First Allen Distinguished Investigators named

EurekAlert

SEATTLE, Wash. — November 18, 2010 — The Paul G. Allen Family Foundation today launched a program to advance important neuroscience and cellular engineering research. The Allen Distinguished Investigator Awards will fund seven researchers at universities and laboratories in Washington, California, Massachusetts and New York.

The grants total $9.4 million and will be paid over three years.

"A year ago, I started searching for programs with potential for major breakthroughs but which had struggled to find funding through traditional sources," said Paul G. Allen. "The inaugural Distinguished Investigators are working on some of the most exciting research in biology and neurology and I'm proud to be able to help keep that work going."

The grants are awarded to the institutions where the researchers work; the University of Washington, California Institute of Technology, Massachusetts Institute of Technology, Stanford University and Cold Spring Harbor Laboratory. Award recipients and projects funded include:

- **David Anderson**, Seymour Benzer Professor of Biology & Investigator, Howard Hughes Medical Institute, California Institute of Technology ($1.6 million)
  Project Title: Genetic identification of attack neurons in the mouse
  Dr. Anderson is working to localize, identify, characterize, and turn on neurons in the hypothalamus associated with attack and bring the study of aggression into the modern molecular era.

- **Edward S. Boyden**, Benesse Career Development Professor, MIT Media Lab and associate member, McGovern Institute for Brain Research at MIT ($1.3 million)
  Project Title: Massively Parallel, Three-Dimensional, Circuitwide Recording of Neural Activity
  Dr. Boyden, who heads the MIT Media Lab's Synthetic Neurobiology research group, is inventing new devices for creating real-time electrical maps of the brain in three dimensions.

- **Michael Dickinson**, Benjamin Hall Endowed Chair in Basic Life Sciences, University of Washington ($2.0 million)
  Project Title: Ethomics: A Technology-driven Approach to Study the Genetic and Neural Basis of Behavior
  Using the fruit fly, or D. melangaster, Professor Dickinson is working to develop new instruments to expand the body of knowledge in the field of

measuring and quantifying complex group behavior in the relatively new field of study called "ethomics."

- **Christof Koch**, Lois and Victor Troendle Professor of Cognitive and Behavioral Biology, California Institute of Technology ($600,000)
  Project Title: Evaluating Connectomes Using Measures of Complexity and Synergy
  Professor Koch studies information processing by neural systems, using computational and theoretical approaches. He will specifically analyze the locomotion network in a worm, C. elegans, with an eye toward assessing the information flow in the neural network that leads to a clearly measurable behavior.

- **Jennifer Nemhauser**, Assistant Professor, University of Washington ($1.4 million)
  Project Title: Reprogramming Cells with Plant-derived Signaling Pathways
  Dr. Nemhauser aims to reverse engineer a cell-to-cell communication system from plants, construct a modular molecular signal processing toolbox for synthetic biology, and to use the toolbox to genetically engineer the single celled organism S. cerevisiae, to exhibit multi-celled behavior.

- **Mark Schnitzer**, Associate Professor & Investigator, Howard Hughes Medical Institute, Stanford University ($880,000)
  Project Title: Massively Parallel Brain Imaging in Mouse Models of Human Brain Disease
  Professor Schnitzer's research will strive to develop miniaturized, mass-producible, fluorescence microscopes that can create real-time imaging of neurons in the brain. The data will be used to unravel the neural and cellular basis of schizophrenia.

- **Tony Zador**, Professor of Biology and Program Chair in Neuroscience, Cold Spring Harbor Laboratory ($1.6 million)
  Project Title: Sequencing the connectome: A fundamentally new way of determining the brain's wiring diagram
  Professor Zador proposes to develop a method for mapping the wiring diagram of neural circuits using high-throughput DNA sequencing technology.

Susan M. Coliton, Vice President of The Paul G. Allen Family Foundation, said, "One of the Foundation's goals is to support projects that create new knowledge about ourselves and our universe. Making investments in early stage, cutting-edge research leverages both our funding and the intellectual capital of talented scientists. We couldn't be more thrilled about the potential of this inaugural group of Allen Distinguished Investigators."

The research also complements work being done by the Allen Institute for Brain Science. The Institute is conducting leading-edge research, including development of a 3-D genetic map of the human brain. The data, made available to researchers

without cost, will shed light on many neurologically based conditions, including behavioral dysfunction and diseases such as Parkinson's and Alzheimer's.

Earlier this year, Allen said that he will leave a majority of his estate to philanthropy, including to continue the work of the brain institute and the family foundation.

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