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

Wafik S. El-Deiry, M.D., Ph.D.

Dr. El-Deiry is Professor of Medicine (Hematology/Oncology), Genetics & Pharmacology at the University of Pennsylvania School of Medicine, co-Director of the Radiobiology & Imaging Program at the Abramson Cancer Center and Associate Director for Physician-Scientist training in Hematology/Oncology. Dr. El-Deiry earned his M.D. degree and Ph.D. in Biochemistry from the University of Miami School of Medicine and completed medical residency and oncology fellowship at the Johns Hopkins Hospital and the Johns Hopkins Oncology Center. He joined the faculty at the University of Pennsylvania as an Assistant Professor of Medicine in 1994 and as a Howard Hughes Medical Institute Investigator from 1995-2004.

In recent years, Dr. El-Deiry's scientific research has been focused on unraveling cell death pathways involved in tumor suppression, mechanistic underpinnings that determine cancer therapeutic responses, the area of non-invasive *in vivo* imaging and drug discovery efforts. Dr. El-Deiry with his colleagues is evaluating the efficacy of combining kinase inhibitors with pro-apoptotic receptor agonists in preclinical and clinical trials. He has also been investigating ways of imaging and targeting human cancer stem cells. Dr. El-Deiry is a Highly Cited Author in the field of Molecular Biology and Genetics according to the Institute for Scientific Information with >25,000 citations including the most highly cited original paper published in Cell and numerous other highly cited original manuscripts. Dr. El-Deiry has published nearly 300 peer-reviewed original manuscripts and review chapters, nearly 200 abstracts and has edited 4 books.

Dr. El-Deiry enjoys teaching, clinical work, serving on review panels, editorial boards (including as Founding Editor-in-Chief of *Cancer Biology and Therapy* since 2001 and as an Associate Editor of the *Journal of Clinical Investigation*) and training future scientists and clinicians. He has served as a reviewer for the National Institutes of Health, the American Association for Cancer Research, the Howard Hughes Medical Institute, the American Cancer Society, the Department of Defense and the State of Maryland Stem Cell Program. He is frequently invited to speak at national and international meetings and has organized several international conferences in the area of cancer. Dr. El-Deiry is a member of the American Society for Clinical Investigation, the American Association for Cancer Research, the American Society for Clinical Oncology and the Interurban Clinical Club, an honor society for physicians started by Sir William Osler in 1905 for which he currently serves as Secretary/Treasurer. Dr. El-Deiry became a member of the Association of American Physicians in 2008 and was cited as one of "America's Top Oncologists" by the Consumers' Research Council of America in 2008 and 2009. He was named as an

American Cancer Society Research Professor as of January 1, 2009, the first such appointment at the University of Pennsylvania.

Olle Korsgren, M.D., Ph.D.

Dr. Korsgren is Professor of Transplantation Immunology and Professor of Cell Transplantation at Uppsala University and is a senior staff member in the Department of Clinical Immunology at Uppsala Hospital. He received his Bachelor of Medicine, M.D. and Ph.D. from Uppsala University and is licensed by the National Board of Health and Welfare to practice medicine and as a Specialist in Clinical Immunology.

Dr. Korsgren's research activity has been focused on making islet transplantation a possible treatment for patients with type 1 diabetes. This has led him into several different areas from the ontogeny of the fetal pancreas and the development of techniques to make human islet isolation possible to the immununological problems involved in islet allo- and xenotransplantation. He is the Principal Investigator of the Nordic Network for clinical islet transplantation.

Dr. Korsgren has received several honors and awards, and he is frequently invited to give seminars and lectures at international meetings and workshops. Dr. Korsgren's present and past commitments include serving on the editorial boards of several scientific journals, such as *Xenotransplantation* and *Transplantation*, and participating as a frequent reviewer for numerous international funding agencies. Dr. Korsgren has authored more than 200 scientific publications. An inventor, he has been awarded five patents.

Theodore Rasmussen, Ph.D.

