molecular neurobiology. The Anlyan Center for Medical Research and Education houses laboratory space, the Magnetic Resonance Research Center, the Section of Bioimaging Sciences, modern teaching facilities, and animal care facilities. The Nancy Lee and Perry R. Bass Center for Molecular and Structural Biology provides a state-of-the-art teaching and research facility that brings together researchers from throughout the University to study molecular biophysics and biochemistry.

YSM's core research resources are built around the newest technologies such as state-of-the-art tools for genomics and proteomics, including whole-genome sequencing and mass spectrometry; high-resolution imaging and image analysis at every scale, including cryoelectron microscopy, cryoelectron tomography, and the only focused ion beam-scanning electron microscope in the region; high-throughput screening, including RNAi and chemical screens, and construction and analysis of animal models of disease.

The university leadership's commitment to enhancing science at Yale, coupled with the close proximity of YSM to the main campus and the collaborative, collegial environment for research, galvanizes interdisciplinary research across the university. Funding for research at YSM has increased from $539.6 million in 2012 to $808.5 million in 2022 with $511.7 million awarded from NIH, a portion of which represents 24 center and program grants. Approximately two-thirds of total sponsored research expenditures are from clinical departments, with the remaining third coming from the basic sciences.

More information about Yale School of Medicine can be found here.

LEADERSHIP

Yale School of Medicine is led by Dean Nancy J. Brown, MD, who reports to the president of the university. Dean Brown joined the campus community in 2020 from Vanderbilt University Medical Center where she was the chair of the Vanderbilt Department of Medicine and physician-in-chief of Vanderbilt University Hospital. From 2006-2010, she served as the Associate Dean for Clinical and Translational Scientist Development and established an institutional infrastructure to support physician-scientists in the transition to independence. Dr. Brown is a fellow in the American Association for the Advancement of Science and a member of the American Society for Clinical Investigation, the American Association of Physicians, the National Academy of Medicine, and the American Academy of Arts and Sciences. Under her leadership, YSM is formulating ambitious priorities and making critical investments.

THE DEPARTMENT OF CELL BIOLOGY

The Department of Cell Biology has a fascinating and storied history. Arising from the study of anatomy and histology, which harkens back to the beginning of the Yale School of Medicine, when the section of cell biology was founded by George Palade, James Jamieson and Marilyn Farquhar with a strong PhD graduate program in cell biology that remains vibrant to this day. The section expanded when George Palade, who is arguably the founder of modern cell biology science, received a Nobel Prize in Physiology in 1974 (along with Albert Claude and Christian DeDuve) for determining the mechanisms of the secretory pathway and intra-cellular communication through electron microscopy and cell fractionation. In 1983, the section became the Department of Cell Biology under the leadership of James Jamieson whose leadership was followed by Ari Helenius (1992), Pietro De Camilli (1997) and Ira Mellman (2000). The establishment of the Center for Cell Imaging (CCI) and pioneering work in exocytosis in kidney function, viral membrane trafficking, endocytosis, antigen presentation, and dendritic cell function, along with many other areas of scientific discovery, was conducted during the ensuing years. In 2008, James Rothman became chair and was awarded the 2013 Nobel Prize in Physiology or Medicine (along with Randy Schekman and Thomas Sühof) for the discovery of vesicle traffic regulation. In addition to these two Nobel Prizes, major international recognition of the discoveries made in the Department over the years include two Lasker Awards, 11 National Academy of Science members, eight National Academy of Medicine members, and four Fellows of the Royal Society.

Today the Department prides itself on research revealing detailed mechanistic understanding of cell function. It continues to be at the forefront of membrane trafficking at the molecular level and has deep strength in the development of new imaging techniques like super-resolution and expansion microscopy to study the most fundamental elements of cellular organization. The Department is composed of 23 primary faculty, 18 faculty with secondary appointments, 40 graduate students, and 45 postdoctoral fellows. Areas of active investigation include regulation and mediation of vesicle trafficking, membrane transport in neurotransmission, organelle

assembly and maintenance, cellular plasticity, protein folding, nuclear transport, and continued discovery of the mechanisms surrounding the endoplasmic reticulum to name a few. Members of the Department have also been at the forefront of single-molecule technology to elucidate the molecular function of proteins involved with cell function. Investigations into the structure and compartmentalization of the nucleus and integrating core capabilities in molecular biophysics and engineering to drive mechanistic understanding of the cell has become an integral focus for the Department's future discoveries and its reputation. The Department's discoveries have led to a fundamental understanding of the cell and illuminate mechanistic avenues for disease therapeutics and treatment.

