The Medical Research Foundation
Investing in the Future of Biomedical Research in Oregon

2011 Awards
Discovery, Mentor and
Richard T. Jones New Investigator

November 9, 2011
The Governor Hotel
Portland, Oregon
The MRF was founded in 1942 by a group of businessmen and physicians for the purpose of stimulating medical research achievement in our state. That first year, the program awarded $200.

When the MRF became an affiliate committee of the OHSU Foundation in 1994, it retained its own unique purpose in recognizing excellence in both scientific achievement and mentorship throughout Oregon. Today, through philanthropic support, the program awards more than $1 million per year to support exceptional research projects throughout Oregon and to acknowledge the work of outstanding investigators and mentors. Past award winners include some of Oregon’s most illustrious scientists and educators.

The MRF is seeking to raise $2 million in endowed funds to support the programs that identify and invest in new scientific talent. A gift designated to the MRF endowment is an investment in the future of world-class biomedical research in Oregon. Such gifts provide the MRF with financial resources in perpetuity to keep the quest for new treatments and new knowledge moving ever forward.

The Richard T. Jones New Investigator Award is intended to honor a new investigator who shows exceptional promise early in a career in biomedical research. Nominees are judged on the basis of independence, quality of science, national funding, and first or senior authored publications in peer-reviewed biomedical research journals. The culmination of the research must have been performed in Oregon.

The Mentor Award is given to an Oregonian who has provided outstanding leadership in support or development of health research, education or the advancement of health care.

The Discovery Award is given to an Oregon scientist who has made significant, original discoveries to health-related research while working in Oregon.

Nominations for all awards are sought from Oregon research, educational and health care institutions, individual researchers, educators and practitioners.

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**Medical Research Foundation History**

**Program**

5:00 p.m. Gathering

5:30 p.m. Welcome

Introduction

Award Presentations

Richard T. Jones New Investigator Award
Hui Zong, Ph.D.
Institute of Molecular Biology, University of Oregon
Award Presented by Kimberly Andrews-Espy, PhD

Mentor Award
J. Gary Tallman, Ph.D.
Department of Biology, Willamette University
Award Presented by Marlene Moore, PhD

Discovery Award
Chris Q. Doe, Ph.D.
Institute of Molecular Biology, University of Oregon
Award Presented by Kimberly Andrews-Espy, PhD

Gail Mandel, Ph.D.
Vollum Institute, Oregon Health & Science University
Award Presented by Richard Goodman, MD, PhD

6:30 p.m. Reception
2011 Richard T. Jones New Investigator Award

Hui Zong, Ph.D.
Assistant Professor of Biology
Member, Institute of Molecular Biology
University of Oregon

The Richard T. Jones New Investigator Award recognizes Hui Zong, Ph.D., a leader in mouse genetic modeling whose work has already made an impact on neuroscience and cancer research.

As a postdoctoral fellow with no prior training in mouse genetics, Zong developed a novel method called “Mosaic Analysis with Double Markers” (MADM) for making sparse green fluorescent protein (GFP)-labeled mutant clones in mice. MADM allowed Zong to investigate tumor-initiating stages that were inaccessible to researchers using conventional tools. His MADM method was published in Cell in 2005. Next, he used the MADM system to study the origin of glioblastoma in the brain, and overturned existing theories about tumor development. Zong’s glioma discovery was published in Cell in 2011. His model may lead to the first effective treatments and preventive intervention of this deadly form of cancer. Zong is now using the MADM system to investigate medulloblastoma, one of the most common brain tumors in children.

Zong is a favorite among undergraduate and graduate students as a teacher, and is known as an outstanding mentor.

Zong earned his Ph.D. from the Department of Biochemistry and Molecular Biology at the Indiana University School of Medicine, and worked as a postdoctoral fellow at the Department of Biological Science at Stanford University. He was the first professor at the University of Oregon to be named a Pew Scholar in the Biomedical Sciences, and he recently obtained funding to study the evolution process of cancer from the W. M. Keck Foundation for a collaborative effort with Bill Cresko at the Institute of Ecology and Evolution at the University of Oregon. His research program is also supported by funding from National Cancer Institute, National Institute of Neurological Disorders and Strokes, and Congressional Directed Medical Research Program at Department of Defense.