Dr. Rasmussen is an Associate Professor in the Department of Pharmaceutical Sciences at the University of Connecticut, a charter member of the University of Connecticut Stem Cell Institute and a founding member of the Center for Regenerative Biology at the University of Connecticut. In addition, he holds a joint academic appointment in the Department of Molecular and Cell Biology. Dr. Rasmussen earned his B.S. degree in Biology at the University of Washington at Seattle and received his Ph.D. in Genetics at the University of Wisconsin at Madison, where he studied processing of nuclear RNA. He then completed a postdoctoral fellowship at the Whitehead Institute at the Massachusetts Institute of Technology, where he performed research on X chromosome inactivation and embryonic stem cell biology.

The research goals of Rasmussen Lab are designed to bring about advances in cell-based therapeutics through approaches drawn from stem cell biology, epigenetics, proteomics, and molecular genetics. Currently, three major research themes are under intensive investigation: (1) directing nuclear reprogramming of somatic cells using induced pluripotency (iPS) and ES cell fusion-mediated reprogramming (FMR)

strategies; (2) exploring heterochromatin assembly in the context of embryonic stem cell differentiation, so as to understand cell lineage-restricted gene silencing; (3) translational research to use iPS cell reprogramming technologies to develop cell culture models of human genetic disorders through collaboration with clinicians. Long-range goals of the lab include the production of safe, immunocompatible, pluripotent cells for use in human cell-based therapies to alleviate human disease and the development of methods for the guided differentiation of pluripotent cells to produce transplantable cells with therapeutic properties. An allied goal is to achieve a better understanding of molecular and cellular mechanisms that participate in the processes of nuclear reprogramming and differentiation. Dr. Rasmussen also investigates epigenetic function during mammalian gametogenesis, preimplantation development, and X chromosome inactivation.

Dr. Rasmussen helped to establish a stem cell research program in the State of Connecticut. He teaches genetics stem cell science at undergraduate and graduate levels and frequently participates in forums and panels that discuss stem cell research and ethics for the public. Dr. Rasmussen participates in grants review for international funding agencies and is also active in peer review for scientific journals including *Biochim Biophysical Acta*, *Cell Stem Cell*, the *Proceedings of the National Academies of Sciences*, *Stem Cells*, and *the Journal of Molecular Biology* among others.

Norman E. Sharpless, M.D.

Dr. Sharpless is currently an Associate Professor of Medicine and Genetics with tenure at the University of North Carolina (UNC). He is director of the Cancer Experimental Therapeutics Program in the Lineberger Comprehensive Cancer Center, co-founder of the UNC Mouse Phase I Unit, and Associate Director of The UNC Center for Aging and Health. He received is B.S. degree in Mathematics with Distinction from UNC, Chapel Hill and his M.D. degree from the UNC School of Medicine, Chapel Hill. Dr. Sharpless trained in internal medicine at Massachusetts General Hospital and hematology and oncology at the Dana-Farber Cancer Institutive, both at Harvard Medical School.

Dr. Sharpless' lab discovered that the $p16^{INK4a}$ tumors suppressor gene plays a causal role in mammalian aging, and described the use of $p16^{INK4a}$ expression in peripheral blood as a biomarker of molecular aging in humans and mice. His lab has also described the beneficial effects of Pharmacological Quiescence (PQ^{TM}) with regard to cellular protection from exposure DNA damaging agents. His lab has been supported by funding from the NIH as well as several foundations including the Sidney Kimmel Foundation, the Ellison Medical Foundation, the American Federation of Aging Research, the Forbeck Foundation and the Burroughs-Wellcome Foundation.

Dr. Sharpless has authored more than 70 papers, 5 book chapters and 6 patents on the molecular biology of cancer and aging. He is on the scientific advisory board of

several scientific foundations and is an associate editor of *Aging Cell* and *Impact Aging*. He was the 2007 recipient of the Jefferson Pilot Award, the 2009 Hettleman Prize, and was recently elected to the American Society of Clinical Investigation, the nation's oldest honor society for physician-scientists.

Igor Slukvin, M.D., Ph.D.

