CIRM Scientific and Medical Research Funding Working Group
Biographical information of candidates nominated to serve as
Alternate Scientific Members of the Working Group

Patrik Brundin, M.D., Ph.D.
Dr. Brundin is Professor of Neuroscience in the Department of Experimental Medical Science Neuronal Survival Unit in the Wallenberg Neuroscience Center at Lund University in Sweden. He received his B.Sc. degree in Medicine, his Ph.D. on the topic of intracerebral transplantation in Parkinson's disease, and his M.D. degree and license to practice clinical medicine at Lund University. He has previously served as the head of the Department of Experimental Medical Science.

Dr. Brundin is a leader in the field of Parkinson's disease and was a part of the research team that first developed a clinical procedure for intracerebral transplantation in this disease. He leads a research group that is active in several areas of investigation related to experimental models of neurodegenerative diseases. Dr. Brundin presently coordinates numerous national and international research programs and scientific projects that focus on neurological disorders of the basal ganglia.

Dr. Brundin has published over three hundred papers on Parkinson's disease and closely related topics. In 2001, he was identified as one of the 0.5% most cited scientists in his area, and he has received numerous awards for his work including his election as a member of Academia Europaea. He has edited a book on restorative therapies in Parkinson's disease, is a member of the editorial board of several renowned journals, and is a consultant for biotechnological and pharmaceutical companies. He as served as a grant reviewer for agencies including The Wellcome Trust, UK and the Medical Research Council (MRC). From 1995-2000 he was president of the Network for European CNS Transplantation and Repair (NECTAR).

Marc Diamond, M.D.
Dr. Diamond is the David Clayson Associate Professor in the Department of Neurology at Washington University School of Medicine. He received his B.A. degree in history from Princeton University. Dr. Diamond received his M.D. at the University of California San Francisco (UCSF) School of Medicine where he also completed two years of research with Keith Yamamoto, Ph.D. as a Howard Hughes Medical Student Research Fellow. He completed an internship and residency in Neurology at UCSF followed by a postdoctoral fellowship in the laboratory of Dr. Yamamoto. He was an assistant, then associate professor in the Neurology Department at UCSF before joining the Neurology Department at Washington University. He is a member of the Hope Center for Neurological Disorders.

Dr. Diamond's laboratory is focused on basic research to identify therapeutic targets and develop small molecules to treat human disease. He is especially interested in targeting abnormal protein conformational change, which plays a key role in neurodegenerative diseases such as Huntington disease (HD) and tauopathies. He uses a range of approaches: biochemistry, cell and molecular biology, and animal models. Dr. Diamond's work on HD focuses on an understanding of protein interactions within the cell that govern the stability of the pathologic protein, huntingtin (Htt). The tauopathies

constitute a large family of neurodegenerative diseases that include dementias such as Alzheimer disease and motor neuron diseases. All of these diseases feature deposition of aggregated tau protein and exhibit inexorable spread of pathology. His laboratory is determining the molecular basis of these processes involved in tau aggregate formation and their role *in vivo*. These prion-like mechanisms of pathology represent a potentially new paradigm in our understanding of neurodegenerative diseases and could enable a host of new therapeutic strategies based on blocking propagation of misfolding.

Dr. Diamond is a clinical attending physician at Barnes-Jewish Hospital in the Movement Disorders clinic where he specializes in the care of Huntington disease patients. He has received numerous awards, has published in peer-reviewed journals, and has been issued 2 patents. Dr. Diamonds has served as a referee for numerous journals including the *Proceedings of the National Academy of Sciences, Nature Chemical Biology, Journal of Cell Biology,* and *Journal of Neuroscience* and has participated in peer review of grant applications including serving as a study section member at the National Institutes of Health (NIH).

Franz F. Hefti, Ph.D.
Dr. Hefti is Chief Scientific Officer (CSO) of Avid Radiopharmaceuticals, a biotech company developing imaging agents for neurodegenerative diseases, and he serves as Chief Development Officer for Chlorion Pharmaceuticals, a biotech company pursuing a novel target for chronic pain. In addition, he is an advisor to several biotech companies developing therapeutics for neurological diseases. Dr. Hefti received his M.S. degree and his Ph.D. from the University of Zurich and did his postdoctoral research at the Massachusetts Institute of Technology and the Max Planck Institute in Munich.

