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The UPMC Hillman Cancer Center, celebrating its 27th year as a leading center for cancer research, is recruiting outstanding basic science faculty at the Assistant, Associate and Professor levels to join established programs in Molecular and Cellular Biology, Cancer Virology, and Cancer Immunology. These programs are internationally recognized for breakthrough research in genome stability, cellular responses to stress, cell death pathways, cancer virus discovery, viral contributions to cancer, immunology and the tumor microenvironment, cancer immunotherapy and cancer immunoprevention.

Successful candidates will have an exceptional scientific research record and will join in tenure-track or tenured faculty positions that are commensurate with prior training and experience. A competitive salary and research start-up package will be provided, as well as laboratory and office space within the state-of-the-art Hillman Cancer Center or Magee-Womens Research Institute.

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To apply for a position, please send your curriculum vitae, a one-page summary of your research plans (together with recommendations) to Hillman Director Robert L. Ferris, MD, PhD, care of thompsonla3@upmc.edu. Applications will be reviewed and evaluated on an ongoing basis, following the receipt of all required materials. The University of Pittsburgh is an Affirmative Action, Equal Opportunity Employer.

Robert L. Ferris, MD, PhD, Director, UPMC Hillman Cancer Center
c/o Lola Thompson, 5150 Centre Avenue, Suite 500
Pittsburgh, PA 15232
From small beginnings come great things, according to an old saying. The first Top Employers Survey, in 2002, had 685 respondents. This year, almost 7,000 answered the web-based questionnaire; 94% were employed in a biotech, biopharmaceutical, or pharmaceutical company. Most (83%) were over 30 years old and had a Master’s or Doctorate degree (64%).

The survey’s reach is growing. In 2002, about 82% of respondents were from North America and the rest from Western Europe. The 2017 distribution included 65% from North America, 25% from Europe, and 7% from the Asia/Pacific Rim. As in previous surveys, respondents named companies they considered the best employers and rated them in categories such as leadership and direction, work culture/environment, and intellectual challenge.

A consistent winner: Innovation

The 2017 top company is 30-year-old Regeneron Pharmaceuticals, headquartered north of New York City, with six medications approved by the U.S. Food and Drug Administration (FDA). Regeneron was the No. 1 workplace for the fifth time in six years after first appearing at No. 2 in 2011. Being an innovative leader in the industry has consistently driven selection as the best employer. George Yancopoulos, president and chief scientific officer, believes this is why only Regeneron and Genentech have led the survey more than once. “Few other companies can demonstrate that their innovation comes from their own labs,” he says. “Our success stories are homegrown.”

Of the 23 novel drugs approved by the FDA through June 2017, Yancopoulos notes that Regeneron invented two, which were developed and commercialized with Sanofi. Many employees are connected to each new medicine. “They either had the initial idea or contributed to a key step along the way,” Yancopoulos says. “They may have been part of a new approach or technology that made a difference in development.”

Namita Gandhi, director of clinical sciences, joined Regeneron in 2007, when the drug that became the immune modulator dupilumab was in early development. Gandhi says her career at Regeneron tracked dupilumab’s trajectory. As it moved from translation to clinical development, her work did too. After making a case that dupilumab might work against nasal polyps, she is now overseeing research on it for this and other indications. “That shows that science drives our business,” she says.

Gandhi says Regeneron’s emphasis on science was obvious from the moment she started there. “I learned to analyze data even more critically than when I was in graduate school,” she says. “Even when I was a junior scientist, I sat at the table with senior leadership and talked about my data, and they listened.”

Senior Vice President of Human Resources Sally Paull notes that Regeneron’s leaders are scientists who get more excited about research results than financial reports. “They’re committed to science, take the long view, and don’t compromise. It’s the corporate version of strength of character.” Yancopoulos confirms this long-term strategy. “We don’t judge ourselves by the market,” he says. “We judge ourselves cont.>

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The 20 companies with the best reputations as employers and the top three driving characteristics for each company, according to respondents in the 2017 survey undertaken for the Science/AAAS Custom Publishing Office. The companies without a 2016 rank did not receive enough mentions to qualify or did not receive a high enough ranking during the 2016 survey.

<table>
<thead>
<tr>
<th>Rank</th>
<th>2017 Rank</th>
<th>2016 Rank</th>
<th>Employer (global headquarters)</th>
<th>Innovative leader in the industry</th>
<th>Work culture values aligned</th>
<th>Treats employees with respect</th>
<th>Is socially responsible</th>
<th>Has loyal employees</th>
<th>Has clear vision</th>
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by how we are setting up to make a difference in peoples’ lives. We look 10 to 20 years in the future. That’s what keeps us enthusiastic and attracts the best employees.”

Regeneron stays committed to its approach of using genetics to find drug opportunities and fill the pipeline, Yancopoulos says. In 2014, the company officially launched the Regeneron Genetics Center, which forms diverse private–public collaborations to gain disease insights and find targets by pairing human DNA sequences with electronic health records.

Culture and values

Top employers have a work culture that encourages employee loyalty and aligns corporate with personal values. Novozymes, based in Denmark but with 6,500 employees worldwide, scored well in these categories. After debuting in the survey in 2015, it has consistently been in the top 10, this year at No. 2. The company specializes in enzymes and microorganisms for industries ranging from household products to agriculture to bioenergy.

The Novozymes culture is strongly science-based, supporting the company’s high rating as an innovative leader. Company-supplied statistics indicate more than 30% of employees in R&D have a Ph.D. “At Novozymes,” says President and CEO Peder Hølk Nielsen, “13% to 14% of our revenue goes into R&D.” About 20% of employees are doing hands-on science, he says, “so our whole culture is one of development and innovation.”

Currently, most Novozymes executives have a science background, although Nielsen says that isn’t required. More important, he says, is that leaders understand how research works. “They must understand that technology moves so fast that we do things now we couldn’t dream of yesterday,” he says. “They must appreciate the value of the science we do so they understand what it can do for our customers.”

Nielsen adds that “work–life balance is high on the agenda” at Novozymes, with generous maternity and paternity leave, for example. “Whether employees are in the United States, China, or Denmark,” he says, “I hope they feel that Novozymes is a good place to work.” Employees stay with Novozymes, Nielsen says, because of other valued characteristics of employers: social responsibility and sustainable products with a positive impact in the world.

