

Best Places to Work in Academia, 2005

Find out whether your institution ranked among the best in The Scientist's annual survey

The respondents to *The Scientist's* third annual Best Places to Work in Academia survey conveyed a clear message: The people that they work with, the resources at their disposal, and their opportunities for career advancement are the leading factors in determining their satisfaction with their work environment. Researchers from across the United States and abroad—more than 2,600 in all rated survey questions relating to peers, research resources, and tenure as the most important, and the institutions that earned high marks in those categories came out on top in this year's rankings.

Respondents repeatedly emphasized the necessity of being able to work well with their peers and derive a sense of accomplishment from collaborative projects. "There is a spirit of collegiality and cooperation," explains a researcher at 6th-ranked University of Wisconsin, Madison. "There is a very large excellent faculty in the biological sciences (over 40% of the total faculty), with excellent opportunities for interaction and communication." Respondents from first-ranked Clemson University hold the same sentiment about their school: "Collaboration is the way research is conducted at Clemson," says one. "This clearly enriches faculty and student experiences, and results in superior research outcomes."

Outside of the United States, Canada and the United Kingdom seem to be doing the best job addressing scientists' workplace concerns. Last fall *The Scientist* noted the progress Canada has made in improving its climate for scientific research,¹ and its efforts are paying off: Five of the top 15 institutions outside the United States are from Canada again this year. A researcher from 15th-ranked University of Manchester explains, "Canada has become a wonderful place to do scientific research, with the addition of the Canada Research Chair and Canada Foundation for Innovation programs." The United Kingdom also improved its showing: Four of this year's top 15 non-US institutions hailed from Great Britain, up from two in 2004.

Twenty of this year's top 30 institutions have previously ranked in *The Scientist's* Best Places to Work survey series; however, neither of the No. 1-ranked institutions—Clemson University and the Weizmann Institute of Science—have placed in the top 15 before this year. Seven of the top US institutions are first time winners, and three institutions in the non-US top 15 are newcomers to our survey series this year. Read on to learn more about this year's top-ranking institutions, and to see how your workplace measures up.

-Maria W. Anderson

1. T. Tamkins, "Oh, Canada!" The Scientist, 18(21):45, Nov 8, 2004.

US	RANK	NON-US
Clemson University, Clemson, SC	1	Weizmann Institute of Science, Rehovot, Israel
Trudeau Institute, Saranac Lake, NY	2	University of Toronto, Toronto, Canada
J. David Gladstone Institutes, San Francisco, CA	3	University of Alberta, Edmonton, Canada

CLEMSON UNIVERSITY



lemson University didn't place in our annual survey of best places to work in academic last year, but this year they're in first place for US institutions. By 2010, the South Carolina school's vision is to become one of the top 20 public research universities, says Christian Przirembel, vice president of research. "We're going to focus on quality rather than keep growing in quantitative ways."

To that end, the university has developed emphasis areas that encourage interdisciplinary collaboration, says Przirembel. The Advanced Materials emphasis area, for example, combines materials science and biology to explore topics like the synthesis of self-

assembling molecules or the science of historic preservation.

Clemson fosters an atmosphere of congeniality in some creative ways, according to bioengineering department chair Karen Burg. For example, employees can donate unused sick days to a general pool. "To me that kind of sums up the campus, it really is a giving place where you're looking out for others," says Burg. "We have town meetings, literally publish where our resources are, really provide mechanisms to communicate across campus," says Przirembel.

Clemson's president also visits junior faculty to hear "the real issues"—complaints and suggestions from what he considers "the future of the university," Burg says. The administration works to keep the tenure process as painless as possible, she says. Expecting mothers and even fathers can receive extensions for consideration for promotion and tenure. And faculty members receive continuous feedback along the path to tenure, facilitated by an electronic database called the Faculty Activity System.

