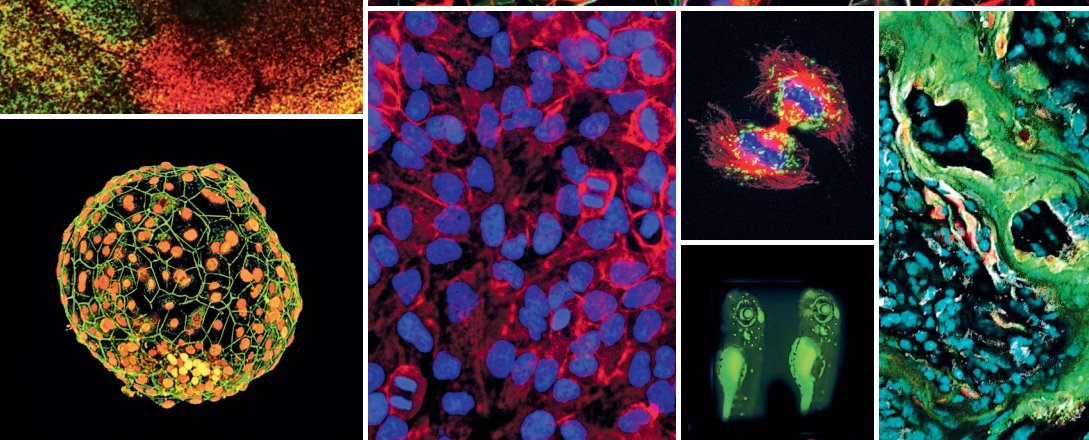


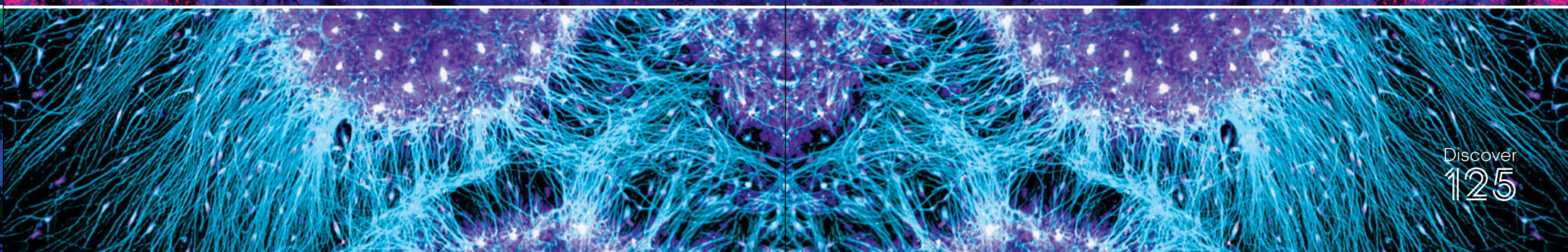
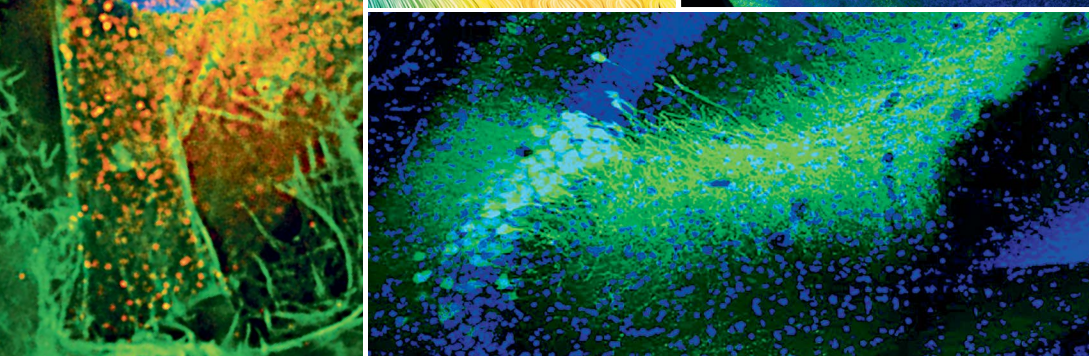
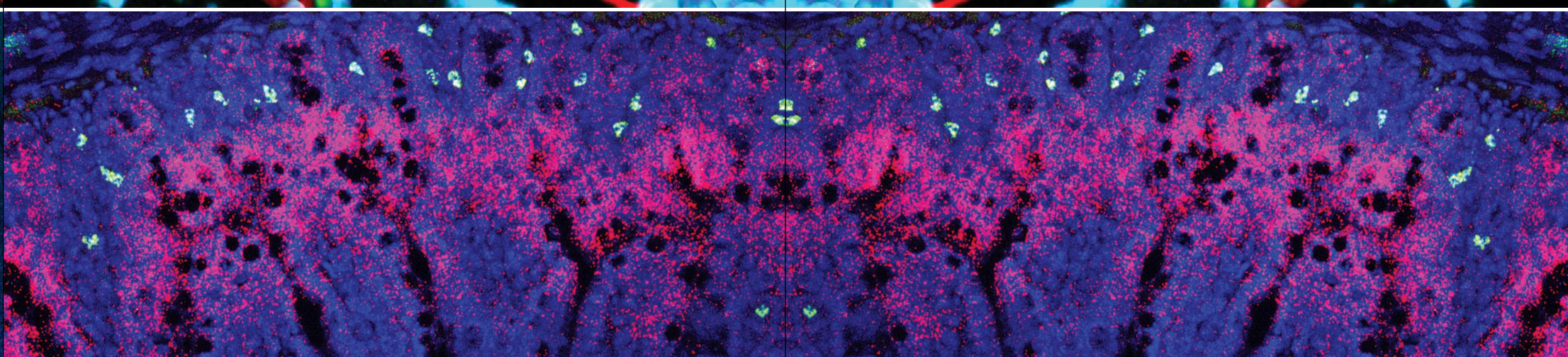
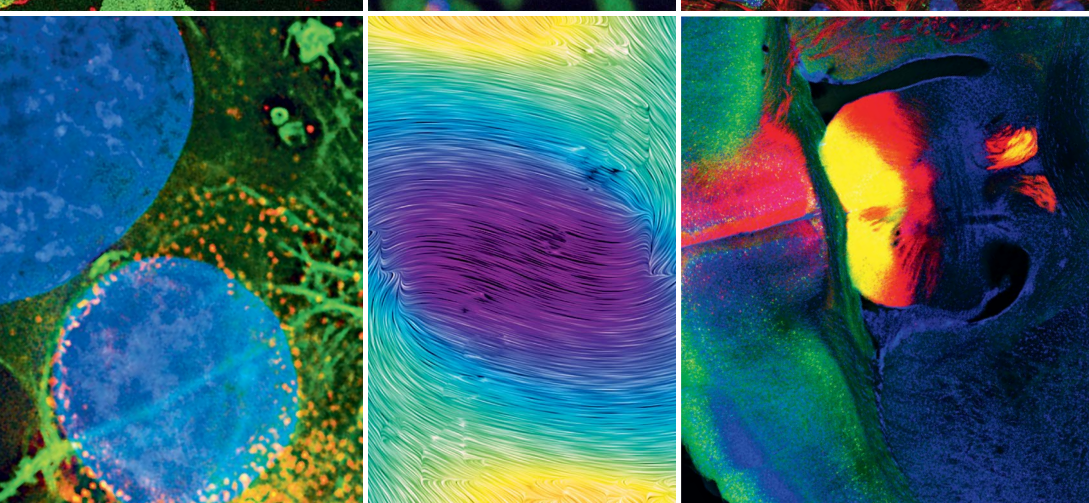
