CIRM Scientific and Medical Research Funding Working Group
Biographical Information of Candidates to serve as Alternate Scientific Members

Margaret Baron, MD, PhD
Dr. Margaret Baron is the Irene and Dr. Arthur M. Fishberg Professor of Medicine and Director of Hematology-Oncology Research at the Mount Sinai School of Medicine in New York. After receiving her MD from Harvard Medical School and her PhD from the Massachusetts Institute of Technology, she was Assistant, then Associate Professor at Harvard University before moving to the Mount Sinai School of Medicine in 1997. Currently, she is also Assistant Director of the Mount Sinai MSTP Program, Co-Director of the Mechanisms of Disease and Therapies Program, and the Interim Co-Director of The Black Family Stem Cell Institute. Her numerous awards and honors include being elected as a member of the American Society for Clinical Investigation in 2000, receiving the Richard E. Rosenfield Faculty Achievement Award in 2000, and the American Cancer Society Research Recognition Award in 2004. Dr. Baron has served on review panels for the American Cancer Society and the National Institutes of Health (NIH), and chaired Special Emphasis Panels for the NIH. She has also chaired the Scientific Subcommittee on Hemoglobin and Red Cells for the American Society for Hematology and serves on the editorial board of the journal *StemCells*. Her research focus is on development of the hematopoietic and cardiovascular systems and on molecular regulation of mammalian stem cell differentiation and proliferation.

Kevin Eggan, PhD
Dr. Kevin Eggan received his PhD in Biology from the Massachusetts Institute of Technology in February of 2003. In September 2003, Dr. Eggan joined Harvard University as a Junior Fellow in the Harvard Society of Fellows, where he is now an Assistant Professor of Molecular and Cellular Biology. In July 2005, Dr. Eggan became the founding member and Assistant Investigator of the Stowers Medical Institute (SMI) of Cambridge, Mass. and a Principal Investigator of the Harvard Stem Cell Institute. SMI's support of his research is similar to the support provided to researchers by the Howard Hughes Medical Institute. In September 2006, Dr. Eggan received the prestigious MacArthur Fellowship award. Currently a member of the CIRM Standards Working Group, he has made significant contributions towards the development of the CIRM Medical and Ethical Standards, now under consideration by the Office of Administrative Law of the state of California. His research interests focus on the mechanisms by which nuclear reprogramming occurs and the identities of the molecular machinery that accomplishes reprogramming.

Steve Emerson, MD, PhD
Dr. Steve Emerson is the Francis C. Wood Professor in Medicine, Pathology and Pediatrics and Chief of Hematology/Oncology and Cancer Center at the University of Pennsylvania where he is also Associate Director for Clinical Research and Director of the University's Institute for Stem Cell Biology and Regenerative Medicine. After receiving his MD and PhD from Yale University, Dr. Emerson interned at Massachusetts General Hospital followed by clinical and research fellowships at Brigham and Women's Hospital, Dana-Farber Cancer Institute and Children's Hospital Medical Center in Boston. He has published over 151 scientific articles and received numerous awards for

his research. Dr. Emerson served on the editorial boards of *Blood, Experimental Hematology* and *StemCells*, as well as on numerous study sections for the National Institutes of Health. In 2007, he will be the deputy editor of the *Journal of Clinical Investigation.* The primary aim of Dr. Emerson's research is to understand the regulation of human hematopoietic stem cell self-renewal and differentiation and to apply this knowledge to the development of novel cellular and molecular therapeutics utilizing bone marrow stem cells. In addition, his laboratory studies the molecular mechanisms underlying the development of graft-versus host disease.

Todd R, Evans, PhD

Dr. Todd Evans is Professor in the Department of Developmental and Molecular Biology and Director of the Graduate Program in Biomedical Sciences at Albert Einstein College of Medicine which administers the academic progress for over 350 PhD and MD/PhD students. After receiving a PhD (1987) in molecular biology from the Department of Genetics and Development at Columbia University, he worked as a post-doctoral fellow with Dr. Gary Felsenfeld at the NIH, where he identified and cloned the transcription factor GATA-1. In 1990, he joined the University of Pittsburgh, Department. of Biological Sciences as an Assistant Professor. His work at Pittsburgh led to the discovery of the cardiogenic factors GATA-4/5/6. He has served on numerous scientific review boards, including study sections for the American Cancer Society, the American Heart Association, and the National Institutes of Health (for both Hematology and Cardiology). In 2001, Dr. Evans was elected to the Leo M. Davidoff Society for excellence in teaching and received the Samuel Rosen Outstanding Teacher Award in 2002. Research in the Evans laboratory is directed toward understanding early embryonic development of blood and heart; the focus is on the function and regulation of GATA factors, a small group of highly conserved transcriptional regulatory proteins.

