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

Margot S. Damaser, PhD

Dr. Damaser is Staff and Associate Professor in the Department of Biomedical Engineering and Glickman Urological and Kidney Institute at the Cleveland Clinic, and she is Senior Research Career Scientist at the Advanced Platform Technology Center of the Louis Stokes Cleveland VA Medical Center. Dr. Damaser received a Ph.D. in Bioengineering in 1994 from the University of California at Berkeley and San Francisco. Two postdoctoral training positions, at Lund University, Lund, Sweden and the Hospital of the University of Pennsylvania, Philadelphia, PA, helped her focus and refine research techniques in the areas of urodynamics and animal models of lower urinary tract pathologies. From 1996 through 1994, she directed the *Urological Biomechanics Laboratory* at Hines VA Hospital, Hines, IL and Department of Urology at Loyola University School of Medicine, Maywood, IL. In January 2005, she relocated her laboratory to Cleveland.

Dr. Damaser's *Urological Biomechanics Laboratory* is funded by research grants from NIH, the Veterans Administration, the State of Ohio, pharmaceutical companies and private foundations. Current research projects include preclinical testing of novel therapies for overactive bladder, stress incontinence, and mixed incontinence; development of novel methods of preventing and treating stress incontinence, pelvic organ prolapse, and fecal incontinence; and development of novel devices for chronically monitoring bladder pressure both wirelessly and catheter-free. She has a particular interest in developing methods to regenerate & repair extracellular matrix and neuromuscular systems and to this end investigates the mechanism of action of stem cell and cell-based therapies as applied to these disorders. Dr. Damaser is also considered an expert in urodynamic biomechanical assessment of bladder function and has been working for almost a decade on development of devices to improve clinical diagnosis and treatment of urinary incontinence.

Dr. Damaser was the recipient of a Presidential Early Career Award for Scientists and Engineers in 2000. This award is the highest honor bestowed by the United States Government on young professionals at the outset of their independent research careers. She was specifically recognized for *outstanding research on the human urinary bladder using mathematical modeling along with physiological and neurological studies*. Dr. Damaser was awarded a VA Research Career Scientist Award in 2004, recognizing her success & commitment to the VA research program and was recently promoted to Senior Research Career Scientist. Dr. Damaser is a member of the editorial board of *Neurourology and Urodynamics*. In 2010, she was co-program chair of the American Urological Association Foundation Summer Research Conference on Incontinence. She was recently elected by the membership of the International Continence Society (ICS) to the Scientific Committee of that professional society. She has over 100 peer-reviewed publications, has been an invited keynote speaker at several international scientific meetings and as a visiting

professor both nationally and internationally, and has served many times on VA and NIH study sections.

Jane Larkindale, PhD
Dr. Larkindale is a private consultant working in the neuromuscular disease space. She worked for the Muscular Dystrophy Association, an international non-profit covering over forty neuromuscular diseases, from 2007 to 2014, finally as Vice President for Research. Dr. Larkindale was instrumental in the start up of MDA Venture Philanthropy (MVP), led an organization-wide strategic planning process for research, and initiated and organized MDA's annual meeting series, which attracts over 500 participants annually. She completed her D.Phil. (Ph.D.) in the department of plant sciences at Oxford University in the UK in 2001, which she attended on a Rhodes Scholarship. In her laboratory days, she did research in areas as diverse as molecular biology, biochemistry, genomics, plant science, medical physics, marine biology and industrial chemistry. In the course of this research, she has published numerous original research papers and review articles. Throughout her scientific career, Dr. Larkindale has attended business development classes and workshops, and frequently acted as the "scientific expert" for discussion groups and debates on current topics in science. In her free time, Dr. Larkindale volunteers for the Southern Arizona Rescue Association, taking part in search-and-rescue missions across Pima County. She enjoys adventure races and ultra-distance running.

