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

Appointment of New Members

Richard M. Myers, PhD

Dr. Richard M. Myers received his B.S. in Biochemistry from the University of Alabama in 1977, his Ph.D. in Biochemistry from the University of California, Berkeley in 1982, and did his post-doctoral training at Harvard University. He joined the faculty of the UCSF Medical Center in 1986 moved to Stanford University in 1993, where he served as Professor and Chair in the Department of Genetics. Since 2008, Dr. Myers has been President, Director and a Faculty Investigator of the HudsonAlpha Institute for Biotechnology, a non-profit research and teaching enterprise in Huntsville, Alabama. The Myers laboratory studies the human genome, with goals of understanding how allelic variation and gene expression changes contribute to human traits, including diseases, behaviors and other phenotypes. His group uses high-throughput genomic methods, including DNA sequencing, genotyping, chromatin immunoprecipitation, mRNA expression profiling, transcriptional promoter and DNA methylation measurements, as well as computational and statistical tools, to identify, characterize and understand the functional elements encoded in our genomes, and how they work together at the molecular level in normal and pathological conditions. His group also sequences whole genomes, whole exomes and targeted regions of the genome with ultrahigh-throughput DNA sequencing technologies to identify DNA sequence variants relevant to clinical and basic biological problems. The lab integrates these functional genomics, epigenetic and genetic data to understand how our genomes are involved in cancer, brain disorders, ALS, children born with developmental disorders, autoimmune diseases and other traits.

Ricardo Ochoa, DVM, PhD, DACVP

Dr. Ochoa was born, raised and educated in Colombia, South America. He obtained his Doctor of Veterinary Medicine from the National University of Colombia in Bogota. Thereafter he entered the service of the agricultural research institute of Colombia (ICA) before traveling to the USA to start his Ph.D. studies at the New York State School of Veterinary Medicine at Cornell University in Ithaca where he graduated with a major in Veterinary Pathology. He returned to his native Colombia and became the director general for research in Veterinary medicine and diagnostic centers for the country. After five years in this position he returned to the USA and joined the Louisiana State University School of Veterinary Medicine in Baton Rouge, LA where he was an Associate Professor. During his stay at LSU, he prepared and passed the certifying examination to become admitted to the American College of Veterinary Pathologists. After that, he joined industry as a Toxicologist/Pathologist at The Upjohn Company in Kalamazoo, MI. where he was in charge of interacting with the discovery colleagues in studying compounds for early and late development. After 10 years in Kalamazoo, he joined Pfizer Inc. in Groton, CT, and headed the pathology group within the Drug Safety Evaluation group during the 16 years of tenure there. He worked actively to increase the

quantity and quality of the safety data in the early candidate phase of compound discovery, and focused on the areas of risk management and mechanistic toxicologic pathology. In 2006 he retired from this position and joined the Neurogen Corp, in Branford, CT for nearly two years as Vice President of Pre-Clinical Safety. In June 2008 he started Pre-Clinical Safety Inc., where he is president today and actively consulting in drug safety issues. He joined the Roundtable of Toxicology Consultants in August 2008 and was elected to the International Academy of Toxicologic Pathology in 2011.

Dr. Ochoa has extensive experience in the areas of Toxicology and Pathology, with special emphasis in issue resolution and risk management. He was councilor and then president of the Society of Toxicology Pathology as well as councilor for the American College of Veterinary Pathologists. Between 2010 and 2014 he was a member of the Scientific Advisory Committee on Alternative Toxicological Methods of the NIEHS. He also served for five years in the strategic planning committee of the local hospital in New London, CT. He was also president of the board of the local United Way and Casa de la Comunidad in the New London (CT) County.

Reappointment of Scientific Members to the Grants Working Group

Grants Working Group Members originally appointed in late 2008 and early 2009 have terms that are now expiring or just expired. We are seeking the reappointment of the individuals listed in the table below. We propose 4 and 6-year reappointment terms for this cohort (as indicated in table).