Gordon Fishell, PhD

Dr. Gordon Fishell is Professor in the Department of Cell Biology at the Skirball Institute and the Department of Cell Biology, New York University Medical Center. He has co-ordinated the Skirball Institute's Developmental Genetics Program since the autumn of 1994 and is currently Professor and Coordinator of the Smilow Neuroscience Program. After receiving his PhD in neurobiology from the University of Toronto in 1989, he was a postdoctoral fellow in Dr. M.E. Hatten's laboratory at Columbia University until 1992 when he joined the Rockefeller University as an Assistant Professor. Dr. Fishell was named a New York Spinal Cord Research Foundation Researcher and has received numerous awards including the Richardson Award, the McMurrich Award, the Irma T. Hirschl Career Scientist Award and the Anthony Corso Memorial Child Brain Tumor Foundation Award. He serves on the editorial boards of *Nature Reviews (Neuroscience), Neurosignals, The Journal of Neuroscience, Developmental Neuroscience,* and *Genes and Development*, and is a regular member of NIH study sections. Dr. Fishell and his laboratory study the mechanisms that pattern the mammalian brain with a focus on the interface between regional patterning and the control of neuronal stem cells.

John Gearhart, PhD

John D. Gearhart is the C. Michael Armstrong Professor of Medicine and director of the Stem Cell Program at Johns Hopkins University. He holds professorships in Physiology,

Comparative Medicine, and Gynecology and Obstetrics in the School of Medicine, and in Biochemistry and Molecular Biology in the Bloomberg School of Public Health. He also serves as Director of Research for the Department of Gynecology and Obstetrics, and the Division of Developmental Genetics, and has been a member of the Medical Genetics Center and the Center for Reproductive Biology since 1990. Dr. Gearhart received his PhD in genetics from Cornell University. His research has focused on the way genes regulate the formation of tissues and embryos; for the last 20 years he has attempted to determine the exact causes of mental retardation and other birth defects in Down's Syndrome. Dr. Gearhart led one of the two laboratories that first published on human pluripotent stem cells in 1998, and has consequently been involved in debates on all aspects of the science, ethics and public policy of human stem cell research. His current research is on the derivation of specialized, mature cells from embryonic stem cells and their use to treat various models of degenerative disorders and injuries. The human cells are also being investigated as vehicles for gene therapies.

Margaret Goodell, PhD

Dr. Margaret A. Goodell is Professor of Pediatrics, Molecular and Human Genetics, and Immunology, and director of the Stem Cells and Regenerative Medicine Center at Baylor College of Medicine. She received her PhD from Cambridge University in England where she worked on embryonic stem cell gene targeting with Dr. Andrew Smith. She then joined Dr. Richard Mulligan's laboratory as a postdoctoral fellow working on hematopoietic stem cells at the Whitehead Institute for Biomedical Research at MIT and at Harvard University. In 1997, she joined the faculty of the Center for Cell and Gene Therapy at Baylor where her research focuses on the basic biology of hematopoietic stem cells and the molecular mechanisms controlling their behavior. Among the many awards received by Dr. Goodell are the Leukemia and Lymphoma Society Scholar Award and the W.M. Keck Foundation Award (2001), the Michael E. DeBakey MD Excellence in Research Award (2004) and the Stohlman Scholar Award (2006). Her professional activities include service as a board member and chair of the Audit Committee of the International Society for Stem Cell Research, and on the editorial boards of *StemCells, PLos Biology, Blood, Experimental Hematology* and *Molecular Therapy*. She has also served on review panels for the NIH, the Muscular Dystrophy Association and the Wellcome Society.