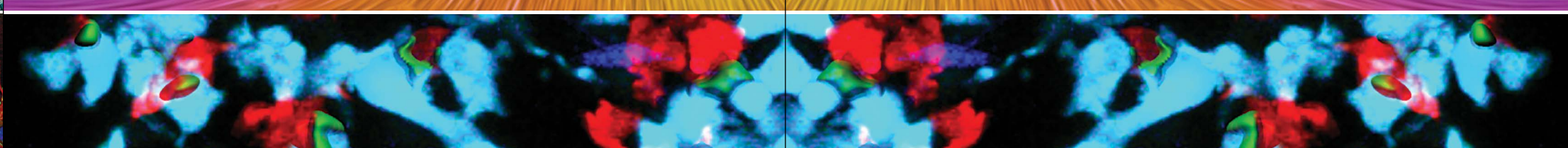
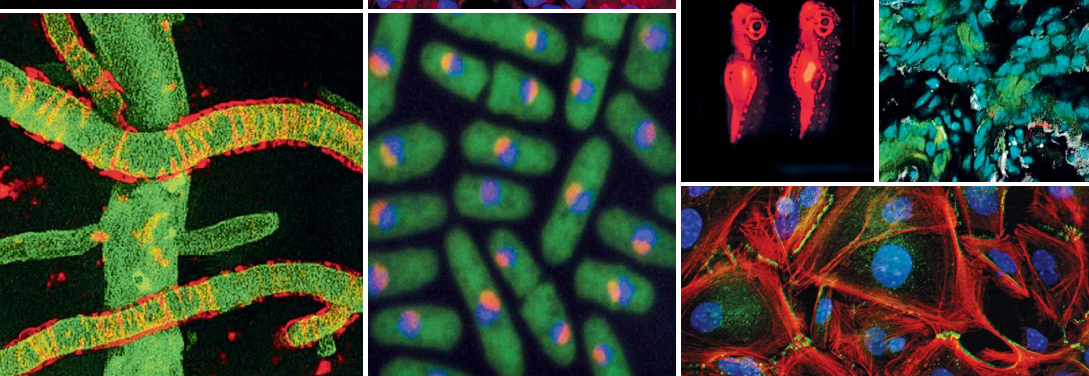
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SCIENCE FOR THE BENEFIT OF HUMANITY