Proposed Reappointments to GWG

Last	First	Term (Yrs.)	Expertise
Balber	Andrew	6	Immunology; Drug Development of Cellular Therapeutics
Cox	Charles	6	Pediatric Trauma; Neurologic Injury; Combination Products; Cardiopulmonary
Zandstra	Peter	4	Stem Cell Bioengineering; Cellular Signaling

Andrew E. Balber, Ph.D.

Andrew E. Balber, Senior Scientific Advisor to the Robertson Clinical & Translational Cell Therapy Program at Duke University, currently helps direct preclinical research and clinical development of cell products derived from umbilical cord blood. He also provides consulting services related to cell therapy products. Previously, Dr. Balber was a Founder, and for ten years served as the Chief Scientific Officer, of Aldagen, Inc., a company developing cell products for use in transplantation and in therapy of cardiovascular diseases. He began his work in cell therapies in 1983 when, as a Duke University faculty member in immunology and Director of the Comprehensive Cancer Center Flow Cytometry Facility, he helped organize and manage a university-based, industry-sponsored research consortium in immunology. This organization developed technologies for the isolation, propagation, and commercial use of T- and B-lymphocyte populations and monoclonal antibodies. Subsequently, as the Associate Director of the Office of Science and Technology at Duke, Dr. Balber participated in building relationships with industrial partners in projects ranging from early research through health care delivery. He helped start companies based on Duke technology and was the liaison to the management of virtual companies working with university scientists. He played an important role in the commercialization of the technology that gave rise to Myozyme®, an approved therapy for Pompe Disease. In the area of cell therapies, Dr. Balber was centrally involved in two early important transactions – spinning out Merix Bioscience, now Argos Therapeutics, and establishing a manufacturing facility initially used collaboratively by Applied Immune Sciences and Duke to produce cellular therapeutics. The founding of Aldagen in 2000 gave Dr. Balber the opportunity to participate more directly in the development of stem cell therapies. He helped Aldagen develop and launch Aldefluor®, a research use only product for identifying and isolating normal and cancer stem cells, and obtain FDA clearance to market a second product, Aldecount®, for clinical enumeration of these cells. Most significantly, he helped the Company establish and maintain a clinical program during which patients were treated under seven cleared INDs with products composed of ALDHbr cells for indications related to cord blood transplantation, critical limb ischemia, ischemic heart failure, and stroke. At Duke, he has participated in submission of additional INDs for clinical trials

involving use of umbilical cord blood cells to treat central nervous system injuries as wel as directing research on the mechanism of action of cord blood cells in these indications.

Dr. Balber earned a BA from Haverford College (1966), completed a Ph.D. from Rockefeller University (1971), did post-doctoral work at Yale University (1971-1973), and taught undergraduates at Bates College (1973-1980). He was also Director of the Comprehensive Cancer Center Flow Cytometry Facility at Duke and a member of the faculty in Immunology operating an NIH-funded research program in parasite immunology and cell biology for 15 years before transitioning to a career in technology transfer and, then, to product development.

Charles S. Cox, M.D.

Dr. Charles S. Cox, Jr., is Professor of Pediatric Surgery, and the George and Cynthia Mitchell Distinguished Chair in Neuroscience, directing the Pediatric Surgical Translational Laboratories and Pediatric Program in Regenerative Medicine at the University of Texas Medical School at Houston. He directs the Pediatric Trauma Program at the University of Texas-Houston/Children's Memorial Hermann Hospital in the Texas Medical Center.

A Texas native, Dr. Cox received his undergraduate degree from the University of Texas at Austin in the Plan II Liberal Arts Honors Program. Upon graduating from the University of Texas Medical Branch, he completed his Surgery residency at the University of Texas Medical School at Houston. Further post-graduate fellowships were completed in Pediatric Surgery at the University of Michigan, an NIH T32 sponsored clinical and research fellowship in cardiopulmonary support/circulatory support devices/bio-hybrid organs at the Shriner's Burns Institute, and Surgical Critical Care/Trauma at the University of Texas Medical School at Houston. He is certified by the American Board of Surgery in Surgery, with added qualifications in Pediatric Surgery and Surgical Critical Care. He served in Afghanistan with the 82nd Airborne in the 909th Forward Surgical Team in 2002.