At No. 3 in the survey, Vertex Pharmaceuticals, based in Boston, also takes social impact seriously. For Chief Scientific Officer David Altschuler, Vertex’s recognition for innovation and social responsibility are linked. With two-thirds of its 2,000 employees working in R&D, cont.>
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the company is committed to applying its resources to game-changing treatments for serious diseases. “We only work on what we believe will be transformative medicines for life-threatening illnesses,” he says. “That means treating underlying causes, not just symptoms, and taking risks.” When conventional wisdom said only gene therapy could correct the root cause of cystic fibrosis, Vertex developed pill-based treatments that address the underlying disease mechanism, says Altshuler. This kind of success reinforces to employees that their work is pioneering and having an impact on society.

To concretely connect employees’ work to the community, CEO Jeff Leiden says that Vertex maintains connections to patients helped by their medications. “Every launch celebration, we have a patient who is taking the medication come talk to us,” he says. “It’s inspiring—there isn’t a dry eye in the house.” Leiden says Vertex’s success is grounded in Boston’s innovative science “ecosystem.” “It’s our responsibility to support it so the next generation can thrive,” he says. He especially backs people who are underrepresented in science. Vertex university scholarships, for example, include ongoing help for first-generation college students and others who might need extra mentoring. Vertex has a summer internship program for underprivileged high school students that is amplified by Leiden’s work on the Massachusetts governor’s science, technology, engineering, and mathematics (STEM) advisory council. He is recruiting and assisting other companies in applying the Vertex internship model. “We’re extending what we’ve learned from our initiatives across the state,” he says, “so everyone can benefit from what started in Boston.”

**Long-term vision**

“Vision” is a broad term, but leaders of companies that scored well on corporate vision easily defined it: a long-term commitment to science, communicated strongly and regularly from leadership, backed by action such as allocation of resources and recognition of successes.

Vision and employee loyalty are strengths of fourth-position Merck KGaA (legally independent from U.S.-based Merck & Co.), headquartered in Darmstadt, Germany. It has 50,000 employees worldwide in three sectors: health care, life science, and performance materials. The company’s core is a balance of stability and flexibility that developed over generations, says Executive Board Member and CEO for Performance Materials Kai Beckmann.

“We have our 350-year anniversary next year,” says Beckmann, “with the same family owners, so we have a clear sense of purpose and long-term thinking about advancing science. We have a degree of predictability in how we treat our employees.” At the same time, Merck KGaA offers flexibility, for example, in work hours and location. It emphasizes diversity and the voicing of different perspectives. Beckmann says the company encourages employees to be curious and “tackle new things every day.” Respect for employees shows, for instance, in the company’s long history of supporting health care and child care. These benefits were new concepts when introduced at Merck KGaA decades ago.

Today, Beckmann says, the company perceives itself as a vibrant science and technology leader and is increasing in visibility, especially to the scientific community. Before, he says, “the company was a place you fell in love with on second sight. It was not highly visible from the outside, but once you were here and knew what the company did, you became very loyal.”

One way the company will mark its 350th year in business and clarify its mission of progress for people everywhere is “Curious2018—Future InSight,” a special international conference for those in science, business, entrepreneurship, and technology, intended to inspire game-changing applications and breakthroughs. Immediately following Curious2018 will be a special edition of the company’s long-running Innovation Cup, a one-week course and contest in which STEM Ph.D.s and MBAs work with Merck KGaA employees to develop novel ideas into business plans for a chance to win a €20,000 (US$24,000) first prize.

Another firm prioritizing external visibility is the pharmaceutical company AstraZeneca and its global biologics R&D arm, MedImmune. The company returns to the top 20 at No. 11 after an absence since 2011. Mene Pangalos, executive vice president of AstraZeneca’s Innovative Medicines and Early Development (IMED) Biotech Unit, believes the achievement reflects changes in company culture in recent years. “We’re more transparent, collaborative, and visible,” he says. Peer-reviewed publications, academic and industry partnerships, and sharing of data, molecules, and access to preclinical assays are all encouraged. Highlighting the company’s research through publications and conference presentations helps recruit top scientists, Pangalos says.

To convey the company’s commitment to scientific progress, IMED holds retreats for scientists across its four global biohubs in Sweden, the United Kingdom, the United States, and China, to present their latest work and hear speakers. Scientific successes are rewarded, Pangalos says, with events like MED’s annual black-tie awards ceremony, for example. “It’s energizing, fun, and a celebration of great science,” he says. “It’s like a science Oscars.”

MedImmune, acquired by AstraZeneca in 2007, is led by Bahija Jallal. “My job,” she says, “is providing an environment where people are encouraged to dream big, come up with new ideas, and take smart risks.” For example, Jallal says, the MedImmune physical space is open, with places for talking and collaborating. As a scientist herself, Jallal encourages employees to always ask why, saying, “We minimize predefined ways of doing things. We invite people to bring ideas and challenge what we do.”

As an executive vice president of AstraZeneca, Jallal must also ensure consistency across global sites. The company allows for local cultural differences, she says, and realizes everyone will succeed in their own way, but also works to be sure everyone is moving in the same direction. “It’s important for us to have one vision as a company,” she explains, “allowing a little bit of freedom but with guiding principles.” Jallal works to give researchers the big picture and emphasizes their involvement in research, developing, and manufacturing a drug. “To employees,” Jallal says, “MedImmune has the best of both worlds: an entrepreneurial, nimble culture that allows us to do great science and move fast, with the footprint, maturity, and resources of a big company.”

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**Gender:**
- 52% Male, 43% Female, 5% No response

**Experience:**
- 69% have 10 or more years work experience

**Highest degree earned:**
- 34% Doctorate, 30% Master’s, 29% Bachelor’s, 7% Other

**Company type:**
- 35% Pharma, 23% Biotech, 36% Biopharma, 1% University, 5% Other; More than 9 out of 10 work in private industry

**Nature of work:**
- 28% Development, 19% Applied Research, 14% Basic Research, 8% Administration/Executive, 11% QA/QC/Regulatory Affairs, 7% Production, 13% Other

**Geography:**
- 65% from North America, 25% from Europe, 7% from Asia/Pacific, 3% from rest of world
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Once companies have a clear vision, how is it conveyed across diverse sites and divisions? At Merck & Co. (at No. 17), Celeste Warren says, “I consider it a best corporate practice to communicate to all employees in a timely fashion what is happening in the company.” Warren is vice president, Human Resources and Global Diversity and Inclusion Center of Excellence at the global health care company that is based in Kenilworth, New Jersey, and known as MSD outside the United States and Canada. Warren says that quarterly employee business briefings from the CEO and CFO are critical. In addition, she says, “Our ongoing leader and manager training stresses communicating our vision and explaining what it means to people in your division, department, or group.”

