



"You can feel the floor vibrate in the exhibit hall," he says about a meeting that last year attracted 28,574 people, good for 10th place on a ranking of the largest U.S. medical meetings. "There's a buzz that infuses the entire conference. For young scientists, it can be a transformative event in their careers."

Given all that a meeting offers, none of the society leaders anticipates switching to a virtual-only format in the foreseeable future, as NASA did this year with its annual Lunar Science Forum (see p. 75). "At least for me, there's nothing that could replace sitting and listening to a young scientist or a very prominent scientist explain his or her research to a group of people, all of whom are trained to ask hard questions and be skeptical," says Joseph McInerney, executive vice president of the American Society of Human Genetics, whose annual meeting draws about 7000 scientists.

For most societies, the annual meeting is also a moneymaker. Registration and exhibitor fees can contribute significantly to an organization's bottom line. SfN's annual meeting, for example, generated 43% of its overall revenue of \$29 million last year and netted \$3.8 million after expenses, according to the society's 2012 report.

The two major meetings put on by the Materials Research Society (MRS) each year do even better for the organization. Fueled by a record combined attendance of 13,750, the meetings produced 68% of the society's \$11 million in revenues last year, contributing \$4.6 million to its bottom line.

AGU's fall and spring meetings added \$1.5 million to the organization's coffers in 2011, a big help in a year in which overall expenses of \$39 million exceeded revenues by almost \$5 million.

Meetings That Flatter, but May Not Deliver

The e-mails come from Amber, Rainy, Dora, and Arlene. "How are you doing now?" some begin. "Hope this e-mail finds all the best on you." Flattering and solicitous and written in bewitchingly mangled English, the e-mails have the hallmarks of spam offering carnal pleasure—except they are actually far tamer. They are invitations to attend scientific meetings in China organized by a company that bills itself as the "World Leading Provider of Intelligence Exchanges in Life Sciences."

BIT Life Sciences, based in Dalian, a seaside city in Northeast China, stages conferences on a staggering array of topics, from vaccines and biodiversity to diabetes, cancer, cloud computing, HIV/AIDS, and algae. The meetings, which are often billed as an "Annual World Congress," sometimes coin names for new disciplines, such as "Endobolism" and "Drug Designology." BITeomics, the parent company, says it has 400 employees and holds at least 70 conferences a year that "tens of thousands of people" have attended since 2001.

Welcome to the bizarre world of what some call "predatory" conferences: scientific confabs, sometimes sparsely attended, that seem to come into being primarily to make money. Jeffrey Beall, a librarian at the University of Colorado, Denver, who monitors a subset of open-access journals that he calls "predatory," sees a similar phenomenon in BIT conferences. "They have the same conflict of interest as predatory publishers," he asserts. While predatory journals charge fees to publish papers, these conferences make money through registration fees that are bundled with charges for accommodation, meals, and program materials. (Typical bills run in the \$2000 range. BIT, which

stands for Bio Integration Technology, also has a subsidiary that offers to help book air flights, hotels, and tours.) "The more papers they accept, the more money they make," Beall says, as people with accepted talks are more likely to attend. While most scientific conferences have a similar financial equation, the vast majority are organized by nonprofits with members drawn from the scientific community, rigorously peer review submissions, and strictly limit the number of presentations. "Predatory" conferences, on the other hand, Beall says, "are accepting papers that

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—DEREK LOWE,
VERTEX PHARMACEUTICALS

may not be valid science: They bear the imprimatur of science even though they never go through the same quality control."

While BIT Congress claims to be "the largest-scale conference company in Asia Pacific," it has competition in what Beall says is an expanding industry. "They're just one in the landscape," he says. He has also taken aim at the OMICS Group, a company based in India that stages conferences and publishes open-access journals that Beall considers "predatory" (see p. 60). (OMICS strongly objects to being deemed "predatory" by Beall and has threatened to sue him for \$1 billion.)

In an e-mail to *Science*, Francis Wang, who works in the business development office of BIT Life Sciences, rejected the charge that the company stages predatory meetings and lowers the quality of scientific discourse. Their business, she stated, is information sharing: "We are a bridge to the professional world." Wang explained that the firm does not use spam or robots to send out e-mail invitations, and noted that only about 40% of participants use its travel subsidiary's services. She suggested that some of the criticism occurs because BIT Life Sciences reaches out to up-and-coming researchers. "We will try very hard to create more platforms to give young experts or junior scientists more visibility and encourage their motivation to engage in the competition in professional world," Wang stated.

Derek Lowe, a medicinal chemist at Vertex Pharmaceuticals in Cambridge, Massachusetts, has ridiculed BIT Life Sciences invitations on his blog, noting that he believes he's been invited to speak at meetings because he can breathe, speak, fill a slot on a schedule, and presumably pay the registration fee. "This stuff reminds me of the *Who's Who* business model," Lowe says. "You can be in this book of luminaries if you'll just pay for the book."