Rita Perlingeiro, PhD
Dr. Perlingeiro is Associate Professor of Medicine in the Lillehei Heart Institute, Department of Medicine at the University of Minnesota. She received her BSc in Biochemistry and Pharmacy from the Federal University of Santa Maria in Santa Maria-RS, Brazil and her MSc in Pharmacology and her PhD in Biological Sciences from the University of Campinas in Campinas-RS, Brazil. She completed a postdoctoral fellowship at the Whitehead Institute for Biomedical Research, Massachusetts Institute for Technology in the laboratory of George Q. Daley.

Dr. Perlingeiro's laboratory has a long-term interest in understanding the molecular mechanisms controlling lineage-specific differentiation of pluripotent stem cells (i.e. embryonic and adult reprogrammed stem cells), and applying this information to efficiently generate tissue-specific stem/progenitor cells endowed with *in vivo* regenerative potential. Her ultimate goal is to develop safe strategies to enable their future therapeutic application. Research project in her laboratory include transcriptional mechanisms and signaling pathways controlling mesodermal cell fate; strategies to enable translational application of induced pluripotent stem (iPS) cells to treat muscular dystrophies; genetic correction of disease- and patient-specific iPS cells; and dissecting the mechanisms associated with stem cell self-renewal and long-term engraftment.

Dr. Perlingeiro is active in peer review, serving to review scientific manuscripts for numerous journals including *Science*, *Cell Stem Cell*, *Nature Medicine*, *PLoS ONE* and

many others; serving on the editorial board for the *Journal of Stem Cell Research and Therapy* and *Stem Cell Reviews and Reports*; and serving on National Institutes of Health (NIH) Study Sections and other grants review committees. Dr. Perlingeiro is a member of several professional societies including the American Society of Gene and Cell Therapy, the International Society for Stem Cell Research, the American Society of Hematology, and the American Heart Association. Dr. Peringeiro's work is supported by grants from the NIH and other non-profit foundations, and she has published more than 45 journal articles in her fields of interest.

Michael A. Pfenning
Mike Pfenning is a senior administrator in the Department of Research Administrative Services with more than 25 years of experience in research management. He presently serves as the Deputy Director for Administration, Center for Regenerative Medicine and senior research administrator for the Mayo Clinic Health System, a network of 13 community-based practices operating in more than 70 locations across a three state region. Previous assignments include: Director for Administration, Center for Translational Science Activities, an NCATS funded center to promote/advance clinical and translational research; Associate Director for Administration, Mayo Clinic Cancer Center, an NCI-designated comprehensive cancer center; Group Administrator, North Central Cancer Treatment Group, an NCI national clinical trials cooperative group based at Mayo Clinic; Associate Administrator for Research, Department of Internal Medicine, a department comprised of more than 600 physicians and scientists; and Section Head, Federal and Private Sector Funding. Mike is the secretary for both the Center for Regenerative Medicine Executive Leadership Committee and Mayo Clinic Health System Research Operations Management Team and former member of the Mayo Clinic Rochester Research Committee. He has served as an ad hoc NIH grant reviewer and member of several external advisory boards.

Born in Boulder, Colorado, Mike earned a B.S. degree in biology from the University of Minnesota and master's degree in business from the University of St. Thomas. Mike has been employed at Mayo Clinic since 1981.

Robert D. Simari, MD
Dr. Simari is the Executive Dean and Professor of Medicine of the University Kansas School of Medicine in Kansas City, Kansas, USA. He recently completed a 21-year tenure as Professor of Medicine at the Mayo Clinic College of Medicine in Rochester, Minnesota, USA, and Vice Chair of the Division of Cardiovascular Diseases. Dr. Simari obtained his undergraduate degree at the University of Notre Dame in Notre Dame, Indiana, and graduated from medical school at the University of Kansas. Dr. Simari completed his Internal Medicine residency at the Beth Israel Hospital in Boston and his Cardiovascular Fellowship and Interventional Cardiology training at the Mayo Clinic in Rochester, Minnesota. Following his clinical training, he completed a post-doctoral fellowship in the laboratory of Dr. Elizabeth G. Nabel at the University of Michigan. Dr. Simari returned to the Mayo Clinic in 1996 as an Assistant Professor of Medicine and has ascended to the rank of Full Professor.

