THE ROCKEFELLER UNIVERSITY

SPRING 2016

COMMUNITY CONNECTION

Rockefeller recruits seven new faculty members to head bioscience labs

Photography by Mario Morgado

The second most important thing Rockefeller scientists do—after science itself—is identify and recruit new colleagues.

The Rockefeller University community devotes substantial time and energy to its faculty hiring process, which aims to attract the very best scientists working in biomedical fields. The goal is not to grow—the university aims to maintain its current size of 75 to 80 laboratories—but to add at least two to three top scientists each year, enough to replace those lost to attrition and to rejuvenate our community with fresh ideas and energetic collaborators.

In the past two years, seven new scientists have been recruited to lead Rockefeller labs. Two of the new recruits are interested in understanding tiny molecular "machines" that play important roles in a cell. **Jue Chen** (above, left), formerly at Purdue University, studies pumps that move nutrients and other molecules into or out of cells. A structural biologist, she crystallizes the molecules she is interested in and bombards them with x-rays to approximate their shape.

Shixin Liu (above, right), who wants to understand how several molecular machines work together to read DNA, is an expert in techniques capable of examining the movements of these components in real time. Liu has a Ph.D. from Harvard University and worked at the University of California, Berkeley, before joining Rockefeller.

For science to advance, technology must too. **Thomas Walz** (above, center) and **Alipasha Vaziri** are experts in tools that allow us to see inside cells as never before. Walz, who was formerly on the faculty at Harvard, has expertise in a technique known as cryo-electron microscopy, which makes it possible to capture the structure of biological molecules at an extraordinarily high resolution. Vaziri, who has a Ph.D. in quantum optics and has worked at the University of Vienna and at the National Institutes of Health, observes brain cells in action. His sophisticated microscopes show three-dimensional views of a brain's tangled neurons.

The body's immune system keeps constant vigil to protect us from disease, and one of its secret weapons is the antibody, which helps the immune system discern between invaders. **Gabriel Victora**, who trained at NYU and Rockefeller and has worked at MIT, studies the process by which antibodies are generated and "trained."

Kivanç Birsoy is interested in metabolism. Cells, like people, must process nutrients to generate energy, and their metabolism, like ours, changes throughout life. Birsoy, a Rockefeller alumnus who is moving from MIT, is developing ways to exploit a cell's metabolic processes to fight diseases such as cancer.

Paul Cohen is working to understand fat cells. A cardiologist, he is interested in the health problems that accompany obesity. Not all fat cells are the same, and Cohen's research suggests there may be ways to engineer healthier ones. He trained at Rockefeller and at Weill-Cornell Medical College, and did postdoctoral research at Dana-Farber Cancer Institute.

East River seawall repairs are nearing completion

In late 2015, Rockefeller University initiated a project to repair, and ultimately refurbish, a crumbling seawall and dilapidated stretch of public parkland along the East River.

Damaged by hurricane Sandy in 2012, the seawall spanning five city blocks—from midway between 63rd and 64th Streets to 68th Street—is being rehabilitated as part of a larger project to expand the university's campus using air rights over the FDR Drive. The scope of the work includes repairing eroded joints between the blocks (right); replacing damaged, displaced, and missing blocks; and repairing eroded concrete.

Rockefeller will also refurbish the esplanade itself by adding new seating and lighting, creating a designated bike lane, and constructing a barrier along the FDR Drive to reduce traffic noise. The university is spending approximately $8 million on the seawall repairs and esplanade improvements, and will also create a $1 million endowment to maintain the landscaping of this section of the esplanade in perpetuity.

Throughout the planning phases of the project, Rockefeller has worked in conjunction with its neighbors and local government officials, including New York City Council Member Benjamin Kallos, Manhattan Borough President Gale Brewer, Community Board 8, and representatives from the Parks Department in a collaborative process

designed to ensure the public enhancements meet the needs of the community.

The seawall repairs will be complete this spring; the refurbished esplanade will open in 2018. For more information about the project, visit rivercampus.rockefeller.edu or send an email to campus.extension@rockefeller.edu.

SCIENCE FOR THE BENEFIT OF HUMANITY

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The Rockefeller University is a research institute and graduate school devoted to making transformative discoveries in bioscience and improving medicine for the benefit of humanity.

www.rockefeller.edu

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Clinical Trials

The Rockefeller University Hospital, a unique facility devoted exclusively to clinical research, is recruiting volunteers to participate in several innovative trials.

Riluzole in Alzheimer's Disease

Do you or your loved one have Alzheimer's? The Rockefeller University Hospital is conducting a study testing a new drug that may improve memory.

Learn more at go.rockefeller.edu/riluzole.

Health Effects of Aspartame

Do you drink diet soda daily? Researchers at the Rockefeller University are conducting a study to determine whether a common artificial sweetener can change how the body responds to sugar.

Learn more at go.rockefeller.edu/dietsoda.

More than 100 other clinical studies are currently underway at Rockefeller. Explore at www.rucares.org or call 1-800-RUCARES.

Upcoming Event

APRIL 20 7:30 P.M.

Peggy Rockefeller Concerts: Renee Rosnes Quartet

Hear one of the premier jazz pianists and composers of her generation. Tickets are available for $30 (or $10 for students) at peggy.rockefeller.edu.

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