Cori Bargmann honored with the 2016 Scolnick Prize in Neuroscience

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Cori Bargmann, Torsten N. Wiesel Professor and head of the Lulu and Anthony Wang Laboratory of Neural Circuits and Behavior, has won the 2016 Edward M. Scolnick Prize in Neuroscience, an award given by the McGovern Institute for Brain Research at MIT to recognize outstanding advances in the field. The prize will be formally presented on March 30 in Cambridge, Massachusetts.

Bargmann, who is also a Howard Hughes Medical Institute investigator, is being honored for her work on the genetic and neural mechanisms that control behavior in roundworms.

Named after Edward M. Scolnick, who was a longtime president of Merck Research Laboratories and is now a member of the Broad Institute, the annual award is given for work in any field of neuroscience. The prize is endowed through a gift from Merck and includes a $125,000 grant.

Bargmann studies the relationships between genes, experience, the nervous system, and behavior in Caenorhabditis elegans, a tiny roundworm with just 302 neurons. Despite its simplicity, many of the genes and signaling mechanisms in the worm are similar to those of mammals. Much of Bargmann’s research focuses on the worm’s responses to smell, which are among its most complex behaviors. The animal can sense and discriminate among hundreds of different odors, generating reactions that are appropriate to the odor cue.

In a recent study, Bargmann and her colleagues showed that worms in their larval stage can learn what harmful bacterial strains smell like, and form aversions to those smells that last into adulthood. Among other things, Bargmann is interested in how genes and neural pathways allow for such flexibility. Work in her lab also explores the neural basis of social behavior, testing how genetic variation between individuals can cause them to behave differently from one another.

Before joining Rockefeller in 2004, Bargmann was on the faculty of the University of California, San Francisco. She received her bachelor’s degree in biochemistry from the University of Georgia and her Ph.D. in cancer biology from MIT. She is codirector of the Shelby White and Leon Levy Center for Mind, Brain and Behavior and the new Kavli Neural Systems Institute at Rockefeller, and has served as cochair of the advisory committee for the BRAIN Initiative, a national research project launched by the Obama administration in 2013.
Among other honors, Bargmann has received the 2015 Benjamin Franklin Medal in Life Science, the 2013 Breakthrough Prize in Life Sciences, and the 2012 Kavli Prize. She is a member of the American Philosophical Society, the National Academy of Sciences, and the American Academy of Arts and Sciences.

Previous Rockefeller recipients of the Scolnick Prize, which was first awarded in 2004, are Bruce S. McEwen in 2011 and Charles Gilbert in 2015.