The Pediatric Translational Laboratories and Pediatric Program in Regenerative Medicine is a multi-disciplinary effort that addresses problems that originate with traumatic injury and the consequences of resuscitation and critical care. The Program focuses on progenitor cell based therapy (stem cells) for traumatic brain injury, and related neurological injuries (hypoxic-ischemic encephalopathy, stroke, spinal cord injury), recently completing the first acute, autologous cell therapy treatment Phase I study for traumatic brain injury in children (Neurosurgery, 2011), as well as a DOD funded Phase 1/2a trial for severe TBI in adults. Recently, the NIH funded the first Phase IIb clinical trial for cellular therapies in children with severe TBI. Three subsequent INDs have been approved for cell-based therapies for neurological injury. The program also develops novel bio-hybrid organs using cell-based and tissue engineering approaches to trauma and injury related problems. These efforts have recently resulted in two IND based cell therapeutic studies, and three patents in the past two years. The program is funded through the National Institutes of Health, Department of Defense/MRMC, Texas Higher

Education Coordinating Board/Emerging Technology Funds, Industry Collaboration, and philanthropic contributions. The Program is housed in state-of-the-art laboratory facilities (4500 sf), and includes two cGMP facilities for the production of clinical grade cell and tissue products: Hoffberger Cellular Therapeutics Laboratory and the Griffin Stem Cell Therapeutics Research Laboratory. Other major areas of interest include: (1) resuscitation induced organ edema and dysfunction, (2) the neuroinflammatory reflex, (3) mesenchymal stromal cell exosomes as anti-inflammatory agents, and (4) mechanotransduction of stem cells to enhance their anti-inflammatory properties.

Dr. Cox has served on scientific study sections/review groups for the National Institutes of Health, California Institute for Regenerative Medicine, American Heart Association, Veterans Affairs MERIT Awards, Department of Defense, Congressionally Directed Medical Research Programs, as well as National Research Programs in Canada, Singapore, Spain, and the Czech Republic. He is the author of over 150 scientific publications, 20 book chapters, and is the editor of a text entitled, *Progenitor Cell Therapy for Neurological Injury*.

Peter Zandstra, Ph.D.

Dr. Peter Zandstra, is Professor and Canada Research Chair in Stem Cell Bioengineering at the University of Toronto, and holds a cross-appointment to the Department of Chemical Engineering and Applied Chemistry. He received his undergraduate degree from McGill University in Montreal, and earned his PhD in Chemical Engineering and Biotechnology at the University of British Columbia. Previously, he has held an NSERC Steacie Memorial fellowship and a fellowship from the John Simon Guggenheim Memorial Foundation.

Professor Zandstra's research has focused on the signaling dynamics regulating stem cell fate, blood and cardiac tissue development, and the design of bioreactors and devices to control the stem cell microenvironment with the goal of developing robust stem cell production systems. Using bioengineering strategies such as predictive mathematical modeling, microfabrication and bioreactors, his lab focuses on three project areas: quantitative, spatial and temporal control of embryonic stem cell self-renewal; bioprocesses for the generation of blood and cardiac cells from embryonic stem cells; and control of intracellular signaling networks to grow human blood stem cells. His work has contributed to the development of clinically and industrially relevant and academically recognized technologies based on the design of bioprocesses for the growth and differentiation of adult and embryonic stem cells. Direct applications of this work include tissue and cellular engineering, gene therapy, and organ transplantation.

Dr. Zandstra is a fellow of the American Institute for Medical and Biological Engineering, and the American Association for the Advancement of Science. In 2008 he was the recipient of the McLean Award and was named one of "Canada's Top 40 Under 40". He is currently an associate editor for the journals, *Stem Cells* and *Biotechnology and Bioengineering*, and has previously sat on the Editorial Boards for *the Journal of Biotechnology and Applied Biochemistry* and *Experimental Hematology*.