Dr. Simari's laboratory focused on the development of biological therapies for cardiovascular disease. In addition to his work in gene, peptide and cell delivery, he established a program in tissue engineering of heart valves. Dr. Simari serves as the Chair of the Cardiovascular Cell Therapy Research Network (CCTRN) that conducts clinical trials of autologous cell delivery for patients with cardiovascular disease. Dr. Simari was the co-PI of the Mayo Center for Translational Science Activities (CTSA) and served as Director of the Consultative, Regulatory, Informatics and Service Centers. He was elected to the American Society of Clinical Investigation in 2005 and the Association of University Cardiologists in 2013 and served as a charter member of the Vascular Cell and Molecular Biology study section from 2005 to 2009. He previously served on the NIH Recombinant DNA Advisory Committee (RAC) 2001-2005.

Reappointment of Scientific Members to the Grants Working Group

Grants Working Group Members originally appointed in late 2007 and early 2008 have terms that are now expiring or just expired. We are seeking the reappointment of the individuals listed in the table below. Their updated biographies follow. In accordance with the rules set forth by Proposition 71, reappointments should be staggered into thirds, each with a 2, 4, or 6-year term. We propose 2, 4 and 6-year reappointment terms for this cohort as indicated in table below.

Proposed Reappointments to GWG

Last	First	Term (Yrs.)	Expertise
Cowan	Chad	6	Stem Cell Biology; In vitro Models of Disease
Miller	Freda Diane	2	Neural Stem Cells; Neurogenesis; Neural Crest Stem Cells
Minger	Stephen	6	Stem Cell Biology; Neurobiology; Cell Technologies
Simmons	Paul J.	4	Hematopoiesis; Mesenchymal Stem Cells
Strom	Stephen C.	2	Cancer of Liver & Prostate
Sykes	Megan	4	Transplantation Tolerance; Clinical Bone Marrow Transplantation
Tabar	Viviane	6	Pluripotent & Neural Stem Cell Biology; Neurosurgery; Tumors
Voldman	Joel	2	Bioengineering; Fluid Mechanics; Microscopy

Chad A. Cowan, Ph.D.
Chad Cowan received his BA and BS, with honors, from Kansas University. He received his PhD, from the University of Texas Southwestern at Dallas, garnering the Nominata award for most outstanding thesis. He subsequently completed a Damon Runyon postdoctoral fellowship with Professor Douglas Melton at Harvard University. He was named a Stowers Medical Investigator in 2006 and in 2008, he became an Assistant Professor at Harvard University. He is currently an Associate Professor at Harvard University in the Department of Stem Cell and Regenerative Biology and Massachusetts General Hospital, with appointments in the Center for Regenerative Medicine, Cardiovascular Research Center and Center for Human Genetics Research. He is an Associate Member of the Broad Institute and a Principal Faculty member of the Harvard Stem Cell Institute where he directs the Diabetes Disease Program and the iPS Cell Core Facility. Professor Cowan has led or been a member of several large efforts to utilize stem cells to better understand disease, including the NHLBI's Next Gen iPS Cell Project and the Progenitor Cell Biology Consortium. In 2013, Professor Cowan received a Transformative Research Award from the NIH to create isogenic human pluripotent stem cell-based models of human disease mutations. More recently, Professor Cowan has focused on using genome editing tools as therapeutics and as a co-founder of CRISPR Therapeutics hopes to see these discoveries translated into treatments or cures.