Rich Tillyer, Merck & Co. senior vice president, Global Chemistry, says that even with about 69,000 employees, everyone supports the goal of having a positive impact on health. People apply it in their daily work by following the example that comes from the top. “Our CEO and the leadership team work at aligning the vision with company decisions and it pays off,” Tillyer says. “People see that our investments and decisions line up with our vision as an organization.”

For example, he says, “We spend a good deal of time discussing how to push more deliberately and urgently toward the outcomes we’re looking for and how we can contribute. It’s a concerted effort to go in the right direction and take suggestions from employees both on what we do and how we do it.” Positive reinforcement is a must in drug discovery, Tillyer says, because the process requires extraordinary persistence. He points to recent company successes with an Ebola vaccine and a biomarker-targeting cancer treatment. “When we announce and celebrate bringing products to patients,” Tillyer says, “we acknowledge all the people involved. We give credit to all the programs across the organization.”

At Merck & Co. R&D, Jennifer O’Neil, principal scientist in Biology-Oncology Discovery, translates that corporate vision into employees’ workdays. “When I meet with my direct reports,” she says, “we talk about what key questions their experiments will answer and how that will drive us forward to new medicines. If the science is interesting but not getting medicines to patients, it’s a lower priority.” The quarterly business reports are meaningful for employees, including in research, O’Neil says. “Everybody who works here would like to say they contributed to something that was featured across the company and is having an impact on patients with a particular disease.”

**Support for STEM education**

Social responsibility consistently appears on the list of top employer features. The reason? “Employees want to know their company stands for something,” Warren says. Beckmann notes the importance of this factor to recruitment. “Acting responsibly resonates with the younger generation of employees,” he says. “They want to know: Beyond how we treat our own teams, what is our contribution to our communities?”

This year, Regeneron was included in the Civic 50, a list of community-minded U.S. companies assembled by the Points of Light organization, which is dedicated to mobilizing volunteers. An example is a skills-based pilot program that Gandhi participates in. Employees volunteer at community organizations on a short-term project that uses their specialized skills, such as finance or in Gandhi’s case, data analysis. She is working with a nonprofit that provides resources to families who are struggling socially or economically and have children with a life-threatening illness. Gandhi is helping the organization analyze data showing its impact on families.

The top companies in the 2017 survey proudly support STEM education as their contribution to the communities where their employees live and work. Regeneron has pledged more than $100 million to the long-running U.S. competition that is now called the Regeneron Science Talent Search. “It’s near and dear to our hearts,” Yancopoulos says. Both he and CEO Leonard Schleifer were participants in high school. “I like to point out that Len was a semifinalist and I was a winner,” he laughs. “But that is our major cause. There’s nothing more important than engaging the brightest young minds in science to cure disease, work on climate change, and find new energy sources.”

Novozymes supports science education as an investment in the future of the industry. “In the Western world,” Nielsen says, “we’re going to have a deficit of people educated in natural science, even in the next 10 years. The remedy is not quick. That’s why we are investing in educating young teachers and kids in biology.”

The Novozymes Educate initiative, adopted in 2015, pledges to reach 1 million learners by 2020, enhancing their understanding of biology, biotechnology, and sustainability. At sites in India, China, the United States, and Brazil, Novozymes employees work with local educators to determine the best programs for their community, says Arlan Peters, head of sustainability, Novozymes North America.

For example, in North Carolina, where Peters is based, Novozymes partners with the University of North Carolina at Chapel Hill’s Morehead Planetarium and Science Center to hold science nights at elementary schools. The events offer families entertaining, informative, hands-on activities about topics including enzymes, evolution, and electronics. Novozymes also holds a biotech contest for Franklin County Early College High School, with equipment and mentoring for experiments to perform at school, culminating with presentations and prizes.

The Novozymes Educate initiative contributes to workplace satisfaction, Peters says, because it is directly related to employees’ work and their lives in their communities. “Even before we had the Educate goal,” he says, “employees visited classrooms and talked about their work and careers, and related classroom learning to the real world. People get personal satisfaction from these activities.”

In Brazil, Pedro Luiz Fernandes, vice president of Corporate Affairs and Sustainability for Novozymes Latin America, led teams of scientists...
in a project to develop smartphone apps for students about United Nations sustainable development goals (SDGs). The teams decided on a digital approach because the audience consists of teenagers. The apps show how biology can help with three SDGs: poverty eradication, hunger eradication, and clean water and sanitation. Each app offers a classic short story related to the SDGs, for example, “Frritt-Flacc” by Jules Verne. Activities include an experiment and social actions students can take.

Because the apps are about “literature, SDGs, and the power of biology,” Fernandes says, they have multidisciplinary appeal. “We found that schools that are using the Novozymes apps for science also use them in classes for English, geography, and chemistry.” The apps are downloadable for free, in English, Portuguese, and Spanish, for use by teachers and students anywhere in the world.

Melodie Knowlton is head of the Thomas M. Menino Vertex Learning Lab, a dedicated space created when the company moved into a new building in 2014. She explains how Vertex supports STEM education in multiple ways. In addition to scholarships and internships, at the Boston site, classes from local public schools make recurring visits to the Learning Lab. Students—more than 1,000 in the 2016–2017 academic year—learn about biotechnology through hands-on experiments. The program will be replicated at Vertex’s new building in San Diego.

In Boston, about 30 Vertex employees annually mentor students one-on-one on a science fair project. Other employees visit schools to talk about the variety of jobs in biotech. “We show we’re more than just scientists,” Knowlton says. “We have employees in communications, accounting, and legal departments. It gives students a more sophisticated view of biotechnology, which is important in a biotech-rich area like Boston.” The Boston Vertex site alone employs more than 1,400 people.

Knowlton understands why social responsibility is a priority for biotech and pharma employees. “I want to work where the values align for me personally,” she says. “If I’m spending a lot of time at work, I want to be making a difference in society.” Science education resonates because people see how critical this issue is today, she says. “Our society is becoming more technological, and people are making more of their own health decisions. If we can equip students to know more about science and have a better educated city in general, that’s important.”