Previously, Dr. Hefti was Executive Vice President of Drug Development at Rinat Neuroscience Corporation - a company acquired by Pfizer Inc. - and was involved in developing antibody therapeutics for chronic pain and Alzheimer's disease. Before joining Rinat, he was Senior Vice President of Neuroscience Research at Merck & Co., where he coordinated the company's neuroscience research worldwide and served as site head for the neuroscience research centers in the U.K. and San Diego. During his tenure, small molecule drug candidates covering several diverse drug targets in the neuroscience area were taken into clinical studies. Prior to Merck & Co., Dr. Hefti was Director of the Neuroscience Research Department at Genentech. Prior to Genentech, he spent more than a decade in academia as a Professor at the University of Southern California and Associate Professor at the University of Miami, where he carried out seminal research on therapeutic applications of neurotrophic factors.

Dr. Hefti has published over 250 papers on neurotrophic factors and topics in neuropharmacology as well as a textbook "Drug Discovery for Nervous System Diseases". He is currently or has served on the editorial board of several scientific journals including *Neuroscience*, *CNS and Neurological Disorders Drug Targets,* and *Journal of Neurochemistry*. Dr. Hefti serves or has served on the Scientific Advisory Boards (SABs) of numerous research foundations, institutions, and companies including NIH study sections and advisory panels.

David H. McKenna, Jr., M.D.

Dr. McKenna is the Director of the Division of Transfusion Medicine of the University of Minnesota Medical School. He is also the Scientific and Medical Director of Molecular & Cellular Therapeutics, the cGMP facility, and the Director of the Cell Therapy Laboratory at the University of Minnesota Medical Center. He is an Associate Professor in the Univesity of Minnestoa Medical School. Dr. McKenna received his B.S. degree from the University of Notre Dame and his M.D. from the Saint Louis University School of Medicine. He completed a residency in Anatomic and Clinical Pathology with an emphasis on cell therapy at the University of Minnesota and the University of Vermont and completed a fellowship in Transfusion Medicine at the University of Minnesota. Dr. McKenna is a board certified physician in Anatomic and Clinical Pathology and Blood Bank/Transfusion Medicine licensed to practice medicine in the State of Minnestoa.

Dr. McKenna's research centers on the translational ("bench to bedside") development of cell-based therapies. Current and developing projects include clinical trials with natural killer cells [peripheral blood-derived, umbilical cord blood (UCB)-derived] and T regulatory (CD4+/CD25+) cells (peripheral blood-derived, umbilical cord blood-derived) in support of bone marrow transplantation, allogeneic large multivalent immunogen (LMI) vaccine [cell line based cancer vaccine: melanoma (SK23) and breast cancer (SKBR3)], marrow mononuclear cells and cardiosphere-derived cells for cardiac regenerative medicine, skeletal myoblasts, dendritic cell-based vaccines, and mesenchymal stem/stromal cells (MSCs) for a variety of applications. His pre-clinical research focuses on the isolation, characterization, expansion, and differentiation of stem cells from human UCB.

Dr. McKenna is actively involved with the National Heart, Lung, & Blood Institute (NHLBI)-sponsored PACT (Production Asisstance for Cellular Therpay) group. He is a member of the American Association of Blood Banks (AABB), serving as the Vice-Chair of their Cellular Therapies Section, the Intereational Society of Cellular Thepary, the International Society for Stem Cell Research, the Tissue Engineering/Regenerative Medicine-International Society, and the American Society for Hematology. He is also a Scientific Member of the Biomedical Excellence for Safer Transfusion (BEST) Collaborative Cellular Therapy Team. Dr. McKenna has published extensively and has participated as a peer reviewer for several granting agencies and journals.

Sean Palecek, Ph.D.
Dr. Palecek is Associate Professor in the Department of Chemical & Biological Engineering at the University of Wisconsin. He received his B.S. degree in chemical engineering from the University of Delaware, a M.S. degree in chemical engineering from the University of Illinois at Urbana-Champaign, and a Ph.D in chemical engineering from Massachusetts Institute of Technology (MIT) where he was advised by Doug Lauffenburger and Rick Horwitz. Dr. Palecek performed postdoctoral research in Steve Kron's lab in the Department of Molecular Genetics and Cell Biology at the University of Chicago. He joined the Department of Chemical & Biological Engineering at the University of Wisconsin – Madison as an assistant professor.