TRUDEAU INSTITUTE

Set in the small town of Saranac Lake in upstate New York, the Trudeau Institute is a small center with a very specific focus: Immune mechanisms in infectious disease. The Institute was originally founded as a tuberculosis sanitarium in 1884 by Edward Livingston Trudeau, who came to the Adirondacks to die after



he contracted the disease. His grandson turned it into a research facility 80 years later in honor of his grandfather's dedication to basic biology.

With only 149 employees spread over a 25-acre campus, a few hours from Montreal and several more from New York City, Trudeau is "really in the middle of nowhere," says Dick Dutton, a senior faculty member. But that means there's no traffic on commutes, he says, which are often nonexistent because housing is provided. The Institute also provides daycare on campus.

Members, from postdocs up, are self-selecting, says president and director Susan Swain: "People who don't want to live in small town don't come here." And those who do enjoy the "mountains, lakes, and forests around," says Dutton. "It's a beautiful spot."

"Everybody knows everybody," says Dutton. "There is a lot of interaction, both scientifically and socially." And the small size, with 13 principal investigators, promotes quick turnaround on new ideas and policies. "The environment is highly collaborative and synergistic among the groups," says Swain. "That's the strongest reason [people come here]."

The scope for interdisciplinary work, which figured highly for so many respondents of *The Scientist's* poll, "is certainly something that we lack," says Dutton. "But we make up for our isolation by having a very vigorous program of seminar speakers." Trudeau is a great place to work for most people because of "the scientific stature of the place," he says. "We rate pretty high because we have a number of people who are quite well known in infectious disease," he says.

Because it is not a university, scientists can focus on research rather than on "distractions" like teaching and administrative duties, he said. What's more, members have three year rolling appointments rather than tenure in the university sense, and most of those appointments are renewed, removing a factor that *The Scientist's* poll shows US scientists care most about.

US Rank	Institution	Туре	No. of Full-Time Life Science Researchers (excluding clinical researchers)	Federal Funding (in millions of dollars)'	Papers Published in the Life Sciences ²³	Citations per Paper ^{2,3}	
1	Clemson University, Clemson, SC	Academic	52	\$76.0	1,658	6.35	
2	Trudeau Institute, Saranac Lake, NY	Private	84	\$12.0	*	*	
3	The J. David Gladstone Institutes, San Francisco, CA	Academic affiliate	258	\$33.0	*	*	
4	University of Florida, Gainesville	Academic	743	\$494.0	20,036	10.67	
5	Vanderbilt University, Nashville, TN	Academic	>1,500	\$367.7	12,996	22.77	
6	University of Wisconsin, Madison	Academic	2,275	\$264.5	23,139	16.92	
7	St Jude Children's Research Hospital, Memphis, TN	Medical	410	\$62.3	3,626	32.10	
8	Wake Forest University, Winston-Salem, NC	Academic	333	\$152.5	7,325	17.62	
9	Wadsworth Center, Albany, NY	Government	315	\$36.0	*	*	
10	Cornell University, Ithaca, NY	Academic	200–400	\$425.7	22,804	18.56	
11	University of Delaware, Newark	Academic	194	\$50.0	1,974	11.22	
12	Calvin College, Grand Rapids, MI	Academic	40	\$0.7	*	*	
13	University of California, San Francisco	Academic	2,381	\$556.3	29,010	27.11	
14	Buck Institute for Age Research, Novato, CA	Private	80	\$14.2	*	*	
15	Purdue University, West Lafayette, IN	Academic	364	\$182.1	6,947	11.66	

1. Most recent FY data available for funding of life science research

2. from ISI Web of Knowledge Essential Science Indicators, which covers the period Jan 1, 1995 to June 30, 2005.

WEIZMANN INSTITUTE OF SCIENCE

The Weizmann Institute of Science in Rehovot, Israel, comes out on top of our annual survey for the best academic institutions to work outside of the United States. The strength of the institution, says president Ilan Chet, is collaboration between Weizmann's five main faculties: mathematics and computer science, biology, biochemistry, chemistry, and physics.

