

Plant Science Gets a Boost

IMAGINE WHEAT ENGINEERED TO BE RESISTANT TO DISEASE AND packed with extra, essential nutrients. Now picture a mustard plant that reveals biology's secrets—secrets that pertain to plants and humans—of gene regulation and gene silencing.

These scientific achievements are a reality, thanks in part to the work of 15 researchers who have been chosen to join a new initiative supported by HHMI and the Gordon and Betty Moore Foundation (GBMF). The investment provides much needed funding for research in fundamental plant science.

HHMI and GBMF are supporting this initiative at \$75 million total, offering 5-year, potentially renewable grants to the 15 investigators so they have the flexibility to move their research in creative directions. Despite funding constraints that have plagued plant researchers for decades, this group of scientists has made impressive discoveries, opening up new research fields and improving crop engineering. They represent 13 institutions from across the United States and were selected on the basis of individual scientific excellence from a group of 239 applicants.

“We think the creation of our joint program underscores the importance of investing in fundamental plant science and we hope it will encourage others in the United States to make analogous commitments,” said HHMI President Robert Tjian. “We are as excited as these scientists are to begin putting their best ideas into action.”

“GBMF and HHMI believe the research will generate high-impact discoveries with implications for a range of intertwined concerns facing society: food production, human health, protection of the environment, and identification of renewable energy

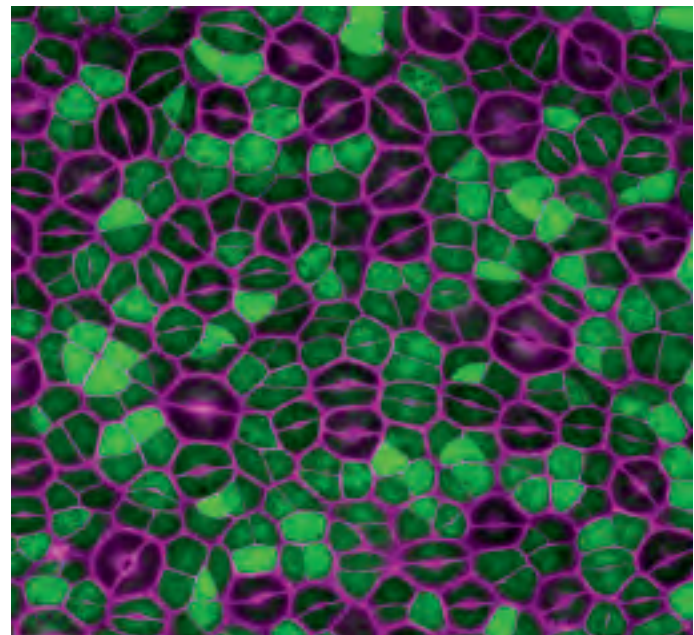
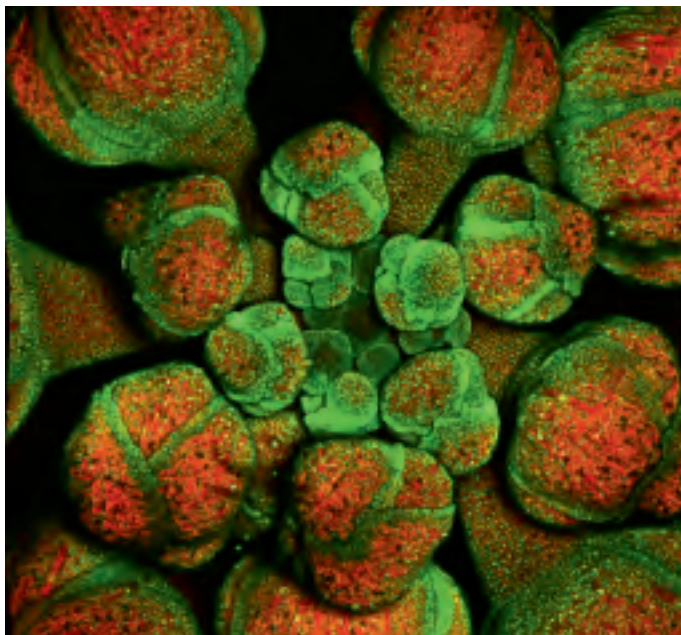
resources,” says Vicki L. Chandler, chief program officer for science at GBMF.

“People in the developed world have sort of lost touch with how, every day, plants are part of their lives—from food, shelter, clothing, and fuel to the simple beauty of a garden,” says Jeff Dangl, of the University of North Carolina at Chapel Hill. His appointment as an HHMI-GBMF investigator will help him recruit smart and creative young scientists to his lab to tackle what he considers the big questions and exciting problems in plant biology. ■

THE HHMI-GBMF INVESTIGATORS

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FOR MORE INFORMATION: To learn more about the scientists and their work, visit www.hhmi.org/news/plantscience20110616_list.html.



Scientists study pattern and orientation of plant cells, which is often predictable and tied to function. In the mustard plant's flower, the patterns and proportions of cells develop progressively from the center outward (left). Stomata, valve-like structures on the underside of the plant's leaves that regulate exchange of gas and water, are typically spaced at regular intervals. When activity of a genetic transcription factor is elevated, all epidermal cells become stomata (right).

Left: Adrienne Reeder, PLoS Biology, 8, e1000367 Right: Kyle Peterson / Torii Lab