The Palecek lab focuses on developing technologies to improve the understanding of how cell-cell contact and mechanical forces influence human pluripotent stem cell self-renewal and differentiation. Dr. Palecek's lab has identified mechanisms by which mechanical forces influence self-renewal of human embryonic stem cells (hESCs) by

activating TGFβ superfamily signaling. The Palecek lab has also designed culture systems that regulate hESC colony size and shape to assess effects of cell-cell interactions on self-renewal and differentiation. These principles have been used to design systems for expanding and cryopreserving hESCs and for directing differentiation to cardiac myocytes. Current projects in the lab focus on synergies of mechanical and chemical cues in hESC differentiation to cardiac, vascular endothelial, and epithelial lineages.

Dr. Palecek has authored over 50 peer-reviewed articles and 3 book chapters and has published 8 patents. His research support includes grants from the National Institutes of Health (NIH) and the National Science Foundation (NSF). Dr. Palecek is the recipient of several awards including the *Circulation Research* Manuscript of the Year, the NSF Career Award, and the Lilly Young Faculty Award in Biosystems Engineering. Dr. Palecek is a peer reviewer for several journals including *Biomaterials, Journal of Cell Biology, Nature Protocols, PLoS Biology, Proceedings of the National Academy of Sciences USA,* and *Stem Cells* and has participated on review panels for the NSF, NIH, and several state agencies.

David H. Sachs, M.D.
Dr. Sachs is the Director of the Transplantation Biology Research Center at Massachusetts General Hospital (MGH) and the first Paul S. Russell/Warner-Lambert Professor of Surgery (Immunology) at Harvard Medical School. He graduated from Harvard College, Summa Cum Laude, with an A.B. degree in Chemistry, received a Diplome d'Etudes Superieures de Sciences in organic chemistry from the University of Paris, where he studied as a Fulbright fellow, and received an M.D., Magna Cum Laude, from Harvard Medical School. Dr. Sachs trained as a surgical intern and research fellow in transplantation at the MGH before moving to the National Institutes of Health (NIH) where he developed a major program in transplantation research. He became Chief of the Transplantation Biology Section, Immunology Branch, National Cancer Institute and Chief of the Immunology Branch, National Cancer Institute. During a sabbatical year Dr. Sachs was Visiting Professor, Department of Cell Research, Wallenberg Laboratory at the University of Uppsala, Sweden, where he initiated studies of the molecular biology of transplantation antigens in the miniature swine model.

Dr. Sachs has published over 700 articles in scientific journals. His research achievements include: 1) discovery of Ia (Class II) antigens; 2) development of monoclonal anti-bodies to MHC antigens; 3) development of a unique large animal model for transplantation using miniature swine; 4) use of mixed marrow reconstitution as a means of inducing specific transplantation tolerance; and 5) studies of specific transplantation tolerance to allografts and xenografts in murine, swine and primate models.

Dr. Sachs is a member of the Editorial Board of several journals in his field, including: *Clinical Transplantation*, *Transplantation*, *Xenotransplantation* and *Chimerism*. He is one of three North American Editors of *Transplantation* and was the founding Editor of *Xenotransplantation*. He was a Councilor of the Transplantation Society from 1988-1994 and Vice-President from 1996-1998. Dr. Sachs was a member of the Immunobiology Study Section at the National Institutes of Health and has served on the Immunology Executive Committee at Harvard Medical School since 1991. He was elected to the Institute of Medicine of the National Academy of Sciences in 1996. Dr. Sachs has been the recipient

numerous award including the Public Health Service Commendation Medal and the Meritorious Service Award; the Jean Borel Award in Transplantation; the ASTP/Novartis Established Investigator Award; the Award for Distinguished Contributions to Health Research by The Medical Foundation; the Mary Jane Kugel Award by the Juvenile Diabetes Research Foundation; the Roche Ernest Hodge Memorial Award (formerly called the Roche AST Distinguished Achievement Award), the highest award bestowed by the AST; and, most recently in 2009, the Martin Prize for Excellence in Clinical Research. Dr. Sachs was also awarded an Honorary Degree (Docteur Honoris Causa) from University of Nantes, France.