**Fewer job seekers**

An unusual feature of the 2017 survey was that only 16% of respondents said they are likely to look for a different position in the next year. This is notably low, given that for several years after the survey began, more than one-third of participants indicated a likelihood to seek new employment, as high as 48% in 2005.

In general, statistics on job seeking by people who are already employed are scarce, so the reasons that biotech and biopharma employees feel like staying put are unknown. Yancopoulos suggests general industry trends as one answer. “When the industry is perceived as growing, people feel like they can make moves that will benefit their careers,” he says. “If fewer companies are being formed—and even fewer are focused on truly innovative science—people are happy enough with the job they have.”

Of survey respondents who were likely to seek a new job, 37% said it was for career advancement and professional growth. A company providing those benefits may be able to successfully retain employees. At Regeneron, Gandhi feels the company regularly supports her professional development. “People acknowledge your work here,” she says. “We recognize people’s potential and give them growth opportunities.”

Another possible reason for the low job-seeking rate, suggested by several interviewees, is that recent advances such as CRISPR technology have increased the R&D pace, giving employees the feeling that goals they have worked toward for years are within reach. Tillyer feels a general sense of optimism about the capability of the industry, with progress on problems that people once saw as intractable. He names Merck & Co.’s hepatitis C treatment as an example. “We’re delivering therapy that cures the vast majority of patients,” he says. “It’s so rare to find cures.” The breakthroughs and pace are unprecedented, he says, so “maybe people are saying, ‘Let’s hang in there and see what we can do.’” O’Neil supports this suggestion: “I’ve been working in oncology for more than 15 years,” she says, “I feel like we’ve been making progress in the last few years, especially with immunotherapy.”

A lack of opportunities, pending scientific breakthroughs, or a combination of factors could be the reason that few 2017 survey respondents say they are seeking a new job. Or respondents could be feeling particularly loyal to their workplace this year, as leaders stress the value of employee contributions to their jobs and society. As Nielsen says, “Our core purpose is to do great things in the world through our products, like saving energy and water and increasing sustainability.” Internal surveys at Novozymes show that this way of making an impact excites people, he says. “That is important to loyal and motivated employees.”

Chris Tachibana is a science writer based in Seattle, USA, and Copenhagen, Denmark.
The Yangtze River Delta: An Important Engine for China’s Economy

Zhimin Li
Director of Center for Science and Technology Development Ministry of Education, People’s Republic of China

Leading in Economy and Education

Located at the confluence of the “Belt and Road” initiative and the Yangtze River Economic Zone, the UA-YRD has an important strategic position in China’s national modernization. It is an essential platform for China’s participation in international cooperation, and a crucial engine of its economic and social development. It is regarded as the leading area of the Yangtze River Economic Zone, and one of the most successful urbanization areas in China. It has a vast hinterland including modern urban clusters and airports. A dense communications network supports China’s expressway system there, which comprises highways and railways, thus shaping an integrated, three-dimensional transportation network.

The UA-YRD is the largest and most active economy in China, leading the country in scientific and technological innovation. A major center for research institutions and universities, it supplies thousands of talented professionals both regionally and nationally, and is eagerly seeking outstanding scientific research personnel and teams.

On June 3, 2016, the Development Plan for Urban Agglomeration in the Yangtze River Delta was published. The plan points out that the UA-YRD should be built as an international urban agglomeration and an example to the world, lighting the way for the Asia-Pacific region, and leading the entire country in prosperity. As China’s most active economic center, it has the potential to reach the heights of technological innovation and become the world’s premiere center for modern service industries and advanced manufacturing.

As an important gateway for the Asia-Pacific region, the UA-YRD is at the vanguard of a new round of national reform and international cooperation, and a model for the development of “Beautiful China.”

Perfecting Industry-University-Research Collaboration

At present, collaboration in this area has been institutionalized and large-scale.

Shanghai, Jiangsu, Zhejiang, and Anhui provinces have successively introduced policies to support Industry–University–Research Collaboration. The growing Shanghai R&D public-service platform comprises 8,396 scientific instruments, 139 key laboratories, and 236
technical centers, which will all be shared by the UA-YRD. Government is not the only tool that can perfect this effort; China's thriving market also helps to revitalize technology, industry, finance, and so on. For example, in May 2015, the State Ministry of Science and Technology and the Shanghai Municipal Government jointly set up the National Technology Transfer Center East (NTTC East). Since then, more than 60 science and technology organizations have settled there, providing an incubator for science and technology development and opening up a conduit for Yangtze River Delta universities, research institutions, and enterprises. The NTTC East has now opened five subcenters and received more than 2,000 requests from different enterprises for work on technical issues, resulting in a turnover of about 30 million yuan/USD 4.5 million.

According to the plan, a collaborative innovation center will be set up in UA-YRD to strengthen the integration of regional innovation resources, deepening regional innovation development and application integration, and transforming the mechanism of cooperation.

Thanks to this collaboration, the UA-YRD will become stronger, as it operates by the “clenched fist” approach instead of the “one-finger Zen” approach. By engaging in regional cooperation instead of working alone, the concept of “one plus one is greater than two” will be realized.

The key to collaborative innovation is to complement each other and integrate innovation factors. Looking at the practice of innovation and development in developed countries, one step that is crucial to success is breaking boundaries in fields and across regions, thus achieving innovation together. At this point, the UA-YRD is at a critical stage, pointing to its emergence as a world-class urban center. For this development to continue in the globally competitive environment of today requires breaking down institutional obstacles and further stimulating the potential for collaboration.

The New Mission of Educational Cooperation

The Yangtze River Delta region has a long tradition of quality education, and it has always led the country in that area. Since 2009, when the first Yangtze River Education Linkage Development Seminar was held in Nanjing, the Delta’s educational program has achieved remarkable results and had a broad impact across China.

The opening of the “Belt and Road” initiative and the Yangtze River economic belt has spurred the growth of a new mission of educational cooperation in the Delta, requiring the region to further strengthen its collaborative efforts and build a greater “team spirit.” This means that educational exchanges and cooperation must be promoted with both relevant international partners and relevant domestic provinces, and a new model of education created for the Delta.