2011 Mentor Award

J. Gary Tallman, Ph.D.
Professor of Biology
Taul Watanabe Endowed Chair of Science
Department of Biology
Director, Office for Faculty Research and Resources
Willamette University

The MRF Mentor Award recognizes J. Gary Tallman, Ph.D., whose work as a researcher and educator has inspired countless students to pursue careers in science. Dr. Tallman has earned a reputation for engaging students with respect, giving them latitude in pursuing their interests, giving them a sense of ownership of their work, being accessible to them when they have questions, and challenging them to achieve more. He serves as a role model to new faculty and is a champion of faculty mentoring at Willamette University as the director of the Office for Faculty Research and Resources.

Tallman displays an enthusiasm for his work and a love of learning that is catching. Many of his students have gone on to be accepted at elite institutions and have won numerous awards. In his career at Pepperdine and Willamette Universities, he has mentored 78 undergraduates, and 48 are co-authors on his 35 peer-reviewed research articles.

Tallman’s research skills and ability to attract research funding in the competitive field of cell biology have helped sustain a high-caliber, internationally respected research programs, bringing great opportunities to his students. As a tenured faculty member at Pepperdine and Willamette Universities, he has been the principal investigator on four National Science Foundation research grants and a co-PI on six other NSF grants. His research on thermal effects of hormonal signaling in cultured plant cells was funded by a two-year grant from the College Life Science Research Program of the M.J. Murdock Charitable Trust, and his most recent three-year request to the NSF was recently recommended for funding.

Tallman earned his Ph.D. in Biochemical Genetics in the Genetics and Developmental Biology Program at West Virginia University. Prior to joining Willamette University, he was a professor of biology and grants specialist at Pepperdine University.
The MRF Discovery Award recognizes Chris Q. Doe, Ph.D., a Howard Hughes Medical Institute Investigator and a world-leading developmental neurobiologist who has made landmark contributions to the study of stem cell biology and cell fate patterning within the nervous system.

Using a Drosophila model, Doe studies central nervous system development in five primary areas: asymmetric cell division of neuroblasts; neuroblasts as a model for stem cell self-renewal; the specification of temporal identity within neuroblast lineages; the genetic programs that generate motor neuron and inter-neuron subtypes; and the neural circuits driving larval locomotion.

Early in his career, Doe identified a mutant fruit fly gene he dubbed Prospero, which features a defect that regulates other genes and, as a result, triggers nervous system cells to change their identities. This discovery has been the basis for a wealth of subsequent research on the regulation of asymmetric cell division and has shed light on such questions as how mutants like Prospero influence brain size or give rise to brain tumors.

Doe's 2001 paper in Cell explaining how neuronal diversity can be generated from a single neuroblast in the Drosophila ventral nerve cord is considered one of the most conceptually significant discoveries in the field. His consistently outstanding research productivity has earned numerous scientific honors and widespread admiration among colleagues around the world who laud his exceptional commitment to collaboration, teaching, mentorship, and creative inquiry.

Doe earned a Ph.D. in developmental neurobiology in 1987 at Stanford University, working with Corey S. Goodman. Following a postdoctoral fellowship with Matthew P. Scott at the University of Colorado, he spent nine years on the faculty of the Department of Cell and Structural biology at the University of Illinois at Urbana-Champaign before joining the University of Oregon in 1998.

The MRF Discovery Award recognizes Gail Mandel, Ph.D., a Howard Hughes Medical Institute Principal Investigator and member of the National Academy of Sciences, for distinguished achievements in neuroscience.

Early in her career, Mandel isolated and sequenced the cDNA from the mammalian sodium channel gene, helping to form the first molecular understanding of the sodium channel. Her subsequent work in the study of how neuronal cell identity is established and maintained took an unexpected turn when she and her colleagues identified a repressor known as REST, which shuts off the sodium channel gene expression in non-neuronal cells. This seminal discovery revealed REST to be a regulator of gene expression, repressing hundreds of neuronal genes in non-neuronal cells. This work provided a molecular explanation for how neurons in the developing brain acquire their specific characteristics, including excitability.

Her more recent work has focused on the mechanism of action of the repressor MeCP2, which has a central role in causing the autism spectrum disorder Rett syndrome. Affecting 1 in every 10,000 to 20,000 girls, Rett syndrome causes retardation, small brain size and early mortality. Mandel's visionary studies with MeCP2 proved that its functions in glia have a role in inducing the disease, countering the conventional approaches focusing on MeCP2 in neuronal cells. This discovery fundamentally changed the understanding of Rett syndrome and creating exciting therapeutic opportunities.