G. Sitta Sittampalam, Ph.D.
Dr. Sittampalam is Deputy Director at The Institute for Advancing Medical Innovation and Professor of Pharmacology, Toxicology, & Therapeutics at the Kansas University Kansas Cancer Center. He received is B.Sc. degree in Chemistry and Biology from the University of Ceylon, Sri Lanka and his M.S. degree in Analytical Chemistry from Bowling Green State University. He received his Ph.D. in Analytical Chemistry from the University of Arizona, Tucson where he subsequently completed a post-doctoral fellowship before joining the team at Eli Lily.

Dr. Sittampalam has over 23 years of pharmaceutical research experience with ~13 years in assay development and validation for High Throughput Screening (HTS) and lead optimization. As head of Lead optimization Biology Laboratory at Eli Lilly & Company (2001-2006), he lead ~70 scientists supporting multiple therapeutic areas. He was also responsible for editing a Quantitative Biology manual for HTS Eli Lilly & Company that is currently published as the Assay Guidance Manual on the NIH-Chemical Genomics Center Website for reference by academic scientists.

Dr. Sittampalam received several honors during his tenure at Eli Lilly including the Quality Award for Good Research Practices. He served as President on the Society for Biomolecular Screening Board of Directors. Dr. Sittampalam has participated as a peer reviewer and served on advisory boards for several journals and for grant review at the National Institutes of Health (NIH) and has given more than 200 invited lectures.

Barbara Wirostko, M.D.
Dr. Wirostko is a board certified Ophthalmologist and has recently accepted a Clinical Adjunct Associate Professor position at the University of Utah, Moran Eye Center where she will join the robust and well-respected retina division. Currently, she is the Global Clinical Development Team Lead for Glaucoma Senior Medical Director in Ophthalmology at Pfizer. Dr. Wirostko graduated with a B.S. degree with distinction from Cornell University, College of Arts & Science with a major in microbiology. She received her M.D. from Columbia University, College of Physicians and Surgeons and stayed on at Columbia, Edward S Harkness Eye Institute for her ophthalmology residency. She completed a fellowship in glaucoma under Dr. Greg Harmon before entering private practice at Huntington Medical Group (HMG) where she maintained a surgical and medical practice for 10 years, served as the chair of the Ophthalmology division, specialized in Glaucoma, and become involved in glaucoma drug development clinical trials as the principal investigator.
During her undergraduate years, Dr. Wirostko's research work focused on utilizing transmission electron microscopy to identify intracellular organisms within vitreous

and tissue samples of various retinal degenerative and uveitis specimens. At Pfizer, Dr. Wirostko began as a medical director focusing on macular degeneration and supported the in line product Macugen in terms of data and safety review, medical Phase 4 strategy, clinical trial design, and chaired the global grant review committee. She was promoted to Senior Medical Director and was given the team lead and development role overseeing clinical trials and post marketing data on the inline glaucoma drugs under Xalabrand. Her responsibilities and accomplishments have included completing a challenging Phase 3 study in pediatric glaucoma for a regulatory filing in Europe and successfully developing the overarching glaucoma strategy for both development and the inline products under Xalabrands - the second largest revenue producing drug in the Pfizer portfolio. Dr. Wirostko has chaired the medical subcommittee and successfully initiated and created as the development lead a new program using an alternative delivery approach for an in line glaucoma compound. She served as the chair of the global independent investigator grant review committee for glaucoma and managed a multi million dollar budget.

In her new position at the University of Utah Moran Eye Center, Dr. Wirostko's research will aim to further understand the retinal neurodegenerative pathophysiology including the genetic, vascular and inflammatory mediators that are hypothesized to lead to retinal ganglion cells, axonal degeneration and atrocyte activation in glaucoma. Glaucoma is a slowly progressive neurodegenerative disease, which shares many characteristics of Alzheimer's disease and dry macular degeneration. She has recently been recognized for her accomplishments by being awarded the 3rd Annual Distinguished Residency Award at Columbia University Edward S Harkness Eye Institute. She has also been asked to join the editorial board for *Acta Ophthalmologic*.