THE ROCKEFELLER UNIVERSITY

# Research Areas 2025–2026



Rockefeller's 72 laboratories are leading breakthroughs across the biosciences, addressing the world's most pressing scientific quandaries and health problems. Their research interests can be categorized in 10 broad areas of discovery.





Biochemistry, Biophysics, Chemical Biology, and Structural Biology

Gregory M. Alushin  
Sean F. Brady  
Steve L. Bonilla  
Elizabeth Campbell  
Brian T. Chait  
Jue Chen  
Paul Cohen  
Robert B. Darnell  
Seth A. Darst  
Titia de Lange  
Hironori Funabiki  
A. James Hudspeth  
Tarun Kapoor  
Sebastian Klinge  
Shixin Liu

Jiankun Lyu  
Roderick MacKinnon  
Michael O'Donnell  
Charles M. Rice  
Viviana I. Risca  
Jeremy M. Rock  
Robert G. Roeder  
Michael P. Rout  
Vanessa Ruta  
Thomas P. Sakmar  
Sanford M. Simon  
Sohail Tavazoie  
Thomas Tuschl  
Ekaterina V. Vinogradova  
Thomas Walz

1

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Cancer Biology

Kivanç Birsoy  
Junyue Cao  
Paul Cohen  
Robert B. Darnell  
Titia de Lange  
Elaine Fuchs  
Hironori Funabiki  
Tarun Kapoor  
Richard P. Lifton  
Michel C. Nussenzweig  
Michael O'Donnell  
Charles M. Rice  
Viviana I. Risca  
Robert G. Roeder  
Sanford M. Simon  
Agata Smogorzewska  
Hermann Steller  
Sohail Tavazoie

Cell Biology

Paul Bieniasz  
Kivanç Birsoy  
Steve L. Bonilla  
Brian T. Chait  
Paul Cohen  
Frederick R. Cross  
Titia de Lange  
Elaine Fuchs  
Hironori Funabiki  
Nathaniel Heintz  
Tarun Kapoor  
Gaby Maimon  
Luciano Marraffini  
Paul Nurse  
Michel C. Nussenzweig

Michael O'Donnell  
Charles M. Rice  
Viviana I. Risca  
Robert G. Roeder  
Michael P. Rout  
Thomas P. Sakmar  
Shai Shaham  
Amy E. Shyer  
Sanford M. Simon  
Agata Smogorzewska  
Tim Stearns  
Hermann Steller  
Thomas Tuschl  
Ekaterina V. Vinogradova  
Michael W. Young

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Immunology, Virology, and Microbiology

Paul Bieniasz  
Sean F. Brady  
Jean-Laurent Casanova  
Brian T. Chait  
Vincent A. Fischetti  
Avi Flamholz  
James G. Krueger  
Luciano Marraffini  
Daniel Mucida  
Michel C. Nussenzweig  
Jeffrey V. Ravetch  
Charles M. Rice  
Jeremy M. Rock  
Robert G. Roeder

Mechanisms of Human Disease

Paul Bieniasz  
Kivanç Birsoy  
Ali H. Brivanlou  
Jean-Laurent Casanova  
Paul Cohen  
Barry S. Collier  
Robert B. Darnell  
Titia de Lange  
Vincent A. Fischetti  
Jeffrey M. Friedman

James G. Krueger  
Richard P. Lifton  
Charles M. Rice  
Jeremy M. Rock  
Sanford M. Simon  
Agata Smogorzewska  
Sohail Tavazoie  
Thomas Tuschl  
Ekaterina V. Vinogradova

6

Michael P. Rout  
Sanford M. Simon  
Alexander Tarakhovsky  
Gabriel D. Victora  
Ekaterina V. Vinogradova

Neurosciences and Behavior

Cori Bargmann  
Jean-Laurent Casanova  
Robert B. Darnell  
Winrich Freiwald  
Jeffrey M. Friedman  
Charles D. Gilbert  
Mary E. Hatten  
Nathaniel Heintz  
A. James Hudspeth  
Erich D. Jarvis  
Daniel Kronauer  
Roderick MacKinnon