Mandel's innovative and rigorous research has earned her a position as a Howard Hughes Medical Institute Principal Investigator and election to the National Academy of Sciences. She is the first Oregon woman – and one of only two – to receive that honor.

Before joining the Vollum Institute, she was a Distinguished Professor in the Department of Neurobiology & Behavior at the State University of New York at Stony Brook. She received a Ph.D. in immunology at the University of California Los Angeles and completed postdoctoral research fellowships at UCLA’s Molecular Biology Institute and the University of California, San Diego, Department of Biology.
### Former Mentor Award Recipients

<table>
<thead>
<tr>
<th>Year</th>
<th>Name</th>
<th>Affiliation</th>
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<tbody>
<tr>
<td>2010</td>
<td>Richard H. Goodman, M.D., Ph.D.</td>
<td>Oregon Health &amp; Science University</td>
</tr>
<tr>
<td></td>
<td>Christine A. Tanner, Ph.D., R.N., F.A.A.N.</td>
<td>Oregon Health &amp; Science University</td>
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<tr>
<td>2009</td>
<td>David and Lynn Frohnmaier</td>
<td>Fanconi Anemia Research Fund</td>
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<td>2008</td>
<td>Stephen W. Arch, Ph.D.</td>
<td>Reed College</td>
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<tr>
<td>2007</td>
<td>Kevin G. Ahern, Ph.D.</td>
<td>Oregon State University</td>
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<td>2006</td>
<td>Thomas M. Becker, M.D., Ph.D.</td>
<td>Oregon Health &amp; Science University</td>
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<td></td>
<td>M. Susan Smith, Ph.D.</td>
<td>Oregon Health &amp; Science University</td>
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<td>2005</td>
<td>Lesley M. Hallick, Ph.D.</td>
<td>Oregon Health &amp; Science University</td>
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<td>2004</td>
<td>Cynthia Morris, Ph.D., M.PH.</td>
<td>Oregon Health &amp; Science University</td>
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<td>2003</td>
<td>Christopher L. Cunningham, Ph.D.</td>
<td>Oregon Health &amp; Science University</td>
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<td>2002</td>
<td>Kathleen Potempa, R.N., D.N.Sc., F.A.A.N.</td>
<td>Oregon Health &amp; Science University</td>
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<td></td>
<td>Laurens N. Ruben, Ph.D.</td>
<td>Reed College</td>
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<td>2001</td>
<td>Thomas G. Cooney, M.D., F.A.C.P.</td>
<td>Oregon Health &amp; Science University</td>
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<td>2000</td>
<td>John A. Benson, Jr., M.D.</td>
<td>Oregon Health &amp; Science University</td>
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<td></td>
<td>Kent L. Thornburg, Ph.D.</td>
<td>Oregon Health &amp; Science University</td>
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<td>1999</td>
<td>Joseph D. Bloom, M.D.</td>
<td>Oregon Health &amp; Science University</td>
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<td>1998</td>
<td>Carol A. Lindeman, Ph.D., R.N., F.A.A.N.</td>
<td>Oregon Health &amp; Science University</td>
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<td>1997</td>
<td>J. S. Reinschmidt, M.D.</td>
<td>Oregon Health &amp; Science University</td>
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<td>1996</td>
<td>Kenneth Swan, M.D.</td>
<td>Oregon Health &amp; Science University</td>
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<td>1995</td>
<td>J. David Bristow, M.D.</td>
<td>Oregon Health &amp; Science University</td>
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<td>1994</td>
<td>Peter O. Kohler, M.D.</td>
<td>Oregon Health &amp; Science University</td>
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<td>1993</td>
<td>John Raaf, M.D.</td>
<td>Good Samaritan Hospital</td>
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<td>1992</td>
<td>John W. Kendall, M.D.</td>
<td>Oregon Health &amp; Science University</td>
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<td>1991</td>
<td>Robert D. Koler, M.D.</td>
<td>Oregon Health &amp; Science University</td>
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<td>1990</td>
<td>Edward H. Cooley</td>
<td>Medical Research Foundation of Oregon</td>
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<td>1988</td>
<td>Leonard Laster, M.D.</td>
<td>Oregon Health &amp; Science University</td>
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<td>1987</td>
<td>Edward Herbert, Ph.D.</td>
<td>Oregon Health &amp; Science University</td>
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<td>1986</td>
<td>Senator Mark O. Hatfield</td>
