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4 Mass. residents awarded 'genius' grants

\$500,000 prize can aid endeavors

By Carolyn Y. Johnson
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As an intern at Greater Boston Legal Services more than a decade ago, Rebecca Onie was haunted by stories of people who found themselves in desperate straits, choosing between HIV medication and paying rent.

So the Harvard University sophomore decided to cold-call the chairman of pediatrics at Boston Medical Center to see whether there was something she could do to leverage the energy and enthusiasm of college students like herself to address health issues that doctors can't always do much about - pushing for access to things like housing, child care, food.

After that conversation with Dr. Barry Zuckerman, the two eventually founded Project HEALTH, a nonprofit that runs "family help desks" in clinics in six cities, including Boston. Students who staff the desk arrange services prescribed by physicians, finding, for example, a food pantry that is open at the right hours, or within walking distance.

Today, Onie is being honored with a \$500,000 "genius" grant from the John D. and Catherine T. MacArthur Foundation. She is one of 24 fellows who received a call out of the blue last week with news of the no-strings-attached, five-year grant.

Three others from Massachusetts won: an applied mathematician who brings the tools of mathematics to everything from skin wrinkling to tightrope walking; an economist who measures the effect of social and economic policies on people's lives in developing countries; and a climate scientist working to understand past climate change.

"I was absolutely and completely stunned to get the call, and I think that what's just exciting about it is that our work fits in many ways squarely into the unfolding conversation about health care in this country," said Onie, 32. "Regardless of the ultimate plan that emerges, the system is being pulled in a direction of being driven by patient outcomes, with a recognition there are a range of factors that affect health."

The MacArthur Fellows span a wide gamut, with backgrounds in everything from photojournalism to papermaking, and the grants are intended to give them the liberty to pursue endeavors freely, without being constrained by the burden of fund-raising.

But in the days after they receive the phone call, most recipients are too dazed and thankful to have yet decided what work they will support with their new influx of cash.

Peter Huybers, an assistant professor in the Department of Earth and Planetary Sciences at Harvard University, called the grant a “wonderful gift” that will give him the freedom to think more broadly.

Huybers combines measurements with theories to test current understanding of how and why the climate has changed in the past.

“To make a prediction that’s credible, you have to make a model capable of explaining observed facts,” Huybers said. “We know beyond a shadow of a doubt, we’re increasing atmospheric carbon dioxide. It’s extremely clear that leads to a warming response. What we don’t have a handle on is all the feedbacks in the climate system - how large they are, and how rapidly they will kick in.”

Esther Duflo, director of the Jameel Poverty Action Lab at the Massachusetts Institute of Technology, said she hopes to use the money to continue her work, which has been aimed at rigorous analysis of the effectiveness of different economic and social policies in some of the poorest developing countries.

“Most people who are really active in the fight against poverty fundamentally are very keen to do the best thing. So if you find out something doesn’t work as you expected, many people are willing to switch,” Duflo said.

Her work has focused on everything from comparing the decisions of female and male politicians in India, to studying the health effects of indoor cooking on women and children.

L. Mahadevan, a professor of applied mathematics at Harvard, said that he was still in a state of shock.

Mahadevan works at the intersection of many fields - math, physics, biology, and even the geosciences. He works on everything from better understanding the shape and movement of a cell using quantitative tools, to the more fanciful - better understanding how to walk on a rope.

“In the end,” he said, “it is driven by what drives all of us - curiosity.”