Marcelo O. Magnasco  
Gaby Maimon  
Priya Rajasethupathy  
Vanessa Ruta  
Thomas P. Sakmar  
Shai Shaham  
Hermann Steller  
Sidney Strickland  
Alipasha Vaziri  
Leslie B. Vosshall  
Michael W. Young

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Organismal Biology and Evolution

Ali H. Brivanlou  
Jean-Laurent Casanova  
Joel E. Cohen  
Erich D. Jarvis  
Daniel Kronauer  
Stanislas Leibler  
Marcelo O. Magnasco  
Gaby Maimon  
Michael O'Donnell  
Vanessa Ruta  
Lamia Wahba  
Li Zhao

Physical, Mathematical, and Computational Biology

Joel E. Cohen  
Avi Flamholz  
A. James Hudspeth  
Erich D. Jarvis  
Stanislas Leibler  
Shixin Liu  
Jiankun Lyu  
Marcelo O. Magnasco  
Gaby Maimon  
Viviana I. Risca  
Amy E. Shyer  
Eric D. Siggia  
Sanford M. Simon  
Alipasha Vaziri  
Li Zhao

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10

Stem Cells, Development, Regeneration, and Aging

Ali H. Brivanlou  
Junyue Cao  
Jean-Laurent Casanova  
Paul Cohen  
Titia de Lange  
Elaine Fuchs  
A. James Hudspeth  
Charles M. Rice  
Viviana I. Risca  
Shai Shaham  
Amy E. Shyer  
Eric D. Siggia  
Agata Smogorzewska  
Hermann Steller  
Sidney Strickland

1

Biochemistry, Biophysics, Chemical Biology, and Structural Biology

Scientists are studying how molecules interact to drive biological processes such as gene regulation, signal transduction, and enzymology. Their work involves delineating the properties of molecules, molecular complexes, and cells; using chemistry tools to manipulate disease mechanisms; and determining the structures of molecular assemblies at near-atomic resolution.

2

Cancer Biology

Work in this area focuses on the processes by which cancers arise, progress, and respond to therapy. Researchers are seeking to understand how cancer cells transform, metastasize, and interact with their microenvironment, and are developing innovative strategies to control cancer processes.

3

Cell Biology

A host of diseases are spurred by disruptions in the processes by which cells propagate, die, or perform their basic functions. Scientists working in this area are dissecting the genes and molecular pathways that control the cell cycle, apoptosis, protein trafficking, and many other cellular events.

4

Genetics and Genomics

Fundamental to all bioscience is the study of how genes and gene-regulatory processes contribute to development, behavior, and disease. Researchers working in this area are employing genetic sequencing technology, bioinformatics, and animal models to pursue genome-wide comparisons, population genetics, functional studies, and more.

5

Immunology, Virology, and Microbiology

Investigations into the workings of the immune system are yielding progress against diseases such as cancer, autoimmune disorders, HIV, hepatitis C, and COVID. Work in this area covers the basic mechanisms of immunity, the biology of disease-causing agents, and new treatment approaches, from vaccines and antibiotics to personalized immunotherapies.

6

Mechanisms of Human Disease

Many labs are conducting research to understand the root causes of both rare and common diseases, and are developing new therapies based on their insights. Having access to The Rockefeller University Hospital enables these scientists to translate basic-science discoveries into the clinic faster than might otherwise be possible.

7

Neurosciences and Behavior

To understand how the nervous system develops and how it produces behaviors and cognition, neuroscientists are studying the brain from many perspectives, focusing on neuronal cells and circuits as well as high-level functions. In addition, labs are working on treatments for Alzheimer's, drug addiction, obesity, and other diseases.

8

Organismal Biology and Evolution

In studying biological processes from the perspective of entire organisms, populations, and ecosystems, scientists are seeking to reveal how complex traits and behaviors develop, and how diseases manifest. Their work covers the biology of vertebrate and invertebrate organisms and plants, the evolution of species, and other topics.

9

Physical, Mathematical, and Computational Biology

Research in this area is focused on the complex properties of living or non-living systems, and on applying sophisticated analytical techniques to model phenomena from biological networks to weather patterns. These scientists are interested in systems theory, biological statistics and probability, population dynamics, and sensory processing.

10

Stem Cells, Development, Regeneration, and Aging

In researching how pluripotent stems cells differentiate, how embryos develop, how tissues replenish themselves, and how organisms age, scientists are laying the groundwork for discovering tomorrow's medicines. Their work holds promise for the development of new disease models as well as innovative therapeutic interventions.