Ann Kiessling, PhD

Dr. Kiessling received a PhD in Biochemistry/Biophysics from Oregon State University in 1971 and served as an Assistant, then Associate Professor at Oregon Health Sciences University from 1977 to 1985 and as an Associate Professor at Harvard Medical School since 1985. She started the first In Vitro Fertilization (IVF) laboratory in Oregon and was recruited to Harvard to head up an IVF laboratory at Brigham and Women's Hospital where she has continued her research in both early embryo development and semen transmission of HIV. Professor Kiessling made important discoveries about early embryo development and is currently developing reliable systems for parthenogenetic activation of mammalian eggs, including human, investigating the role of endogenous reverse transcriptase in pluripotent stem cell differentiation, and developing strategies for maturing oocytes from human embryonic stem cells. She serves as a scientific member of CIRM's Standards Working Group, providing critical expertise particularly with respect to protocols related to oocyte donation for research purposes.

Diane Krause, MD, PhD
Dr. Diane Krause is Associate Professor at the Yale University School of Medicine, Director of the Stem Cell Processing Laboratory and Associate Director of both the Yale Stem Cell Program and the Blood Bank at the Yale-New Haven Hospital. After receiving her MD in Medicine and her PhD in Cell Biology at University of Pennsylvania, Krause was a post-doctoral fellow at the Johns Hopkins Oncology Center before joining Yale in 1995. She has served extensively on NIH study sections as well as other national and international review committees including the Wellcome Trust Review Committee and the Agence National de la Recherche. Dr. Krause also serves on several state, national and international committees engaged in critical scientific and policy decision-making with regard to stem cell research. She has published extensively. Her work centers on characterizing hematopoietic stem and progenitor cells and defining the molecular mechanisms that regulate their self-renewal and differentiation with the goal of improving strategies for bone marrow/stem cell transplantation and developing novel strategies for treating leukemia and lymphoma.

Sean Morrison, PhD
Sean J. Morrison is Associate Professor at the University of Michigan, Director of the University of Michigan Center for Stem Cell Biology, the Henry Sewall Professor in Medicine and a Howard Hughes Medical Institute Investigator. He obtained his PhD in Immunology at Stanford University (1996), working with Dr. Irving L. Weissman, followed by a postdoctoral fellowship at Caltech (1999) in Dr. David J. Anderson's laboratory. Since 1999, Dr. Morrison has been at the University of Michigan where his laboratory studies the mechanisms that regulate stem cell function in the nervous and hematopoietic systems. Dr. Morrison's many honors and awards include being a Searle Scholar (2000-2003), being named to Technology Review Magazine's list of 100 young innovators (2002), recipient of the Wired Magazine Rave Award for Science (2003) and the Presidential Early Career Award for Scientists and Engineers from the White House (2003). In addition to stem cell research, Dr. Morrison has been active in public policy issues surrounding stem cells as a director of the International Society for Stem Cell Research, as a member of the American Society for Cell Biology Public Policy Committee, and as the director of the University of Michigan Center for Stem Cell Biology. In recognition of his public policy work at the state level, the Detroit News recently named Dr. Morrison one of it's Michiganians of the Year (2006).

Alan Rosmarin, MD
Alan Rosmarin is Associate Professor of Medicine and of Molecular Biology, Cell Biology and Biochemistry at Brown University. He is also director of the Brown University Oncology Group and recently established a successful program in Oncology at Moi Teaching and Referral Hospital in Eldoret, Kenya. After receiving his medical degree from UMDNJ - Rutgers Medical School he served as an intern, resident and clinical fellow at Beth Israel Hospital/Harvard Medical School. His clinical practice is primarily directed towards Hematology and Hematologic malignancies. Widely recognized for his work, he has received many honors including the National Research Service Award and the Physician Scientist Award from the NIH, the Milton Fund Award from Harvard Medical School, and the Henry Christian Award from the American Federation for Clinical Research. He serves on the editorial boards of *Stem Cells* and the American Cancer Society's Cancer Information Database and on numerous review committees

including as chairman of the Peer Review Committee on Leukemia, Immunology, and Blood Cell Development, the Council for Extramural Grants for the American Cancer Society, the Scientific Subcommittee on Myeloid Biology of the American Society of Hematology and review panels of the NIH. His primary research interest is the regulation of transcription in myeloid differentiation.