A typical e-mail from BIT begins by offering a slot to give an oral presentation or chair a session at a meeting that may not even intersect with your expertise. It will add that the program coordinator has invited you for your "invaluable experience and knowledge" or maybe because "you are an outstanding expert and have enjoyed great fame." The note will list other "world-class experts" and renowned speakers who have attended BIT conferences, including Nobel lau-

The allure of such profits, meanwhile, has created a growing number of “predatory” scientific meetings that appear to exist solely for making money (see p. 76).

Not all meetings are money spinners, of course. The general science meeting organized each year by the AAAS (which publishes *Science*) is not “anyone’s principal scientific meeting,” CEO Alan Leshner acknowledges. That secondary status limits how much the organization can charge registrants and exhibitors. As a result, he says, revenues are insufficient to cover many no-charge activities “that are central to our mission,”

Geophysical attraction. The American Geophysical Union’s fall meeting in San Francisco keeps growing.



reates. Program committees may well feature names you recognize from respected institutions. If you do not promptly accept, a reminder e-mail—“to ensure that you do not miss out”—is sure to follow. “Maybe there some problems with my mailbox and I haven’t received your kindly reply,” it will humbly suggest.

BIT conferences indeed have attracted Nobel laureates and other prominent speakers, some of whom vouch for the meetings they attended. “I did not learn much new, but the organization, et cetera, was OK,” says immunologist Rolf Zinkernagel, a Nobel-ist at the University of Zurich in Switzerland who gave a keynote lecture at an HIV/AIDS meeting in Tianjin in 2006. Alan Stone, a biochemist in London who previously chaired the International Working Group on Microbicides, attended the same conference and gave it a ringing endorsement. “The scientific presentations were well-chosen and the sessions I attended were effectively chaired,” he wrote the organizers in a review of the “excellent” meeting that he shared with *Science*. Malaria specialist David Warhurst, a professor emeritus at the London School of Hygiene & Tropical Medicine, gave a keynote speech at the 2nd Annual World Congress of Microbes-2012 and says it was a “valuable” meeting. “I had not been to an international meeting held under purely Chinese auspices there and enjoyed the experience,” Warhurst says. “I was able to meet some of the Chinese workers active in the fields I was interested in.”

**We are a
bridge to the
professional
world.**

—FRANCIS WANG,
BIT LIFE SCIENCES

Others, however, express serious misgivings about BIT. Some scientists—including officials such as Janet Woodcock, who directs the Center for Drug Evaluation and Research at the U.S. Food and Drug Administration, and Roger Glass, director of the Fogarty International Center at the U.S. National Institutes of Health—say they had no clue they were listed as advisory board members of a program committee until they were notified by *Science*. Immunologist Jeffrey Bluestone at the University of California, San Francisco, was billed as a “renewed” speaker for a meeting in 2011 that he did not agree to attend. “I have never and will never go to a BIT conference,” Bluestone says. “I have been trying for years to get them to stop including me on their lists.”

Attendees of some BIT conferences say they felt duped. “None of the colleagues that were supposed to be there were at the meeting,” says Mario Clerici, an immunologist from the University of Milan in Italy who chaired a session at a World AIDS Day meeting in 2011. “Ninety percent of the audience and of the speakers were Chinese, the rest a curious collection of people from exotic places. The general feeling was that of being stranded on a raft in the sea with a bunch of people who had never been sailing. In short: great opportunity to visit China, forget about science.”

Obstetrician/gynecologist Danny Schust of the University of Missouri, Columbia, says that he was honored by an invitation to chair a session

at a BIT conference and also curious to visit China. When he arrived at his session, there were only three other people there—including one from his own institution. “I don’t tell that story to many people because it’s kind of embarrassing,” Schust says. “I think lots of people are getting sucked into it. It kind of cheapens the whole research agenda.” To his surprise, BIT Life Sciences now lists him as a program committee advisory member of an upcoming meeting.

Wang told *Science* that BIT Life Sciences’ conferences list people as advisory board members only if they have agreed to serve that role. Speakers sometimes back out, she stated, which may explain why they are wrongly listed on a program. She acknowledged that on occasion, researchers receive invitations to speak at conferences outside their fields. “Some mismatched invitations can’t be avoided,” she wrote. Such issues are “the problems of a young organizer’s fast growth.” And she argued that it’s “absurd” that people would attend BIT Life Sciences meetings purely out of vanity. “Do you really believe, each year, those 10,000 professional professionals from more than 70 countries are all stupid? They are so easily hoaxed? And will they pay a good price and fly all the way to China just because they are flattered?”

At the end of some BIT Life Sciences invitations, researchers can opt out of future solicitations. “We will definitely unsubscribe requests from the bothered experts in our database,” Wang stated. The company is young, growing quickly, and trying to improve, she stressed: “In the garden of conferences, BIT is only a new flower bud with unyielding life power.”

—JON COHEN