The research interest of Dr. Cowan's lab is to understand how naturally occurring human genetic variation protects (or predisposes) some people to cardiovascular and metabolic disease—the leading cause of death in the world—and to use that information to develop therapies that can protect the entire population from disease. Their strategy is to identify patients, families, and cohorts with disease; to use genetic techniques such as genome-wide association studies and exome sequencing to identify novel DNA variants and genes linked to disease; to use human cell-based models and mouse models to understand how the DNA variants affect gene and protein function; and to use these mechanistic insights to begin the process of developing new therapies that will benefit patients and populations. In particular, they are interested in using human pluripotent stem cells to create human-derived tissues, containing specific DNA variants, as genetic disease models in which environmental and epigenetic influences have been minimized. They also aim to use stem cells to enable regenerative medicine, in which a patient's own cells can be genetically cured or made resistant to disease and then transplanted back into the body as a durable treatment.

Freda Diane Miller, Ph.D.
Dr. Freda Miller is a cell and molecular developmental neurobiologist at The Hospital for Sick Children in Toronto and Professor at the University of Toronto. She is a Howard Hughes Medical Institute International Research Scholar, Canada Research Chair in Developmental Neurobiology, a Fellow of the Royal Society of Canada and a Fellow of the American Association for the Advancement of

Science. She has authored more than 140 scientific papers, reviews and book chapters and has 15 patents (issued and pending).

Dr. Miller is best known for her studies of neural and dermal stem cells and of neuronal growth, survival and apoptosis. Major findings from her lab have provided evidence that adult mammalian skin contains an accessible multipotent dermal stem cell that can generate peripheral neural cells, that the p75 and p63 play a critical role in determining the life, death and degeneration of mammalian neurons, and that one way genetic disorders cause cognitive dysfunction is by perturbing embryonic neurogenesis.

Dr. Miller obtained her B.Sc. in Biochemistry at the University of Saskatchewan, her PhD in Medical Sciences from the University of Calgary and completed her postdoctoral training at the Scripps Research Foundation. She then held faculty positions at the University of Alberta and the Montreal Neurological Institute at McGill University prior to moving to her current position in 2002. Dr. Miller was also a founder of Aegera Therapeutics Inc., a Canadian biotechnology company.

Stephen Minger, Ph.D.

Stephen Minger is global head of research and development for cell technologies at GE Healthcare Life Sciences, where he leads the development of cell-based technologies for use in drug discovery and pharmaceutical research, and directs the development of enabling technologies for regenerative medicine and cell therapy.
Prior to joining GE Healthcare Life Sciences, Dr. Minger was a senior lecturer at King's College, London, and director of the King's College Stem Cell Biology Laboratory. While at King's College, Dr. Minger was awarded one of the first UK licenses for the derivation of human embryonic stem cells. His research group generated the first human embryonic stem cell line in the United Kingdom, and went on to produce other stem cell lines including those containing mutations for Cystic Fibrosis and Huntington's disease.

Dr. Minger received his PhD in pathology from the Albert Einstein College of Medicine, and began his career in stem cell research at the University of California, San Diego. He went on to hold positions at the University of Kentucky Medical School and Guy's Hospital, London, before moving to King's College in 1998. Dr. Minger is co-founder and director of the London Regenerative Medicine Network, a grassroots, research-led organization designed to stimulate clinical translation of cell- and gene-based therapies within London. He is also the senior editor of the journal *Regenerative Medicine*.

Paul Simmons, Ph.D.

Until recently, Prof. Paul J. Simmons held the C. Harold and Lorine G. Wallace Distinguished University Chair at the University of Texas Health Science Center at Houston and was appointed as the inaugural Professor and Director of the Centre

for Stem Cell Research at the Brown Foundation Institute of Molecular Medicine (IMM). He has had a long and distinguished career in stem cell research and his contributions to the field over the past near 30 years were recently recognized by his election as President of the International Society of Stem Cell Research (ISSCR) from 2006 to 2007