Today, the mission of educational cooperation in the Delta has entered a new stage; the breadth and depth of that cooperation has been further expanded. But there is still much room for improvement. As for the mechanism of cooperation, it demands transformation at the institutional level. Top-level design and planning systems should be strengthened, and the restrictions of administrative divisions should be broken. Joint development planning should be encouraged, along with the formulation of cooperative educational standards to accelerate integration. As for increasing cooperation, we should pay more attention to arousing enthusiasm at all levels, both at the grass roots and in administrative departments—until everyone participates, like a hundred flowers in bloom. As for the project aspects of cooperation, we should pay attention to combining, summarizing, and performance monitoring; explore the establishment of flexible and effective project management methods; and enhance the administrative guidance of educational collaboration.

Transforming the UA-YRD’s educational mission also calls for increased resource sharing to promote mutual benefit and win-win situations. Only by sharing can we strengthen our vitality and better communicate with each other. On the one hand, mutual sharing of educational resources in the Delta promotes extensive twinning programs between interprovincial schools and increased project cooperation at home, and is also conducive to the establishment of joint training and collaborative research efforts in science and technology. On the other hand, it strengthens international cooperation and exchange programs abroad, as institutions work together to promote China’s world-class educational resources overseas, and to recruit high-level experts, scholars, and research teams. With initiatives such as the promotion of Sino–foreign cooperative education programs and others, the UA-YRD has become a new research field for Chinese higher education.

As Song Yonghua, executive vice president of Zhejiang University, recently pointed out, since the globalization of science and technology has resulted in increasingly fierce competition, China must become one of the world’s leaders in this area. It must keep up with cutting-edge technology development, strongly encourage its young talent, and reinforce its long-term development strategy. To ensure that China achieves its “two 100-year goals,” the state has put forward the Double First-Class Project to develop world-class universities. To achieve this task, outstanding young talent is the most critical driving force. China’s colleges and universities must attract and cultivate young talent, providing the platform, policies, and atmosphere conducive for their growth.

We welcome domestic and foreign scholars to contact us. We will provide you with free, one-on-one personal service, inform you about Yangtze River Delta region colleges and universities, and help you to learn about and apply for talent recruitment projects in this region. For assistance, please contact the personnel consultant at consultant@acadbridge.edu.cn. For more details, please visit our website at www.edu.cn/jjcsj.
ShanghaiTech University is a young and dynamic higher education institution aiming for innovation, high-quality research and global influence. It seeks innovative solutions in energy, materials, environment, human health, data science, artificial intelligence (AI), and electrical engineering to address challenges faced by China and the world. An integral part of the Zhangjiang Comprehensive National Science Center, the university is now leading several frontier research projects and large-scale facilities, such as Soft X-Ray Free Electron Laser Facility, Living Cell Imaging Facility, Ultra-Intense and Ultrashort Pulse Laser Facility etc..

For more information, please visit: www.shanghaitech.edu.cn.

We are seeking talents for multiple faculty positions at all ranks in the following fields:

**School of Physical Science and Technology:**
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**School of Life Science and Technology:**
- molecular biology and cell biology, structural biology, neuroscience, immunology, stem cells and regenerative medicine, system biology and biological data, molecular imaging, biomedical engineering.

**School of Information Science and Technology:**
- electrical engineering, electronic science and technology, computer science and technology, information engineering, communication engineering, statistics, applied mathematics.

**School of Entrepreneurship and Management:**
- economics, finance, management, marketing, strategy and entrepreneurship.

**Shanghai Institute for Advanced Immunochemical Studies:**
- immune antibody.

**Human Institute:**
- drug development targeting GPCR, cell biology and biomedicine, pharmacology, chemical biology, and computational biology.

Successful applicants should have a doctoral degree and are expected to establish a record for independent, internationally recognized research, supervise students and teach high-quality courses. Applicants for senior positions are expected to take a leading role.

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- reasonable start-up funds, research associates and post-doctoral fellows, laboratory space that meets research needs.

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- highly competitive salary commensurate with experience and academic accomplishments, a comprehensive benefit package.

**Subsidized housing:**
- on-campus, 80/100/120 m² faculty apartments will be available at low rents for tenure and tenure-track faculty.

**Relocation & Travel Allowance:**
- reimbursement of expenses for household relocation and family’s one-way travel.

**Family Assistance:**
- support with children’s education, and affiliated kindergarten, primary and middle schools are under construction.

ShanghaiTech focuses on creating an international working and living environment. We warmly welcome international talents to join our vibrant community!

To apply: please submit a cover letter (Firstname_Lastname_Cover_Letter.pdf), a research plan (Firstname_Lastname_Research_Plan.pdf), a CV (Firstname_Lastname_CV.pdf) to talents2@shanghaitech.edu.cn.
Faculty Positions Available in Ningbo University

◆ Seeking bright minds

Located in the historical port city of Ningbo in eastern China, Ningbo University is a burgeoning comprehensive university co-established by the Chinese Ministry of Education, Zhejiang provincial government and Ningbo municipal government. It is selected as one of the Chinese Universities in “Double First-class Project” and among the first five provincially governed key universities designated by the Zhejiang provincial government. Young and dynamic, Ningbo University is already ranked among the top 100 universities in China. Ningbo University is actively seeking talented researchers to strengthen its faculty team.

Openings for academic leaders

Requirements:
- A doctoral degree from an overseas institution is expected, along with at least three years of work experience conducting research overseas; those who have obtained their doctoral degree from a domestic institution, at least three years of overseas teaching or research experience is a must.
- Experience working as a tenured professor or equivalent in a well-known university or research institution overseas (associate professor experience is fine for young candidates from top universities or institutions); generally, candidates should qualify for the national Thousand Talents Program.
- A proven track record of achievements in a specialized research field, with the potential to become an academic or technical leader in the field.
- Ability to work full-time on site, and preferably under 50 years old.

Openings for top young scientists

Requirements:
- A doctoral degree from an overseas institution is preferred, along with at least three years post-graduate research experience overseas; those with doctoral degrees from domestic institutions must have at least three years of experience conducting research or teaching overseas.
- Experience working full-time in a well-known university or research institution overseas, conducting research or teaching; generally, candidates should qualify for the national Thousand Young Talents Program or the provincial Thousand Talents Program.
- Ability to work full-time on site, and preferably under 45 years old.