Janet Rossant, PhD

Dr. Janet Rossant is Professor at the University of Toronto and Chief of Research and Senior Scientist at the Hospital for Sick Children in Toronto. In addition, she is the Deputy Director of the Canadian Stem Cell Networks Centers of Excellence and Director of the Centre for Modelling Human Disease in Toronto which is undertaking genome-wide mutagenesis in mice to develop new mouse models of human disease. Trained at the Universities of Cambridge (PhD) and Oxford (post-doctoral fellow) in the United Kingdom, Dr. Rossant is a Fellow of both the Royal Societies of London and Canada as well as of the American Association for the Advancement of Science and a Distinguished Investigator of the Canadian Institutes of Health Research (CIHR). A past editor of the journal *Development* and president of the Society for Developmental Biology in 1996/97, she has been involved in public issues related to developmental biology, most recently serving as chair of the CIHR working group on stem cell research, and participated in the development of the National Academies Guidelines for Embryonic Stem Cell Research published in May 2005. She is a member of the Governing Council of the CIHR and the Scientific Advisory Boards of the Stowers Institute, the Genomic Institute of Singapore and the Australian Stem Cell Network as well as on the External Advisory Board of the Max Planck Institute for Cell Biology. Dr. Rossant has served on numerous grant review committees for the HHMI Scientific Review Board, the CIHR Genomic Grants Committee, multiple MRC panels and the NIH. Her research interests center on understanding the genetic control of normal and abnormal development in the early mouse embryo; she is well known particularly her discovery of a novel placental stem cell type, the trophoblast stem cell.

Michael Rudnicki, PhD

Michael Rudnicki received his PhD from the University of Ottawa in 1988 with Dr. Michael McBurney, then trained with Dr. Rudolf Jaenisch at the Whitehead Institute at the Massachusetts Institute of Technology. He is Professor of Medicine at the University of Ottawa, Scientific Director of the Ontario Genomics Innovation Center, an International Scholar of the Howard Hughes Medical Institute and holds the Canada Research Chair in Molecular Genetics. In 2001, Dr. Rudnicki was appointed director of the Molecular Medicine Program at the Ottawa Health Research Institute (OHRI); in 2005, he was appointed Scientific Director of the Canadian Stem Cell Network and he will be the Director of the new Centre for Stem Cell and Gene Therapy when it opens at the OHRI. He is also Scientific Director of the Stem Cell Genomics Project, a $10.6 million initiative to identify genes that regulate stem cell function. He was involved as a founding scientist in the formation of an OHRI spin off biotech company StemPath. Dr. Rudnicki's laboratory employs molecular genetic approaches to determine the function and roles played by regulatory genes acting in pathways that regulate cellular proliferation and differentiation of stem cells.

Harinder Singh, PhD
Dr. Singh is the Louis Block Professor of Molecular Genetics and Cell Biology and Howard Hughes Medical Institute Investigator at the University of Chicago. He obtained his PhD from Northwestern University, working with Dr. Lawrence Dumas and was a Jane Coffin Childs postdoctoral fellow in the laboratory of Dr. Phillip Sharp at the Massachusetts Institute of Technology. At the University of Chicago, Dr. Singh serves as Director of the Molecular and Cellular Biology Training Grants, as Chair of the Stem Cell Biology Initiative and Director of the Interdisciplinary Scientist Training Program. He has a great deal of experience in review having chaired and served on many review panels for the NIH and the Leukemia and Lymphoma Society and as a member of the Board of Scientific Counselors at the National Cancer Institute. He has published extensively on the mammalian immune system and cellular differentiation. His current research focus is on analyzing transcription factors that control gene activity and development of the immune system.

Lorenz Studer, MD
A native of Switzerland, Dr. Lorenz Studer graduated from medical school in 1991 and received his doctoral degree in neuroscience at the University of Bern in 1994. While there, he initiated studies with Dr. Christian Spenger leading to the first clinical trial of fetal tissue transplantation for Parkinson's disease in Switzerland in December 1995. He then worked as a visiting Associate in Dr. Ron McKay's laboratory at the NIH before accepting a joint appointment as an Assistant Member in Developmental Biology and Neurosurgery at the Sloan-Kettering Institute and as an Assistant Professor at Cornell Medical School in New York. He is currently an Associate Member of the Sloan-Kettering Institute and an Associate Professor of Developmental Neurobiology at Cornell Medical School. At the NIH he pioneered tissue culture techniques that led to the generation of dopamine cells from dividing precursor cells. In 1998, he demonstrated that upon transplantation, such dopamine cells improve clinical symptoms in Parkinsonian rats. Studer then went on to show that virtually unlimited numbers of cultured mouse dopamine cells could be obtained from embryonic stem cells. Major recent contributions of his laboratory include the in vitro derivation of midbrain dopamine neurons from adult mouse somatic cells via nuclear transfer. As a result of his seminal contributions to science, Dr. Studer has been honored by numerous awards. He also serves on many review panels including several for the NIH, the Michael J. Fox Research Foundation, the Juvenile Diabetes Research Foundation and the Biomedical Research Council of Singapore.

