

Five emerging designers explore the boundaries of light

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"The spiral is an interactive news ticker."

## Scientific Advancement

A David Small installation promotes the work of the Broad Institute to the man on the street.

Despite being a distinguished school with top-notch design programs, MIT is full of dreary architecture. While bricky Harvard weaves though downtown Cambridge, MIT hugs industrial Main Street. The city of Cambridge has been working to enliven its inhospitable streetscapes, one reason both planners and pedestrians are excited about an addition on the road—an interactive lobby with museumlike exhibits designed to share genetics with the public.

It won't officially launch for several months, but the glass lobby of the Broad Institute—the nation's preeminent center for biomedical genomic research—already holds 76 42-inch monitors welded in a nautilus shape. Across the screens, beads drift and float like protozoa. A series of panels outside hold close-range remotes that invite passersby to choose their own genomic adventure. Upon selection, each bead blooms into an illustrated story: "Genes Underlying Estrogen-Fueled Breast Cancer Mapped," "New Findings Suggest How Genes Affect Eyesight Later in Life," or "Genetic Code

Cracked for a Fungus Important to CO<sub>2</sub> Reduction."

"The spiral is an interactive news ticker," says
David Small, whose design firm is crafting several of the displays.



Small's moving graphics may be reminiscent of Times Square, but they're encoded with an educational mission: to bring ivory tower science to the public 24 hours a day. Eric Lander—who collaborated on the Human Genome Project, which first mapped the roughly 3 billion base pairs of human DNA-is now in charge of harnessing that information for medical purposes. As director of the Broad Institute, he's also cataloging the DNA of life forms from elephants to shrews to see what the patterns and variants say about evolution. And because he's equally committed to educational outreach (and well funded by the Broad family), he has championed the transformation of the lobby into a venue for connecting with passersby, even developing the nautilus form in collaboration with Marvann Thompson Architects. While the spiral broadcasts general developments in the field, future installations will reflect in real time work that is under way at the Broad, from computers testing the effects of chemicals on cells to tiny micro-array analysis chips reading the strands of DNA that make everybody unique. "Eric is interested in

transformations of science in the present moment, not just in history," Small says. "He wants to show the cutting

edge as it happens."

For its part, Small Design Firm faces the challenge of crafting meaningful representations of complex information for the man on the street. "There's tension between the desire to make our work accurate and to make it beautiful," says software designer Justin Manor, who is collaborating with Small on the installations. "We're trying to show how computers calculate billions of letters of DNA base pairs and to make massive data streams visually comprehensible. It's like trying to make bumper-to-bumper traffic look fun."

So far test runs of the spiral as an urban gesture are a hit. On a recent night Small left a trial version out to gather comments. The designer particularly likes those he thinks came from high school students. "Someone named flygrrlzz wrote, 'This thing is crafty.' Someone else called it 'sick,' "Small says. "We took it to mean hip, not unwell. That felt great." —Tess Taylor

Pedestrians on Main Street, in Cambridge, Massachusetts, can learn about developments in genetic research through an interactive exhibit in the Broad Institute lobby.