Cell biology is the natural and preferred core location for microscopic imaging at YSM, given its current strength and historical roots in anatomy. Within the Department and located in the Sterling Hall of Medicine, the Cellular Imaging using NEw Microscopy Approaches (CINEMA) lab and the Center for Cellular and Molecular Imaging (CCMI) were created as a state-of-the-art microscopy imaging centers and full-service core facilities. The CINEMA lab imaging center is equipped with an automated Evos FL2 wide-field fluorescent microscope, an OMX-SIM and Total Internal Reflection Fluorescent (TIRF) microscope, and two custom-built TIRF microscopes (RingTIRF and GalvoTIRF) along with a tissue culture facility and analysis computer station. The CCMI supports users who utilize electron microscopy (EM) to study 3D subcellular architecture, such as electron tomography (ET), focused-ion-beam scanning electron microscopy (FIB-SEM), or correlative imaging of fluorescence microscopy and EM (CLEM). The facilities provide cutting-edge technologies to address complex cell biological questions that cannot be addressed with standard methodologies. Yale has the best dynamic fluorescence microscopy methods, now centering on super-resolution and EM tomography. The blend of electron and light microscopy with CLEM and expansion microscopy are another place where Yale has a leading edge. Combinations of microscopy with mass spectrometry, including lipidomics, is a technology that is projected for the future. The Department intends to maintain world leadership in the biological application of super-resolution microscopy.

Cell Biology Training Environment

Diversity and inclusion are fundamental for promoting scientific creativity, innovation, and discovery. In recent years, the Department has taken steps toward creating educational and operational initiatives to catalyze the transformation of the institutional culture towards an inclusive environment that nourishes individuals of different genders, ethnicities, and backgrounds. The appointment of a Vice Chair for Diversity, Equity and Inclusion (DEI) and the recent addition of a DEI committee has led to the development of a strategic plan with a long-term vision. Seminars and workshops like the "Beyond the Bench" career seminar, the "Work in Progress" research meetings, and the "Belonging in Cell Biology" workshop, along with systematic individual postdoctoral and Associate Research Scientist mentoring have been efforts to ensure that the Department's culture and climate is supportive of its faculty, researchers, and trainees.

The Department sponsors a graduate program leading to the PhD in cell biology. Admission to the Graduate Program is through the Combined Programs in Biological and Biomedical Sciences (BBS), and students interested in cell biology generally matriculate in the Molecular Cell Biology, Genetics, and Development (MCGD) track or the Biochemistry, Quantitative Biology, Biophysics and Structural Biology (BQBSB) track. Students formally enter the cell biology program when they join the lab of a cell biology faculty member to carry out their thesis research. The program emphasizes interdisciplinary training and collaborative research using cutting-edge molecular technologies and experimental systems to address fundamental and innovative biological questions using a range of approaches, from super-resolution imaging to genomic and proteomic analyses.

The Department of Cell Biology brought in $11.6 million in sponsored income in FY22 with $4 million in indirect cost income and holds a reserve balance of $2.3 million.

ROLE OF THE CHAIR OF CELL BIOLOGY

Reporting to the Dean of the School of Medicine, the Chair promotes and empowers the education and research missions while having oversight of the administrative and financial operations of the Department. Reporting to the Chair are the Vice Chair, the Vice Chair of Diversity, the Director of Graduate Studies, Director of the Yale CINEMA Laboratory, Director of the CCMI, and the Director of Finance and Administration. The Chair will have strong expertise in cell biology, demonstrated research excellence, and exquisite taste in science. Establishing and maintaining collaborative efforts within and outside the Department will be essential, and the Chair will have a proven track record of nurturing a culture that embeds the values of inclusion and diversity within the entire Department.

KEY OPPORTUNITIES AND CHALLENGES

To promote a successful future for Yale's Department of Cell Biology, the next Chair must address the following key opportunities and challenges:

Broadening science while investing in the current portfolio

Cell biology is an extremely active foundational discipline that underpins all areas of medicine. The Department's robust history in membrane trafficking, and subcellular organization and dynamics of the cytoplasm is widely known, and its strengths in membrane compartments and trafficking and cutting-edge microscopy led to its excellent reputation. While the Department is successful in garnering extramural funding, the funding environment has changed over time. There is not only a desire but a need for the Department to broaden its scientific endeavors to areas of more interdisciplinarity. New resources from multiple sources are needed to create a fresh and exciting vision and a sustainable future. The next Chair will need to promote and nurture expansion to other areas of discovery to create opportunities not only for synergy across the faculty in the Department but for diversification of resources. They must be willing to champion the Department's needs and strategically delve into new frontiers while maximizing the existing strengths of the Department.