<td>Oregon Health &amp; Science University</td>
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<td>2010</td>
<td>Shoukhrat M. Mitalipov, Ph.D.</td>
<td>Oregon Health &amp; Science University</td>
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<td>2009</td>
<td>J. Eric Gouaux, Ph.D.</td>
<td>Vollum Institute</td>
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<td>2008</td>
<td>Lynn Y. Sakai, Ph.D.</td>
<td>Shriners Hospitals for Children and Oregon Health &amp; Science University</td>
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<td>2007</td>
<td>Markus Grompe, M.D.</td>
<td>Oregon Health &amp; Science University</td>
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<td>John H. Postlethwait, Ph.D.</td>
<td>University of Oregon</td>
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<td>2006</td>
<td>Susan J. Hayflick, M.D.</td>
<td>Oregon Health &amp; Science University</td>
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<td>2005</td>
<td>Balz Frei, Ph.D.</td>
<td>Oregon State University</td>
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<td>David Kabat, Ph.D.</td>
<td>Oregon Health &amp; Science University</td>
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<td>P. Michael Conn, Ph.D.</td>
<td>Oregon Health &amp; Science University</td>
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<td>James D. White, Ph.D.</td>
<td>Oregon State University</td>
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<td>2003</td>
<td>*James R. Bunzow, M.S.</td>
<td>Oregon Health &amp; Science University</td>
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<td>*David K. Grandy, Ph.D., Oregon Health &amp; Science University</td>
<td>John D. Scott, Ph.D.</td>
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<td></td>
<td>*joint award</td>
<td>Oregon Health &amp; Science University</td>
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<td>2002</td>
<td>Monte Westerfield, Ph.D.</td>
<td>University of Oregon</td>
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<td>2001</td>
<td>P. Shing Ho, Ph.D.</td>
<td>Oregon State University</td>
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<td></td>
<td>James T. Rosenbaum, M.D.</td>
<td>Oregon Health &amp; Science University</td>
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<td>2000</td>
<td>David A. Lieberman, M.D.</td>
<td>Oregon Health &amp; Science University</td>
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<td>1999</td>
<td>Brian J. Drucker, M.D.</td>
<td>Oregon Health &amp; Science University</td>
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<td></td>
<td>Roger D. Cone, Ph.D.</td>
<td>Oregon Health &amp; Science University</td>
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<td>1998</td>
<td>Dennis E. Hruby, Ph.D.</td>
<td>Oregon State University</td>
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<td></td>
<td>Charles B. Kimmel, Ph.D.</td>
<td>University of Oregon</td>
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<td>1997</td>
<td>J. David Bristow, M.D.</td>
<td>Oregon Health &amp; Science University</td>
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<td></td>
<td>Tom H. Stevens, Ph.D.</td>
<td>University of Oregon</td>
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<td>1996</td>
<td>Scott H. Goodnight, M.D.</td>
<td>Oregon Health &amp; Science University</td>
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<td></td>
<td>R. Michael Liskay, Ph.D.</td>
<td>Oregon Health &amp; Science University</td>
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<td>1995</td>
<td>John C. Crabbe, Jr., Ph.D.</td>
<td>Oregon Health &amp; Science University</td>
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<td></td>
<td>Edward A. Neuwelt, M.D.</td>
<td>Oregon Health &amp; Science University</td>
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<td>1994</td>
<td>John M. Barry, M.D.</td>
<td>Oregon Health &amp; Science University</td>
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<td>*Alfred J. Lewy, M.D., Ph.D.</td>
<td>Oregon Health &amp; Science University</td>
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<td></td>
<td>*Robert L. Sack, M.D.</td>
<td>Oregon Health &amp; Science University</td>
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<tr>
<td></td>
<td>*joint award</td>
<td>Oregon Health &amp; Science University</td>
</tr>
</tbody>
</table>
Former Richard T. Jones New Investigator Award Recipients

2010
Kevin L. Winthrop, M.D.
Oregon Health & Science University

2009
Joseph W. Thornton, Ph.D.
Center for Ecology & Evolutionary Biology, University of Oregon

2008
Rosalie C. Sears, Ph.D.
Oregon Health & Science University

1993
Richard H. Goodman, M.D., Ph.D.
Oregon Health & Science University
R. Ellen Magenis, M.D.
Oregon Health & Science University