The systems biology and biological physics programs, for example, combine many of these fields, as does the DNA-based nanocomputers recently developed there. And the Institute gives researchers the freedom to explore these options, in part by minimizing teaching obligations. "We have only graduate students, so we teach only several hours a year," Rony Seger, a professor in the biological regulation department, writes in an E-mail.

The Institute also encourages its members to collaborate outside its bounds, according to Seger. "We receive each year a very generous traveling fund," he writes. "So we (and our students) have no problem staying in touch with laboratories in the US or in Europe, and to attend conferences."

When they are not abroad, says Chet, the campus setting is a major factor in making Weizmann a great place to work for many of its 2,100 scientists. "It's a very quite and peaceful environment," he says. Seger agrees, calling the campus "one of the nicest gardens in Israel." The

Institute provides members with housing for six years until tenure, then three more following tenure. In their off time, they can attend the student theater or visit the recreation center, which according to Seger has a nice swimmingpool and is cheap to join.

One area in which the Institute could improve is the number of lab personnel, says Seger. "We need more lab technicians or research assistant professors that can help in the maintenance and day to day management of

the laboratories," he writes. But according to Chet, what is most important is the quality of the people at Weizmann.

UNIVERSITY OF TORONTO

hough slipping from first to second in our annual poll, the University of Toronto continues to satisfy their scientists within a competitive research and teaching environment. For one thing the setting, for city-lovers, is a huge benefit.

Toronto is "by far the most multi-ethnic city in the whole world, with no sense of [it] being a big deal," says associate professor of bioinformatics Boris Steipe, who recently moved to Canada from Germany. This attitude is reflected in the university's interdisciplinary approach, he says. To communicate across dicipline boundaries, "What is needed is an atmosphere of interest in



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each other's differences," he says. "It's better here than I have experienced in other places."

Indeed, the University of Toronto's multicultural, diverse, and tolerant environment sets it apart, says John Challis, vice president for research and associate provost. Living in Toronto also provides the benefit of being in a safe city with a number of perks, says Steipe. "[There is] free medical care, plus the public school system works very well," he says. "I and most of my colleagues send our kids to public school."

When Challis came to the university ten years ago as the chair of physiology, he established mentor groups for faculty, to "help them find their way around the university... to give them advice on career progression," he says. The administration also provides seed money for new faculty so they can "get going on research quickly," says Challis. And in his current position, he meets with department chairs and asks, "how can my office help you? How can we do things better? How can we make it easier?"

Non-US Rank	Institution	Туре	No. of Full-Time Life Science Researchers (excluding clinical researchers)	Annual Government Funding (in millions) ^{1,**}	Papers Published in the Life Sciences ²³	Citations per Paper ^{2,3}
1	Weizmann Institute of Science, Rehovot, Israel	Academic	2,100	\$64.8 USD	4,589	27.22
2	University of Toronto, Canada	Academic	685	\$234.0 CAN (\$199.9 USD)	28,164	17.78
3	University of Alberta, Edmonton, Canada	Academic	240	\$24.3 CAN (\$20.7 USD)	12,763	14.04
4	University of Dundee, United Kingdom	Academic	1,534	£ 13.45 (\$23.5 USD)	5,297	22.94
5	University of Glasgow, United Kingdom	Academic	250	£ 6.4 (\$11.4 USD)	10,124	15.23
6	Dalhousie University, Halifax, Canada	Academic	900	\$45.0 CAN (\$38.4 USD)	4,599	13.21
7	Karolinska Institute, Stockholm, Sweden	Academic/Medical	1,105	SKr 1,786 (\$227.7 USD)	22,498	17.31
8	Erasmus Medical Center, Rotterdam, The Netherlands	Medical	NA	NA	1,055	7.84
9	Institut Pasteur, Paris, France	Private	850	€ 57.3 (\$69.5 USD)	11,047	21.58
10	Catholic University of Leuven, Belgium	Academic	1,428	€ 123.0 (\$149.3 USD)	9,566	14.81
11	McMaster University, Hamilton, Canada	Academic	1,298	\$59.0 CAN (\$50.4 USD)	8,692	18.85
12	Ghent University, Belgium	Academic	2,863	€ 282.0 (\$342.2 USD)	*	*
13	Cambridge University, United Kingdom	Academic	474	£ 89.1 (\$158.9 USD)	15,344	22.21
14	University of Calgary, Canada	Academic	745	\$94.5 CAN (\$80.7 USD)	7,856	14.00
15	University of Manchester, United Kingdom	Academic	468	£ 12.4 (\$22.1 USD)	8,915	15.37