Prof. Simmons graduated from Queen Elizabeth College, University of London, UK with a B.Sc Hons majoring in Cell Biology and In 1985 he received his Ph.D. from the University of Manchester, UK where his research focused on understanding the nature of the stromal cell microenvironment responsible for regulating the growth and differentiation of hematopoietic stem cells in long-term bone marrow cultures. Postdoctoral training was conducted at the Terry Fox Laboratory, BC Cancer Research Centre, Vancouver, BC, Canada and subsequently (1986-1990) in the Department of Transplantation Biology, Fred Hutchinson Cancer Research Center, Seattle, Washington, USA headed by Nobel Laureate E Donnal Thomas. Dr. Simmons began his academic career as the inaugural R.L. Clifford Fellow in Experimental Haematology (1990-94) in the Division of Haematology, Hanson Centre for Cancer Research (HCCR), IMVS, Adelaide, Australia and was subsequently appointed a Member (Professorial equivalent) of the HCCR. In 1999 he was recruited to the Peter MacCallum Cancer Centre (Peter Mac) in Melbourne, Australia as Program Head in Stem Cell Biology. In 2002, he was part of the team of investigators headed by Dr Alan Trounson who successfully competed for the Biotechnology Centre of Excellence funding that led to the establishment of the Australian Stem Cell Centre (ASCC) and from 2003 until his recruitment to the IMM in Houston in December 2006, Dr Simmons headed the ASCC Adult Stem Cell Platform.

He is committed to translating discoveries in the field of stem cell research into new clinical strategies and cellular therapies to improve current treatments for both malignant and non-malignant diseases. His desire to both enable and to participate in the translational pipeline from concept to clinic led to his recent decision to accept the position of Executive Vice President Corporate Research & Product Development at *Mesoblast Ltd*., a regenerative medicine company based in Melbourne, Australia funded in part on patents covering Dr Simmons' work on prospective isolation of adult mesenchymal precursor cells (MPC).

Megan Sykes, M.D.

Megan Sykes is the Michael J. Friedlander Professor of Medicine, and professor of microbiology & immunology at Columbia University College of Physicians and Surgeons, where she is also director of the Columbia Center for Translational Immunology. At New York Presbyterian Hospital, Dr. Sykes serves as director of bone marrow transplant research, and as director of research of its Transplant Initiative. She received her MD from the University of Toronto, and completed a medical internship at Montreal General Hospital, and residency at Toronto General Hospital and Toronto Western Hospital.

Dr. Sykes' research is in the areas of hematopoietic cell transplantation, organ allograft tolerance induction, and xenotransplantation. Her research program aims to utilize bone marrow transplantation as immunotherapy to achieve graft-versus-tumor effects while avoiding the common complication of such transplants, graft-versus-host disease (GVHD). Another major area of her research has been to utilize bone marrow transplantation for the induction of transplantation tolerance, both in organs from the same species (allografts) and from other species (xenografts). Her laboratory has worked toward the development of clinically feasible, non-toxic methods of re-educating the T cell, B cell and natural killer (NK) cell components of the immune system to accept allografts and xenografts without requiring long-term immunosuppressive therapy.

Stephen C. Strom, Ph.D.
Dr. Stephen Strom is Professor of Cell Transplantation and Regenerative Medicinein the Department of Medicine at the Karolinska Institute in Stockholm, Sweden. He is also Professor of the Division of Cellular and Molecular Pathology at the University of Pittsburgh. He is on the Board of Councilors of the Cell Transplantation Society and the Hepatocyte Users Group, and is on the editorial board of the journal Cell Transplantation where he serves as the Section Editor of the Hepatocytes section. Prior to joining the University of Pittsburgh in 1993, Dr. Strom was an Assistant Professor of Radiology and Pharmacology at Duke Medical Center, and Associate Professor of Pathology at the Medical College of Virginia/Virginia Commonwealth University. He received his B.S. degree in Biology and Chemistry at Westmar College in Iowa, and his Ph.D. in Pharmacology at the University of Kansas Medical Center.