Openings for excellent doctoral researchers

Requirements:
- A doctoral degree from an overseas institution is preferred, along with at least three years of work experience conducting research overseas; those with doctoral degrees from domestic institutions should have at least three years of experience conducting research or teaching overseas.
- A track record of publication experience, with at least one paper published in Social Sciences Citation Index or Arts & Humanities Citation Index journals for candidates in humanities and social sciences fields; two or more papers published in Science Citation Index-listed journals or at least one publication in a top journal for candidates in natural sciences fields.
- Ability to work full-time at the university.

◆ Compensation

Generous compensation packages will be available. For excellent doctoral researchers, the successful candidate will receive a settling-in allowance of 600,000 (180,000+420,000) RMB. Those with four or more publications in top journals are eligible to be hired as associate professors, and will receive a settling-in allowance of 800,000 (600,000+200,000) RMB.

◆ Application procedure

Please submit a completed application form, a curriculum vitae, and a cover letter, along with other relevant supporting materials via e-mail to: rsc@nbu.edu.cn.

For additional information regarding the application, such as the number of openings, please visit: http://www.nbu.edu.cn/shizi.
2017 Overseas Talents Wanted by Shanghai University of Engineering Science

1. University profile
Shanghai University of Engineering Science (SUES) is a full-time higher education institute where multiple disciplines, such as engineering technology, economic management, art & design are interpenetrative and in harmonious development. Its main campus is located in Songjiang College Town, covering an area of 1,500mu. The university now has 4 master degree programs of first-level discipline, 22 master degree programs of second-level discipline, 3 master programs, 1 international PHD training base and 75 undergraduate and junior college majors (including all majors with different emphasis). Full-time college students of the university are nearly 20,000, postgraduate students approximately 1,800 and full-time lectures over 1,000.

SUES is one of the pilot universities for Excellent Engineers Training Program launched by Ministry of Education. Disciplines and majors established by the university advance with modern industries in Shanghai and have their distinctive features.

SUES never stops to expand international cooperation and exchange, especially with some well-known colleges and universities in USA, British, France, Germany, Japan, Sweden, Korea, Canada, Australia, New Zealand, among others. Now the university wants a vast number of talents who aspire to devote themselves into higher education.

2. Talents wanted
1) Talents for Experts Recruitment Programs of SUES
   ① Zhihong Scholar: applicant shall have doctoral degree and under 45-year-old in principle; associate professor or higher or other equivalent title is needed in principle.
   ② Tengfei Program: applicant shall have doctoral degree and under 36-year-old in principle; associate professor or other equivalent title is needed.
   ③ Zhanchi Program: applicant shall have doctoral degree and under 32-year-old in principle; outstanding in academy, teaching, scientific research and academic achievements.

2) High-level talents
Academicians of the Chinese Academy of Sciences and Chinese Academy of Engineering, talents from National Special Support Program for High-level Talents and Recruitment Program of Global Experts, Changjiang Scholar, talents from Shanghai Recruitment Program of Global Experts, Eastern Scholar, etc.

3) Teaching and research staff
4) Excellent fresh PhD graduate
   Note: see website of the university for more details: http://hr.sues.edu.cn.

3. Majors needing talents (including but not limited to the following)
Engineering (mechanical, energy and power, computer, automation, electric, electronic information, material, chemical and pharmaceutical, environmental science and engineering, transportation, textile engineering, clothing design and engineering); natural science; economics (economy and trade, finance); management science (business administration, management science and engineering, logistics management and engineering, industrial engineering, Tourism management, public management); literature (journalism and communication, foreign languages and literatures); art (fine art, design).

4. Application (optional)
1) Make application through our recruitment system (http://zhaopin.sues.edu.cn).
2) Send your materials and desired positions to email address: jsk@sues.edu.cn

5. Contact
Address: No. 333, Longteng Road, Songjiang District, Shanghai
Contact: Ms. Miao, Ms. Zhu
E-mail: jsk@sues.edu.cn
Tel: (+86) 021-67791252
Donghua University, located in Shanghai, is one of the key universities under the direct administration of the Ministry of Education since 1960. It is a member of Project 211. Textile Science and Engineering is selected as world first-class discipline by the Ministry of Education in 2017. Donghua University was founded in 1951 as East China Textile College. In 1985, it changed its name to China Textile University, and to its present name, Donghua University in 1999. It is one of the first universities accredited by the Ministry of Education for granting the bachelor, master and doctor degrees.

Donghua University has developed into a distinctive multi-disciplinary university, with engineering as the predominant discipline alongside the coordinated development of engineering, science, management, and the liberal arts disciplines.

**Recruitment Positions**
- Donghua University Distinguished Research Fellow
  1. Under the age of 35 for researchers in natural science and engineering science, or under the age of 40 for researchers in humanities and social sciences.
  2. Applicant should get PhD degree and have post-doctor experience or obtained assistant professorship or above in prestigious overseas universities; or professors in domestic high-level universities or institutions.
- 1000 Plan Professorship for Young Talents
- 1000 Plan Professorship
- Chang Jiang Scholars Program

**Main Disciplines:**
- Textile Science and Engineering
- Materials science and Engineering
- Control Science and Engineering
- Environmental Science and Engineering
- Design Science
- Chemistry
- Management Science and Engineering

**Contact Information**
Email: rcb@duh.edu.cn
TEL: +86-0216792043
More details available at http://web.dhu.edu.cn/rcbdhu/

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**FACULTY POSITIONS**
Soochow University Institutes for Translational Medicine (SU-ITM) seeks outstanding scholars to fill in several positions to strengthen current programs in cancer biology, immunology, stem cell biology, and drug discovery with emphasis on translational research. Qualified applicants should have a doctoral degree (Ph.D., M.D./Ph.D., or equivalent) and minimal 3 years of post-doctoral training. A good record of publications in top-tier journals is required.

SU-ITM has an outstanding research environment including adjacent Cold Spring Harbor-Asia meeting facility, excellent opportunities to collaborate with colleagues at Soochow University and affiliated hospitals as well as other institutes in Shanghai (25 min by train). Excellent recruitment package including start up funding relocation fees, competitive stipend and social benefits will be offered to successful applicants. Soochow University is highly experienced in assisting application for national scholar programs such as Thousand Talents Program and Young Thousand Talents Program.