Dr. Slukvin is Assistant Professor of Pathology at the Department of Pathology and Laboratory Medicine at the University of Wisconsin, Madison. He received his M.D. degree and his Ph.D. in developmental and reproductive immunology at Kiev Medical University, Ukraine. Dr. Slukvin completed his postdoctoral training at the University of Wisconsin, Madison. Following completion of his postdoctoral training, he was enrolled in the Anatomic and Clinical Pathology residency program at the University of Wisconsin Hospital and Clinics where he graduated from residency and obtained the Board Certification in Anatomic and Clinical Pathology

The major goal of Dr. Slukvin's lab is to significantly advance the clinical use of stem cells through development of novel sources of hematopoietic stem cells and mature blood cells for transplantation, transfusion and immunotherapy. He focuses on the following strategies to generate alternative sources of therapeutic blood cells: 1) directed differentiation of human embryonic stem (hES) cells and induced pluripotent stem (iPS) cells into the hematopoietic stem and mature blood cells; 2) directed reprogramming of adult human fibroblast into the blood cells. He uses integrative approaches, including genomics; proteomics; and bioinformatics, to achieve the outlined goals and to understand important cellular and molecular events leading to blood cell development and diversification. Using these methodologies, he anticipates generating immunologically compatible hematopoietic stem and immunotherapeutic cells in large quantities. In this way he can eliminate serious complications of bone marrow transplantation such as graft-versus-host disease and transplant failure, and at the same time generate a significant anti-tumor immune response.

Dr. Slukvin's research is supported by NIH research grants, including Program Project Awards. He is an Editorial Board member of *Stem Cell Research* Elsevier and *Stem Cells International* SAGE-Hindawi. Dr. Slukvin reviews on regular basis papers submitted to *Blood*, *Nature Medicine*, *Molecular Medicine*, *Stem Cells*, *Journal of Immunology*, *Stem Cell Research*, *Stem Cells and Development*, *Cellular and Molecular Life Science*, *Cell and Tissue Research*, *AIDS Research and Therapy*, *Experimental Hematology*, and *Regenerative Medicine*. As add hock reviewer, he has participated in numerous NIH study sections including Hematopoiesis, Small Business Application in Development and Aging, Challenge Grant Applications and the Carrier Enhancement Award. In addition, Dr. Slukvin was involved in review of applications submitted to Wellcome Trust Foundation (UK), Chronic Granulomatous Disorder Research Trust (UK), and Raine Medical Research Foundation (Australia).

Michael B. Yaffe, M.D., Ph.D.

Dr. Yaffe is Professor of Biology and Biological Engineering at the Massachusetts Institute of Technology and Senior Associate Member and Chair of the Cell Circuits Program at the Broad Institute. He received his B.S. degree in Materials Science and Engineering at Cornell University, and his M.D. degree and Ph.D. from Case Western Reserve University in Biophysical Chemistry. He completed a residency in General Surgery/Surgical Oncology and a Fellowship in Surgical Critical Care at Harvard Medical School and post-doctoral training as a Howard Hughes Physician-Scientist Post-doctoral scholar in Cell Signal Transduction with Lew Cantley in the Department of Cell Biology at Harvard.

Research in the Yaffe lab focuses on the role of protein phosphorylation and cell signaling in the control of cell division and the response of cells to DNA damage. Seminal discoveries made by the Yaffe lab include the mechanism of BRCA1 BRCT domain function and the molecular basis for regulation of Polo-like kinases. In addition, the Yaffe lab also studies how protein kinases regulate transcription during mesenchymal stem cell differentiation and how phosphorylation regulates the inflammatory response of neutrophils. Technologies which have been pioneered by the Yaffe lab include phosphoserine/threonine-oriented peptide library screens, novel high-throughput proteomic screens for ligand-binding modules and structural biology techniques aimed at deciphering the mechanism of molecular recognition in molecular and atomic detail. Dr. Yaffe has published more than 100 scientific papers and reviews and holds 3 patents.

Dr. Yaffe is an Attending Surgeon in the Surgical Intensive Care Unit at the Beth Israel Deaconess Hospital. He currently serves on the scientific advisory boards of several biotechnology and pharmaceutical companies. Dr. Yaffe is active in peer review as an editor and reviewer at numerous journals including *Cell*, *Science*, *Nature*, *Science Signaling*, *Journal of Biological Chemistry*, and *Biochemistry* among others. Dr. Yaffe also participates in grants review for the National Institutes of Health and the Boston Biomedical Research Institute.