Continue to build the Department's legacy and provide a strategic direction for the future

The Department of Cell Biology has a rich history of being at the forefront of the field, a center of excellence, and a high-profile department. The great questions in the field have been meticulously researched in this department, and the contributions of its faculty have been many. The next leader of this department should be able to see the field as a whole, have the ability to adapt to rapidly changing technological advances, and know how cell biology can position itself in a world where more resources are provided to translational science. It is crucial that they can strategically build upon the strengths, maintain the rigor, and honor the legacy of the Department and ensure that YSM is a leader in the effort to see cell biology thrive into the next era.

Promote stronger collaborations within the school and university

With the dawn of proteomics and lipidomics science and technologies, the discoveries around the structure, function, and dynamics of cellular and subcellular organization have far-reaching impact on the amelioration of disease and provide numerous opportunities for interdisciplinary partnerships. Within the rich scientific environment at Yale, the Department of Cell Biology needs to be a strong and successful collaborator acting as a bridge department with the many investigators in basic and clinical departments and centers like the Yale Cancer Center and the Yale Graduate School of Arts & Sciences, providing a synergistic environment for collaboration and integration of knowledge. The next Chair needs to value and be skilled in the art of collaboration and team building, understand how to leverage the strengths of cell biology with other areas of expertise in Yale's outstanding scientific enterprise, and encourage integration of the cell biology faculty more broadly. They will be tasked with encouraging cell biology to be a resource for other departments and promoting an environment that inspires the kind of team science that utillizes basic science discoveries in the clinical arena.

Recruit, retain, mentor, and inspire the next generation of faculty and leadership

The Department of Cell Biology remains one of the top cell biology centers in the world, which contributes to its ability to attract the best basic and translational researchers to YSM. A crucial measure of the next Chair's success will be both retention and mentorship of current faculty, with a focus on exceptional scientific and professional support. This support should foster an environment that allows faculty to deploy their talents fully, attain their professional goals, and advance their scientific discovery. The Chair must employ their own excellent scientific taste to identify recruits who will thrive in the YSM environment and add to its richness while continuing to diversify the faculty ranks, both in terms of gender and racial diversity, as well as the diversity of scientific investigation. An opportunity exists to build a formal mentoring structure that allows junior faculty to thrive and be successful in an ever-changing scientific and funding landscape that is different than it is for established investigators. The next leader must be attentive to the culture and climate of the Department.

QUALIFICATIONS AND CHARACTERISTICS

This position requires a leader with broad intellectual insights, strategic vision, a flair for collaboration, and strong leadership and managerial acumen. The desired qualifications and experience of an ideal Chair include the following:

- A PhD or MD/PhD whose scientific core identity is as a cell biologist and who carries a broad knowledge of cell biology and a distinguished record of research and publications that would support appointment as a tenured full professor at YSM;
- An accomplished scientist who has a national reputation as a thought leader in cell biology;
- A strategic, broad, and interdisciplinary vision of the opportunities for the Department and its faculty that positions the Department to lead in the broader field of academic cell biology; a keen understanding of the funding environment for science, the possibilities for research collaborations, and creative appeals for research funding;

- A record of leading faculty scientists in planning that is creative and rigorous; an inventive and ambitious spirit disciplined by an uncompromising standard of excellence;
- An authoritative, clear, and accurate communicator; ability to speak the truth;
- The ability to build consensus with and convene a diverse range of constituents to generate excitement around ideas;
- Experience building internal and external partnerships;
- Experience leading in a medical school environment;
- Financial acumen and experience in managing complex budgets;
- Respect and appreciation for the history of the Department of Cell Biology combined with energy and excitement to maximize its future potential;
- An accessible and engaging style as a colleague, manager, and community leader; a willingness to communicate often and to consult closely with colleagues, coupled with a willingness to act decisively;
- An impeccable reputation for personal and organizational integrity, transparency, compliance, and accountability.

Applications, Inquiries, and Nominations

Yale School of Medicine has retained the national executive search firm Isaacson, Miller to assist in this search. Inquiries, nominations, referrals, and applications should be sent in confidence to:
https://www.imsearch.com/open-searches/yale-university-school-medicine/chair-department-cell-biology

Ariannah Mirick, Partner
Jane McInerney, Senior Associate
Madeleine Ruth, Managing Search Coordinator
Isaacson, Miller