1992
M. René Malinow, M.D.
Oregon Regional Primate Research Center
Josef Rosch, M.D.
Oregon Health & Science University

1991
William M. Bennett, M.D.
Oregon Health & Science University
Frederick W. Dahlquist, Ph.D.
University of Oregon

1990
Grover C. Bagby, Jr., M.D., VAMC
Oregon Health & Science University
Roderick A. Capaldi, D.Phil.
University of Oregon

1988
Robert S. Dow, M.D.
Dow Institute, Good Samaritan Hospital
Donald J. Reed, Ph.D.
Oregon State University

1987
William E. Connor, M.D.
Oregon Health & Science University
Brian W. Matthews, Ph.D.
Institute of Molecular Biology, University of Oregon

1986
Christopher K. Mathews, Ph.D.
Oregon State University
Peter H. von Hippel, Ph.D.
Institute of Molecular Biology, University of Oregon

1985
Monte Greer, M.D.
Oregon Health & Science University
Barbara Iglewski, Ph.D.
Oregon Health & Science University

1984
Howard S. Mason, Ph.D.
Oregon Health & Science University
James Metcalf, M.D.
Oregon Health & Science University

1983
Richard T. Jones, M.D., Ph.D.
Oregon Health & Science University

1982
Howard S. Garelick, Jr., M.D.
Oregon Health & Science University

1981
Roderick G. Tuner, M.D.
Oregon Health & Science University

1980
Peter H. von Hippel, Ph.D.
Institute of Molecular Biology, University of Oregon

1979
Grover C. Bagby, Jr., M.D., VAMC
Oregon Health & Science University

1978
H. E. Gregory, M.D.
University of Oregon

1977
Richard T. Jones, M.D., Ph.D.
Oregon Health & Science University

1976
Robert S. Dow, M.D.
University of Oregon

1975
Robert C. McDermott, M.D.
University of Oregon

1974
William E. Connor, M.D.
Oregon Health & Science University

1973
Richard T. Jones, M.D., Ph.D.
Oregon Health & Science University

1972
Robert S. Dow, M.D.
University of Oregon

1971
Henry R. Imamura, Jr., M.D.
University of Oregon

1970
William E. Connor, M.D.
University of Oregon

1969
Richard T. Jones, M.D., Ph.D.
Oregon Health & Science University

1968
Robert S. Dow, M.D.
University of Oregon

1967
Robert S. Dow, M.D.
University of Oregon

About the Grants

For half a century, the Medical Research Foundation of Oregon has enhanced the quality and quantity of life-science research carried out at Oregon’s leading research institutions. Through research grants, early clinical investigator awards and other programs, the MRF each year invests more than $1 million in innovative biomedical research in the state of Oregon.

By encouraging Oregon scientists to pursue their most innovative ideas, and by fostering a statewide culture of mentorship and lifelong learning, the MRF contributes to the idea that Oregon’s total value in the biosciences is worth far more than just the sum of its individual parts.

To learn more about how you can support the MRF’s mission to promote innovation and discovery in Oregon, please contact the OHSU Foundation at 503 228-1730. To give online, go to www.ohsufoundation.org.

The Medical Research Foundation (MRF) supports promising biomedical exploration and the development of research careers in clinical investigation in Oregon through a program of competitively awarded research grants in excess of $1 million annually.

New Investigator: Quarterly grants of up to $40,000 are intended for physicians and scientists who are new to research and are currently without major funding resources.

Emergency Interim Support for Established Investigator: Quarterly grants of up to $40,000 may be made to support ongoing research when an investigator is between grants and a hiatus would jeopardize the program.

Early Clinical Investigator: Quarterly grants of up to $20,000 are intended to further the development of young investigators who interact with human subjects and who are interested in a career in clinical research.

The Oregon Scientist Development Award: One annual grant of up to $75,000 may be made to support exceptional, but not yet fully independent young investigators who are making the transition from an intermediate rank to scientific independence.

For more information about Medical Research Foundation Awards and Grants or to make a gift in support of the MRF, visit www.mrf-oregon.org.
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David H. Ellison, M.D.
Caroline A. Enns, Ph.D.
Balz Frei, Ph.D.
James J. Huntzicker, Ph.D.
Jonathan R. Lindner, M.D.
Cynthia D. Morris, Ph.D., M.P.H.
Nancy A. Press, Ph.D.
Allan Price
Eliot R. Spindel, M.D., Ph.D.
Mary P. Stenzel-Poore, Ph.D.
J. Timothy Stout, M.D., Ph.D., M.B.A.