Interested applicants should send their curriculum vitae, a statement of research proposal, 3-5 exemplary publications, and 2-3 recommendation letters to Dr. Yufang Shi (shiyufang2@gmail.com) or Dr. Yongjing Chen (chenyongjing@suda.edu.cn), Soochow University Institutes for Translational Medicine, Soochow University, 199 Ren Ai Road, Suzhou Industrial Park, Suzhou 215123, China.
Yale University
School of Medicine

FACULTY POSITION AT THE ASSISTANT PROFESSOR LEVEL
DEPARTMENT OF CELLULAR AND MOLECULAR PHYSIOLOGY

The Department of Cellular and Molecular Physiology is conducting a search for new faculty members at the assistant professor level.

The search seeks candidates whose research connects the properties of molecules to the properties of physiological systems.

Excellent opportunities are available for collaborative research, as well as for graduate and medical student teaching. Candidates must hold a Ph.D., M.D., or equivalent degree. Applicants should include a curriculum vitae, a statement of research interests and goals, and should arrange to have three letters of reference sent.

Applicants should apply at the following website:
apply.interfolio.com/45824

Application Deadline: November 17, 2017

Yale University is an Affirmative Action/Equal Opportunity Employer and welcomes applications from women, persons with disabilities, covered veterans, and members of minority groups.

Department of Pharmacology
Yale University

Assistant or Associate Professor of Pharmacology

The Department of Pharmacology at Yale University School of Medicine invites applications for Assistant or Associate Professor positions in the tenure track. Applicants must have an M.D. and/or Ph.D. or equivalent degree and have demonstrated excellent qualifications in research and education. Areas of interest include studies of molecular function such as proteomics, chemical biology, structural biology (including electron microscopy) and computational biology in different areas of drug discovery, cell signaling, metabolism, genetic diseases and epigenetic mechanisms.

Responsibilities include establishing a vigorous and independently funded research program in cancer biology while supervising and mentoring students with diverse backgrounds plus contributing to the graduate and medical school educational missions. We seek individuals with strong records of independent creative accomplishments, who will interact productively with colleagues within the Department and across Yale School of Medicine.

Pharmacology at Yale University has a rich history of pre-eminent in drug discovery, indeed the first cancer chemotherapy clinical trials were conducted here. Today, the research in our Department encompasses a broad range of fields, with researchers aiming to both understand and treat human disease, with particular strengths in drug discovery, integrative cell signaling, structural biology, and neuroscience. For more details, see https://medicine.yale.edu/pharm/

Please submit a letter describing qualifications, along with a CV, a two-page summary of current and proposed research, and three letters of reference to the following Interfolio website: https://apply.interfolio.com/46087

Informal inquiries may be submitted electronically to Prof. Joseph Schlessinger, Chair of Pharmacology, c/o Nathan Kucera (nathan.kucera@yale.edu).

Consideration of applications will begin December 1st, 2017.

Yale University is an Equal Opportunity/Affirmative Action Employer. We seek candidates who embrace and reflect diversity in the broadest sense. Yale values diversity among its students, staff, and faculty and strongly welcomes applications from women, persons with disabilities, protected veterans, and underrepresented minorities.

Northeastern University
College of Engineering

With 173 tenured/tenure-track faculty (67 hired since 2013), and 13 multi-institutional research centers, with funding by eight federal agencies, Northeastern’s College of Engineering is in a period of dynamic growth. Our emphasis on interdisciplinary, transformative and innovative research—tied to Northeastern’s unique history of industry collaboration via the university’s signature cooperative education program—enables partnerships with academic institutions, medical research centers, and companies near our centrally located Boston campus and around the globe.

The college seeks outstanding faculty candidates in all five departments.

Consideration will be given to candidates at the assistant, associate, and full professor levels; successful applicants will lead internationally recognized research programs aligned with one or more of the college’s strategic research initiatives.

Learn more and apply at coe.neu.edu/faculty/positions

Northeastern University is an Equal Opportunity, Affirmative Action Educational Institution and Employer, Title IX University. Northeastern particularly welcomes applications from minorities, women and persons with disabilities. Northeastern is an E-Verify Employer.

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FROM THE JOURNAL SCIENCE IAAAS
Energy fuels most human activities. By 2035, the world’s 8.5 billion people will require 1.5 times more energy than today. Research conducted by more than 270 scholars at the University of Calgary directly addresses the challenge of ensuring safe, clean energy supplies for generations to come.

Advancing high-impact energy research

In the last year alone, these investments have moved us forward:
- $75 million through the Canada First Research Excellence Fund (CFREF) to implement the Global Research Initiative in Sustainable Low Carbon Unconventional Resources, which will contribute to a climate-neutral energy system.
- $46 million from the Mexican Ministry of Energy advanced the second of our Global Energy Research sites.
- $1 million+ for partnership projects in China focused on responsible development of unconventional hydrocarbon reserves.

Researchers from Canada and around the world are now collaborating to explore new and sustainable ways of developing unconventional resources.

Learn more: ucalgary.ca/energy/gri

We are building research capacity by recruiting more of the world’s leading energy researchers in these areas:
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- Life Cycle Analysis and Energy Policy
- Solid-State Inorganic Chemistry
- Catalysis for Energy Transformation Reactions
- Microbial Science and Micro/Nanomaterials
- Reservoir Surveillance and Dynamics

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Strategically investing in more than 400 new faculty to advance “Beyond Boundaries”

“Beyond Boundaries” articulates Virginia Tech’s vision for the future as we strive to create global impacts through research, education, and engagement, and lead as a premier 21st century global land-grant institution through nine interconnected areas of strength called Destination Areas and Strategic Growth Areas.

Destination Areas and Strategic Growth Areas will advance our vision to grow “Beyond Boundaries” and focus on multifunctional and transdisciplinary collaborations that bring together diverse faculty from across the campus to create transformative solutions to global issues, graduate an innovative workforce, and position Virginia Tech as a premier destination for talent that seeks to advance the human condition.

Virginia Tech is committed to “Ut Prosim” (That I May Serve) in the spirit of community, diversity, and excellence. (inclusive.vt.edu)

For more information, please visit provost.vt.edu/destination-areas
Penn University of Pennsylvania
Physics and Astronomy
Assistant Professor in Computational Astrophysics

The Department of Physics and Astronomy at the University of Pennsylvania invites applications for an Assistant Professor position, to start July 1, 2018. We are looking for an astrophysicist with expertise in data science, numerical simulation, or computation. The first three years of this tenure-track position at Penn will include a joint (50/50%) appointment with the newly created Simons Center for Computational Astrophysics (CCA). At the CCA, the appointment will hold the position of Associate Research Scientist. Associate Research Scientists develop algorithms and codes for computational astrophysics and/or for the analysis of large astronomy data sets. Applicants are expected to have a PhD and to have established an independent program of research that they will expand at Penn and CCA.