Amy J. Wagers, PhD

Amy Wagers received her PhD in Immunology and Microbial Pathogenesis from Northwestern University in 1999, and then worked as a postdoctoral fellow studying stem cell biology in the laboratory of Dr. Irving Weissman in the Department of Pathology at Stanford University School of Medicine. Since May 2004, she has been an Assistant Professor in the Section on Developmental and Stem Cell Biology at Joslin Diabetes Center and the Department of Pathology at Harvard Medical School. She is also a Principal Faculty member of the Harvard Stem Cell Institute, serving on its Executive Steering Committee and heading its Junior Faculty Program. She was recently appointed to the State of Connecticut Stem Cell Research Advisory Committee and is a recipient of the Burroughs Wellcome Fund Career Award in the Biomedical

Sciences and the Smith Family New Investigator Award. Her current research focuses on defining the factors and mechanisms that regulate the migration, expansion, and regenerative potential of adult blood-forming and muscle-forming stem cells.

John E. Wagner, MD

Dr. John Wagner is Professor of Pediatrics in the Division of Hematology-Oncology and Blood and Marrow Transplantation and holds the Albert and Eva Corniea Chair of Clinical Research and Variety Club Chair in Molecular and Cellular Therapeutics at the University of Minnesota. After receiving his MD degree at Jefferson Medical College in 1981, he completed his internship and residency at Duke University School of Medicine in 1984 and a post-doctoral fellowship in Hematology-Oncology at the Johns Hopkins School of Medicine. Internationally recognized as an expert in the field of hematopoietic stem cell transplantation, he is board certified in Pediatrics and Hematology/Oncology and serves as Scientific Director of the Clinical Research Blood and Marrow Transplant Program and Director of the Clinical Trials Office at the University of Minnesota Cancer Center. Dr. Wagner has served on numerous national and international scientific advisory committees including for the NIH-NHLBI, National Marrow Donor Program, Society of Hematotherapy and Graft Engineering, the FDA Biological Response Modifiers Advisory Committee and the American Association of Blood Banks and has made significant contributions as a scientist/clinician member of the CIRM's Standards Working Group. In addition, he has reviewed proposals for several prestigious granting organizations including the Wellcome Trust, National Institute for Biological Sciences, Israel Science Foundation, the National Research Institute (Taiwan) and the Swiss Science Foundation. Dr. Wagner's research is focused on the development of novel strategies for preventing the immunologic complications of allogeneic hematopoietic stem cell transplantation, namely through bone marrow graft engineering and the use of neonatal umbilical cord blood.

David A. Williams, MD

David Williams is the Beatrice G. Lampkin Professor of Pediatrics,Associate Chairman for Translational Research at the University of Cincinnati College of Medicine and Director of the Division of Experimental Hematology of the Cincinnati Children's Research Foundation. After receiving his MD with distinction from Indiana University School of Medicine, he completed his residency at Cincinnati's Children's Hospital Medical Center and served as a research fellow and clinical fellow at Harvard Medical School and the Dana-Farber Cancer Institute in Boston. The recipient of numerous honors, his awards include the William Dameshek Award from the American Society of Hematology (2000), the Samuel Rosenthal Prize for Excellence in Pediatrics (2002), membership in the Institute of Medicine, National Academy of Sciences (2003), the Frank Oski Award and the Donald Metcalf Award from the International Society of Experimental Hematology (2006). Dr. Williams has filed numerous patents, has published widely and has vast experience on review panels. Research in Dr. Williams' laboratory focuses on understanding the biology of hematopoietic stem cells and development of gene transfer methods for application in the treatment of severe genetic diseases of the blood system.