NEWSMAKERS

Stefan Hell Wins Körber Prize

Physicist Stefan Hell, whose work on nanoscopy redefined how deeply scientists could peer into living cells, is the winner of the 2011 Körber European Science Award, the Körber Foundation announced 6 July. The prize, which Hell will receive 7 September, comes with an award of €750,000 and is awarded annually to European scientists whose projects show potential for international impact.

Hell discovered a way to bypass a theoretical limit to the observational power of optical microscopes. In 1873, Ernst Abbe postulated that objects less than 200 nanometers apart—equivalent to half the wavelength of light—would be indistinguishable. To break through this barrier, Hell invented stimulated emission depletion (STED) microscopy: First, he marked specimens with fluorescent dyes and illuminated them with a laser. Then, he aimed a STED laser at some of the nearby molecules excited by the primary laser, “turning off” certain fluorescent cell components. The resulting darkness allowed for better resolution of the still-glowing molecules. Now, Hell says, “the limit is the size of the molecule.”

The technique has allowed researchers to observe the tiniest details of living cells and tissue. “This is not only a breakthrough discovery, this is a breakthrough discovery of enormous potential,” says Peter Gruss, chair of the selection committee and president of the Max Planck Society in Munich, Germany.

PNAS Editor to Steer New Open-Access Journal

A new open-access biomedical journal sponsored by the Howard Hughes Medical Institute, the Wellcome Trust, and the Max Planck Society now has an editor-in-chief: cell biologist Randy Schekman, an HHMI investigator at the University of California, Berkeley, who currently edits the Proceedings of the National Academy of Sciences.

The sponsors plan to launch the journal, which will be edited by active scientists, next summer. A board of 10 to 12 senior editors will be paid to spend 20% of their time on their journal duties. Reviewers will also be paid, probably through an annual retainer, Schekman says. For a brief interview with Schekman, go to http://scim.ag/Schekman.

FINDINGS

Diver Snaps First Photo Of Fish Using Tools

While exploring Australia’s Great Barrier Reef, professional diver Scott Gardner snapped the first photographs of a wild fish using a tool. Gardner found a footlong blackspot tuskfish (Choerodon schoenleinii) holding a clam in its mouth and whacking it against a rock. The shell gave way, and the fish gobbled up the bivalve, spat out the shell fragments, and swam off.

Once thought to be the hallmark of human intelligence, tool use has been observed in a wide variety of animals. To date, however, there has been no photo or video evidence of tool-using fish.

In fact, tool-using tuskfish might be commonplace, says Culum Brown, a behavioral ecologist at Macquarie University in Sydney, Australia, and a co-author of a paper to be published in Coral Reefs. Numerous middens of crushed shells are visible around the reef.

Antiparasitic Drug Has Bonus Effect on Mosquitoes

Ivermectin, already used to control river blindness and elephantiasis in many African countries, could also drive down malaria, a new study has found. The drug makes mosquitoes less likely to transmit Plasmodium falciparum, the malaria parasite.

A team led by Brian Foy, a vector biologist at Colorado State University in Fort Collins, has been studying mosquito populations in an area in southeastern Senegal where ivermectin, donated by Merck, is administered annually by the govern-