Penn hosts a collegial department with a vibrant research enterprise, and strong programs in undergraduate and graduate teaching and public outreach. The Department is actively involved in a number of data-intensive projects including AdvACT, DES, HERA, SDSS IV, LSST, WFIRST, and the Simons Observatory. The CCA, part of the Flatiron Institute in New York City, aims to become a focal point for computational astronomy around the world and plans to play a leadership role in developing the computational tools needed for calculations, simulations and data analyses.

Candidates should submit materials online at http://facultysearches.provost.upenn.edu/postings/1289 and include: a curriculum vitae (including list of publications); a description (4 pages maximum) of past and planned research and of teaching interests; and the names and contact information for at least three references. Recruiters are expected to be contacted by the University with instructions on how to submit a letter to the website. Review of applications will begin December 1, 2017 and continue until the position is filled.

The Department of Physics and Astronomy is strongly committed to Penn’s Action Plan for Faculty Diversity and Excellence and to creating a more diverse faculty (for more information see: http://www.upenn.edu/almanac/volumes/v58n02/diversityplan.html). The University of Pennsylvania is an Equal Opportunity Employer. Minorities, women, individuals with disabilities, and protected veterans are encouraged to apply. The Simons Foundation is an Equal Opportunity Employer. M/F/D/V.

Creighton University
School of Medicine
Tenure-track faculty position in Pharmacology/Neuroscience

The Department of Pharmacology of the Creighton University School of Medicine invites applications for open rank tenure-track position. We are seeking candidates in broad areas of pharmacology and medicine that complement and expand our ongoing research in neuropharmacology, cardiovascular and respiratory pharmacology, epilepsy, neurodevelopmental disorders and cancer biology (http://medschool.creighton.edu/pharmacology/). Investigators with research programs in neuroscience are particularly encouraged to apply as this is one of the university-wide emphasis areas. Young investigators applying for assistant professor position are expected to develop a competitive and extramurally funded research program. Candidates for Associate or Full Professor should have an established, well-funded and innovative research program. Incoming faculty are expected to participate in teaching in the undergraduate neuroscience, health profession and/or graduate programs. Successful candidates will receive competitive salary, benefits, start-up package, laboratory space, access to core facilities and collaborative opportunities.

Candidates must possess a PhD and/or MD and appropriate postdoctoral training. To apply please send as A Single PDF a Cover Letter, Curriculum Vitae, Research Statement and contact information for at least three references to Dr. Shashank Dravid (shashankdravid@creighton.edu), Chair Search Committee. Applications received before December 15th, 2017 will receive full consideration. EOE/AA

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Assistant Professor (Tenure Track) of Nutrition and Chronic Disease

→ The Department of Health Sciences and Technology (www.hest.ethz.ch) at ETH Zurich invites applications for the above-mentioned position. The new assistant professor will be an integral part of the Institute of Food, Nutrition and Health, IFNH (www.ifnh.ethz.ch), which is the only university institute in Switzerland where research and teaching in all aspects of food, nutrition and health sciences takes place.

→ Chronic diseases such as diabetes and cardiovascular disease have become a health concern in both the industrialised and emerging economies of the world. This position reflects the increased scientific and public interest in the relationship between food, nutrition and chronic disease, and helps to strengthen the research and teaching activities of the department in those areas.

→ The assistant professor will focus on the mechanisms that link food and nutrition patterns to prevention of chronic disease. She or he is expected to lead a world-class research programme in that respective area and should apply state-of-the-art technologies with a major focus on human studies, which might be complemented by studying underlying mechanisms in animal models. This requires an in-depth understanding of how nutrition affects human metabolism and plays a role in disease development. Commitment to teaching and the ability to lead a research group are required.

→ Assistant professorships have been established to promote the careers of younger scientists. ETH Zurich implements a tenure track system equivalent to other top international universities.

→ Please apply online: www.facultyaffairs.ethz.ch

→ Applications should include a curriculum vitae, a list of publications and projects, a statement of future research and teaching interests, and a description of the three most important achievements. The letter of application should be addressed to the President of ETH Zurich, Prof. Dr. Lino Guzzella. The closing date for applications is 30 November 2017. ETH Zurich is an equal opportunity and family friendly employer and is further responsive to the needs of dual career couples. We specifically encourage women to apply.

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The Marine Biological Laboratory
2018 Whitman Center Fellowships

THE MARINE BIOLOGICAL LABORATORY, a hub for research and education and an affiliate of the University of Chicago, convenes biologists from around the world each year to advance the mission of biological discovery. We are now accepting applications for Whitman Center Fellowships for the 2018 season. Support is available for scientists to come to the Marine Biological Laboratory for 4 to 10 weeks to conduct research, year-round.

We particularly encourage applications from individuals or collaborative groups focused on the following:

- Evolutionary, genetic, and genomic approaches in regenerative and developmental biology, microbiomes, and neuroscience with an emphasis on marine organisms
- Integrated imaging and computational approaches to illuminate cellular function and biology emerging from the study of marine and other organisms

The 2018 Whitman Center Fellowships include Whitman Center Early Career Fellowships, specifically designated for individuals less than 10 years from their doctoral degree who wish to focus on these areas of biological discovery.

Whitman Center Fellowships cover laboratory rental and housing costs. The MBL offers access to state-of-the-art instrumentation, innovative imaging technology, DNA sequencing and informatics, year-round availability of model freshwater and marine organisms, and modern laboratory facilities.

The Marine Biological Laboratory hosts more than 1,000 researchers, postdocs, and graduate students from around the world to participate in scientific discovery courses, research, lectures, and field studies. As a convener of biology, the Marine Biological Laboratory is well known for fostering a highly collaborative environment, with scientists and students engaged in intensive research in a collegial and informal atmosphere.

Applications will be evaluated on the basis of scientific merit. Eligible applicants must hold appointments at accredited universities, colleges, or research institutions anywhere in the world. Scientists who have previously been awarded Whitman Center Research Awards for three years are no longer eligible. The Marine Biological Laboratory is especially interested in qualified candidates who can contribute to the diversity and excellence of its research community throughout the year.

mbl.edu/research/whitman-fellowships
research@mbl.edu

Application Deadline: December 15, 2017