3. includes papers in Plant/Animal Science, Environment/Ecology, Agricultural Sciences, Clinical Medicine, Biology and Biochemistry, Neuroscience and Behavior, Molecular Biology and Genetics, Microbiology, Immunology and Pharmacology/Toxicology.

* data not available in ESI ** conversions current as of Oct. 27, 2005



WHAT MATTERS MOST IN WORK SATISFACTION

while academic researchers in the United States and abroad still deal with different tenure policies and healthcare systems, they agree that their peers and their sense of professional accomplishment contribute significantly to their workplace satisfaction. Tenure, peers, and job satisfaction were the three most important categories for US researchers, while academics abroad weighted peers, research resources, and job satisfaction most heavily. Remuneration was the least important category for US and foreign respondents—a change from 2004, when pay was among the top 10 most important factors for US researchers.

Respondents' comments indicated that an institution's location also plays a role in workplace satisfaction. One researcher values the "cheap quality housing and excellent schools in the region around Dundee." Another says, "the Nashville community is very supportive of Vanderbilt University. ... Nashville is a great place to live." And a respondent from McMaster University notes, "The cost of living is low compared to other places in Canada, but the quality of life is high." As one Cornell employee

points out, "These [factors] are very important in attracting and retaining the best faculty."

An institution's size—and the size of the community around it—might also contribute to the academic atmosphere. This year's survey suggests a trend in the size of the cities in which top-ranking institutions are located: of the top 15 universities in the United States, nine are located in cities with a population of less than 200,000—six in cities of less than 50,000. Seven schools are in metropolitan areas where the overall cost of living index is below the national average.

-Maria W. Anderson

US RANK	FACTOR	NON-US RANK
1	My work gives me great personal satisfaction	1
2	My institution provides adequate health care coverage for me and my family	20
3	I maintain good working relationships with my peers	2
4	The tenure review process has been applied fairly to different faculty members	11
5	The tenure system at my institution is clearly laid out for the faculty	12
6	The criteria laid out are/were applied throughout the tenure process	17
7	My institution provides adequate core facilities	3
8	My institution provides an adequate research funding package for new faculty members	5
9	My peers are excellent scientists	4
10	My institution has the resources to supply basic research infrastructure needs not covered by grants	7
12	My institution has an excellent information technology infrastructure	6
14	My teaching activities are valued by my students	8
17	My institution has a well stocked and well maintained library	9
25	My institution has an excellent reputation	10



METHODOLOGY

The Scientist posted a Web-based questionnaire and invited readers and web site registrants who identified themselves as tenured or tenure-track life scientists working in academia or other non-commercial research organizations to respond. From more than 40,000 invitations, we received 2,603 usable responses from scientists in the United States, Canada, and Western Europe. We asked respondents to assess their working conditions and environments by indicating their level of agreement with 41 criteria in 8 different areas. They also indicated which factors were important to them. We ranked 135 institutions – 91 from the United States and 44 from Canada and Europe.

To calculate an institution's overall ranking, we first weighted each factor based on the average importance score. Because several factors that ranked as important in the United States are valued less elsewhere and vice versa, we used different factor weightings to rank US and non-US institutions. The overall rankings are based on the average score per institution from all respondents on all factors weighted according to their regional importance. Detailed information on the survey methodology is available on *The Scientist* web site at www.the-scientist.com. Our sample of scientists was self-selected, and we have made no attempt to standardize the results nor to conduct a detailed statistical analysis.