

## Paul A. Offit, MD

RECIPIENT OF THE 2013 MAXWELL FINLAND AWARD FOR SCIENTIFIC ACHIEVEMENT

**P**ediatrician, researcher, academician, administrator, advocate and author, Paul A. Offit is the 2013 NFID Maxwell Finland Award for Scientific Achievement recipient.

As an impassioned advocate for immunizations, Dr. Offit has rallied the scientific counteroffensive against those who would denigrate the power and worth of vaccines. As co-inventor of the RotaTeq<sup>®</sup> rotavirus vaccine now recommended for universal use in infants in the United States and widely used in other countries, notes Vijay B. Samant, President and CEO of Vical, he “shares in the credit for saving hundreds of lives worldwide on a daily basis.”

Paul Offit was born in Baltimore in 1951. When he was five he spent three weeks in a chronic care facility recovering from foot surgery. All of the other children in the clinic had polio. “It was a pretty lonely, isolating experience,” he told *Wired* magazine in 2009. “But what was even worse was looking at these other children who were just horribly crippled and disfigured by polio.” That was a defining moment in Dr. Offit’s life—and in his choice to make battling pediatric infectious diseases his life’s work.

There was something else about Dr. Offit, the magazine article pointed out: Even at a young age, he appreciated the logic and elegance of science. “What I loved about science was its reason. You have data. You stand back and you discuss the strengths and weaknesses of that data. There’s just something very calming about that,” he told *Wired*. “You formulate a hypothesis, you establish burdens of proof, you subject your hypothesis to rigorous testing. You’ve got 20 pieces of a 1,000-piece puzzle . . . It’s beautiful, really.”

Throughout his career, Dr. Offit has held on to that

love of science like an explorer’s compass. “You do science because you love the process of science,” he said in a 2011 speech, “you have to enjoy every minute of the process, even though largely it’s a frustrating one.”

### *The Way You Make Any Vaccine*

After graduating from Tufts University in 1973 and the University of Maryland School of Medicine in 1977, Dr. Offit became an intern and resident in pediatrics at the Children’s Hospital of Pittsburgh. In 1980, he received a fellowship in Infectious Diseases at the Children’s Hospital of Philadelphia.

In 1982 he was appointed to the Pediatrics faculty at the University of Pennsylvania School of Medicine and served as a Research Investigator at the Wistar Institute of



Anatomy and Biology. For several years in the mid 1980s, Dr. Offit worked at the Stanford University School of Medicine—first as a research associate in the Department of Medical Biology, then as clinical assistant professor in the Division of Pediatric Infectious Diseases.

He returned to the University of Pennsylvania School of Medicine in 1987 as assistant professor in the Department of Pediatrics and he resumed his work at the Wistar Institute.

While advancing his career in the 1980s, Dr. Offit—and colleagues Dr. Stanley Plotkin and Dr. Fred Clark—conducted studies on rotavirus “that allowed us to figure out which parts of the virus evoked protective immunity and which parts of the virus basically made you sick. And then to separate those two things out so we could have the best of both worlds—[evoking] protective immune responses without having a virus that was virulent. That’s really the way you make any vaccine.” He spoke of his research in an interview at the 2011 BIO International Convention. The studies and the collaboration led to RotaTeq®.

In 2000 he was named Professor in the Department of Pediatrics at the University of Pennsylvania.

Today he is the chief of the Division of Infectious Diseases and Immunology and director of the Vaccine Education Center at the Children’s Hospital of Philadelphia. The center was created in 2000 to provide “accurate, comprehensive and up-to-date information about vaccines and the diseases they prevent to parents and healthcare professionals.”

Through the center—and books and speeches and any chance he gets—Dr. Offit advocates for the efficacy of vaccines and provides science-based counterpoint to those in society who do not share his certainty. “That’s the thing about vaccines,” he told Stephen Colbert when he appeared on *The Colbert Report* in 2011 “when they work—absolutely nothing happens. But that’s a good thing, right?”

He added, “A choice not to get a vaccine is a risky choice.”



