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FOR IMMEDIATE RELEASE



Maynard Olson

Maynard Olson receives \$500,000 Gruber Genetics Prize and turns to bacterial evolution in our bodies

July 9, 2007, New York, New York – The human genome would have been an impossible jigsaw puzzle without the work of Maynard Olson.

He created a way of breaking genomes into manageable pieces, applied it to the yeast genome, and made the human genome project a possibility. Now he is working to apply genome science to real biological problems—starting with the bacterium that kills many people with cystic fibrosis. And he's continuing to fight for the public ownership of genome information.

For his contribution to genome science Olson, professor of Genome Sciences at the University of Washington, will receive the 2007 Gruber Prize for Genetics on October 24, 2007, at the American Society of Human Genetics Annual Meeting in San Diego, California. The prize consists of a gold medal and \$US500,000.

“When he assembled his physical map of the yeast genome, Maynard developed a new way to piece together the puzzle. He allowed us to mechanize, computerize and organize the process,” says 2003 Gruber Genetics Laureate, David Botstein. “Maynard was one of the top two or three key brains behind the Human Genome Project. And he is a mentor—not just for his students, but for whole institutes.”

Olson's latest work could change our approach to treating cystic fibrosis, that dread genetic condition in which victims normally die before they reach 40 from a complication: chronic lung inflammation from a bacterial infection they acquired in early childhood.

Olson and his colleagues have found that *Pseudomonas aeruginosa*, the bacterium which causes the inflammation, evolves in a relatively predictable way inside the human lung. The result is that the bug which ends up killing its human host has very different characteristics from the one which invaded decades, and thousands of bacterial generations, before. And that means effective treatment should also be different.

He says, “The future now lies in turning genomic methods into true experimental tools, so that we can use them in hundreds of small laboratories to solve real biological problems such as those posed by infectious disease.” So, as he has done several times before, he is showing the way.

The Genetics Prize honors leading scientists for distinguished contributions in any realm of genetics research. The Foundation's other international prizes are in Cosmology, Neuroscience, Justice, and Women's Rights. Nominations for the 2008 prizes are now open and close on December 31, 2007.

A profile of Olson, photos, background information and nomination details for 2008 are available online at www.gruberprizes.org.

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Additional Information

The official citation reads:

The Peter and Patricia Gruber Foundation proudly presents the 2007 Genetics Prize to Maynard V. Olson, PhD, a founder of the field of genomics.

Maynard Olson created tools critical to each step of human genome sequencing as it developed from dream to reality. Then, through his articulate advocacy of high standards for accuracy and of free public access to data, he worked to ensure that DNA information is used to benefit humanity.

He used DNA sequence polymorphisms to connect functional genes with their physical locations. He made the first physical map of an entire eukaryotic genome, that of budding yeast. He invented the first practical system for cloning large segments of genomes and measuring their size. He introduced the now-universal common language for ordering and comparing genomic segments based on short stretches of unique sequence.

These techniques brought to fruition the convergence of genetic and physical mapping of the human and other genomes and laid the intellectual and practical groundwork for genomics.

Past Laureates of the Gruber Genetics Prize:

- 2006: Elizabeth H. Blackburn, for her studies of telomeres and telomerase, and her science advocacy
- 2005: Robert H. Waterston, for his pivotal role in the Human Genome Project
- 2004: Mary-Claire King, for three major findings in modern genetics: the similarity of the human and chimpanzee genomes; finding a gene that predisposes to breast cancer; and forensic genetics
- 2003: David Botstein, a driving force in modern genetics who established the ground rules for human genetic mapping
- 2002: H. Robert Horvitz, who defined genetic pathways responsible for programmed cell death
- 2001: Rudolf Jaenisch, who created the first transgenic mouse, to study human disease

2007 Gruber Genetics Prize Selection Advisory Board Members:

The Genetics Selection Advisory Board, an international panel of experts, chose Maynard Olson as the recipient of the 2007 Prize. Its members are:

Elizabeth H. Blackburn, University of California, Mission Bay; David Botstein, Lewis-Sigler Institute; Uta Francke, Beckman Center for Molecular and Genetic Medicine; H. Robert Horvitz, Massachusetts Institute of Technology; Mary-Claire King, University of Washington; Leena M. Peltonen-Palotie, Biomedicum; Robert H. Waterston, University of Washington

The Gruber Prize Program honors contemporary individuals in the fields of Cosmology, Genetics, Neuroscience, Justice and Women's Rights, whose groundbreaking work provides new models that inspire and enable fundamental shifts in knowledge and culture. The Selection Advisory Boards choose individuals whose contributions in their respective fields advance our knowledge, potentially have a profound impact on our lives, and, in the case of the Justice and Women's Rights Prizes, demonstrate courage and commitment in the face of significant obstacles.

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The Peter and Patricia Gruber Foundation honors and encourages educational excellence, social justice and scientific achievements that better the human condition. For more information about Foundation guidelines and priorities, please visit www.gruberprizes.org.

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For more information on the Gruber Prizes email media@gruberprizes.org or contact Berneta Akin of the Gruber Foundation at 340-775-8035 or by mail 140 W 57th St Suite 10C New York, NY 10019. Media materials and additional background information on the Gruber Prizes can be found at **our online newsroom:** www.gruberprizes.org/Press.php

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