Dr. Strom's primary research interests include chemical carcinogenesis and molecular mechanisms of growth control in human liver and prostate. His lab is known for its work on the role of growth factors and growth factor receptor systems in the development and progression of cancer. His research team is currently investigating the progression of cancer within the liver and the regulation of human gene expression.

Dr. Strom has been featured in several publications for his research efforts regarding the human liver. He has recently been recognized for his work in investigating the role of growth factors and growth factor receptor systems in the development and progression of cancer. Recent results indicate that the expression of new growth factor pathways and the communication between existing growth factor pathways are two mechanisms by which growth control regulation is lost in cancer development. In other studies, researchers have determined that the regulation of the expression of the cytochrome P450 genes in human liver is strikingly different from that observed in animal models. It has recently been identified the ethanol is a potent inducer of the CYP3A family of human genes. The induction of CYP3A by ethanol is most likely the basis for adverse effects of ethanol consumption on acetaminophen toxicity in humans. Current studies involving the examination of the promoter sequences of the human P450 genes have identified

several regions of the DNA, to which protein binding can be demonstrated, which are thought to control gene expression.

Viviane Tabar, M.D.
Dr. Viviane Tabar is an Associate Professor of Neurosurgery at the Memorial Sloan Kettering Institute (MSKI) and Associate Professor of Neurological Surgery at Weill Cornell Medical College. She serves as an advisor on numerous stem cell research organizations and facilities, including the International Society for Stem Cell Research and the in vivo unit of the Memorial Sloan Kettering Stem Cell Characterization core facility. She received her B.S. in biology and an M.D. at the American University of Beirut in Lebanon.

Dr. Tabar's research centers on developing embryonic stem (ES) cells as potential tools for cell replacement therapies. As a neurosurgeon with fellowship training in neurosurgical oncology, her interests and expertise include intra-operative mapping of the brain to identify critical areas that control language, thought, and memory. Her laboratory studies neural differentiation and neuronal/glial subtype specification as well as on the interaction of human ES cells with the adult brain environment. Projects include the study of radiation damage in the brain with emphasis on the fate of stem cells and oligoprogenitors, as well as the possibility of cell replacement as a means of ameliorating cognitive decline. Other translational applications of human ES cells are in neurodegenerative models, such as ALS (Amyotrophic Lateral Sclerosis) and Parkinson's disease.

Joel Voldman, Ph.D.
Joel Voldman received the B.S. degree in electrical engineering from the University of Massachusetts, Amherst, in 1995. He received the M.S and Ph.D. degree in electrical engineering from the Massachusetts Institute of Technology (MIT), Cambridge, in 1997 and 2001, developing bioMEMS for single-cell analysis. Following this, he was a postdoctoral associate in George Church's lab at Harvard Medical School, where he studied developmental biology. In 2002 he returned to MIT as an Assistant Professor in the Electrical Engineering and Computer Science department at MIT. In 2004 he was awarded the NBX Career Development Chair, in 2006 promoted to Associate Professor, and in 2013 promoted to Professor in the department. Among several awards, he has received an NSF CAREER award, an ACS Young Innovator Award, and several awards for posters and presentations at international conferences.

His research focuses on developing microtechnology for cell biology, with an emphasis on cell sorting and stem cell biology. In the field of stem cell biology, Prof. Voldman has developed a number of technologies to enhance the study of fundamental embryonic stem cell biology, from simple cell patterning devices that allow stem cells to be patterned on feeder cells, matrigel or other arbitrary substrates; to microfluidic perfusion for modulating diffusible signaling as a way of

studying self-renewal and differentiation; to large-scale microfluidic cell pairing for studying fusion-mediated reprogramming. He has used these devices to provide fundamental understanding of how shear stress affects pluripotent stem cell self-renewal (important for therapeutic bioprocessing), to uncover autocrine factors important in self-renewal and neural specification, and to highlight the role of matrix metalloproteinases in pluripotent stem cell self-renewal.