### *What's Best for Kids*

Dr. Offit’s interest in vaccine advocacy “grew from the consensus of scientific evidence supporting the value of vaccines, and was fueled by his experience as a pediatrician,” says Mr. Samant. “His candid defense of vaccines also put him in the crosshairs of those who ignore the scientific data and continue to promote the idea that autism may be associated with vaccines. The most aggressive among this group have resorted to hate mail and even death threats, requiring Dr. Offit to rely on the protection of armed guards at public meetings.”

Because he vigorously promotes the science of vaccines, some people “think of me as this wild-eyed maniac,” Dr. Offit told *Newsweek* in 2008. “If I sat down with them for 10 minutes, they’d see that my motivation is the same as theirs. You want what’s best for kids.”

Dr. Offit is a Founding Advisory Board Member of the Autism Science Foundation, and is also involved with the Center for Autism Research at the Children’s Hospital of Philadelphia. Because of his focus and fervor, he has won a raft of awards over the years. In 1981 he won the Fellow’s Annual Teaching Award at the Children’s Hospital of Philadelphia. In 1988 he received the Lederle Young Investigator Award in Vaccine Development and the University of Pennsylvania Research Foundation Award.

The American College of Physicians - the oldest professional medical organization in the country - welcomed Dr. Offit as a Fellow in 2003. The following year he was the recipient of the Maurice R. Hilleman Chair in Vaccinology at the University of Pennsylvania School of Medicine. Dr. Hilleman, one of Paul's mentors, developed numerous essential vaccines that, according to the New York Times, saved tens of millions of lives. Dr. Hilleman was the NFID's Maxwell Finland Award for Scientific Achievement recipient in 1998.

In 2006, the Food and Drug Administration approved RotaTeq®—a live, oral pentavalent vaccine containing five rotaviruses. In recognition of his 25-year quest to develop the rotavirus vaccine, Dr. Offit received the 2006 Jonas Salk Bronze Medal from the Association for Professionals in Infection Control and Epidemiology, the 2008 Luigi Mastroianni Clinical Innovator Award and the 2009 William Osler Award from the University of Pennsylvania School of Medicine.

In 2009 he received NFID's Charles Mérieux Award and was also named Humanitarian of the Year by the National Meningitis Association. Also that year he was honored by the American Academy of Pediatrics and by Bill and Melinda Gates at their Foundation's Living Proof Project for Global Health.

"It's gratifying to know that people recognize those – and I'm one of many, I think—who are willing to stand up for good science," he said in 2011, when he won the Humanitarian Award from the Biotechnology Industry Organization. Standing up for good science, he said, sometimes is like "leaning into a left hook."

In 2012, Dr. Offit was elected to the Institute of Medicine of the National Academies of Medicine.

To educate the public on the virtues of vaccines and other medical matters, Dr. Offit has written many books, including *The Cutter Incident: How America's First Polio Vaccine Led To Today's Growing Vaccine Crisis*; *Vaccinated: One Man's Quest to Defeat the World's Deadliest*

*Diseases; Autism's False Prophet: Bad Science, Risky Medicine, and the Search for a Cure; Deadly Choices: How the Anti-Vaccine Movement Threatens Us All*; and this year's *Do You Believe in Magic? The Sense and Nonsense of Alternative Medicine*. He has also published more than 140 papers in medical and scientific publications, primarily on rotavirus-specific immune responses and vaccine safety. In addition he is a co-editor of *Vaccines*, a leading textbook on immunization.

Paul Offit, says Mr. Samant, "is a most appropriate candidate for the Maxwell Finland Award for his broad influence on the pediatric vaccine field, from his development of the life-saving rotavirus vaccine, to his exemplary pediatric practice, to his staunch support of childhood immunizations against zealous opponents. His insightful and approachable style of writing has helped bridge the gap between medical research and the general public. His legacy must include both the hundreds of thousands of lives already saved by the rotavirus vaccine, and the millions more that will be saved by his advocacy for prudent vaccine policy."

