Faculty Bio-sketches

(in order of appearance)

BROCK REEVE, MPhil, MBA

Executive Director, Harvard Stem Cell Institute

Brock Reeve is Executive Director of the Harvard Stem Cell Institute. In partnership with the Faculty Directors, he has overall responsibility for the operations and strategy of the Institute whose mission is to use stem cells, both as tools and as therapies, to understand and treat the root causes of leading degenerative diseases.

Brock came to this role from the commercial sector with extensive experience in both management consulting and operations for technology-based companies, with a focus on life sciences. His clients have included some of the leading pharmaceutical, biotechnology and medical device companies, and he also has had hands-on operational responsibility in product management and marketing roles in software start-ups.

JACQUES GALIPEAU, MD, FRCP(C)

Emory School of Medicine

Dr. Galipeau is a Professor of Hematology and Medical Oncology & Pediatrics, Emory School of Medicine. He obtained his Medical Degree from the University of Montreal in 1988 and completed specialty training in internal medicine at the McGill-affiliated Jewish General Hospital. He went on to the Tufts-affiliated New England Medical Center in Boston for three years of subspecialty training in Hematology and Oncology followed by a two-year scientific fellowship in gene Therapy at St-Jude Children's research hospital in Memphis Tennessee. In his 12 year career at McGill University starting in 1997, he initiated and developed a research program in MSCs, cell and immunotherapy of catastrophic illnesses including cancer and immune disease. He relocated to Emory University in October 2009 where he established the Emory Personalized Immunotherapy Center [EPIC] whose mission is to develop evidence-based and innovative personalized cell therapies for immune and malignant disorders. He is the sponsor of a series of FDA INDs examining the use of autologous marrow-derived mesenchymal stromal cells for immune disorders.

ROBERT BRENNER, MD

EVP and CMO, Orionis Biosciences

Robert M. Brenner, M.D. joined Orionis Biosciences in late 2015 as Executive Vice President and Chief Medical Officer. Previously, Dr. Brenner was President and Chief Executive Officer at AlloCure, a privately held, clinical stage biotechnology company developing a mesenchymal stem cell therapy for acute kidney injury. Prior to leading AlloCure, Dr. Brenner was at AMAG Pharmaceuticals, where he was Senior Vice President of Medical Affairs and responsible for the company's nephrology clinical development activities. Dr. Brenner began his executive career at Amgen where he spent nine years and served in a variety of nephrology leadership roles both in clinical development and medical affairs, ultimately holding the title of Executive Director and Renal Anemia Global Program Area Leader. During his career, Dr. Brenner has contributed to the approval of new products, led the design of clinical trials, and served as a key liaison to the nephrology community, professional societies and regulatory agencies. Dr. Brenner received his B.A. from Johns Hopkins University and his M.D. from Albert Einstein College of Medicine. He completed his medical residency in internal medicine at Brigham and Women's Hospital in Boston and his fellowship in nephrology at Stanford University Medical Center.

ROBERT DEANS, PhD

CSO Rubius Therapeutics

Dr. Deans is responsible for science and technology development at Rubius Therapeutics, based on his background in cell therapy and translational science. Rubius Therapeutics is developing a platform of novel enucleated cell therapeutics based on gene modification and ex vivo expansion of hematopoietic progenitors to mature reticulocytes.

Dr. Deans has more than 25 years of experience in adult stem cell therapeutics which includes work with stem cells from bone marrow including both hematopoietic as well as mesenchymal stem cell (MSC) populations. He most recently served as Exec VP at Athersys, a biotechnology company developing a platform of adult adherent stem cell therapeutics (MultiStem™) with 5 programs in mid-phase clinical development.

Prior to Athersys, Dr Deans was VP of Research at Osiris Therapeutics, contributing to the development and later approval of Prochymal™, an MSC cell therapy product. Dr. Deans was previously Director of R&D at Baxter Healthcare and developed biologics used in a CD34+ cell selection platform, which included a retroviral gene therapy clinical study.

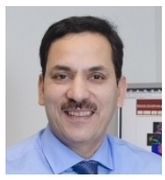
Daniel Devine, JD, MBA

Senior Vice President, Special Projects, Mesoblast Ltd

Dan heads up Special Projects for Mesoblast Limited, a leading mesenchymal lineage cell therapy company. Within Mesoblast, Dan's primary responsibility is the identification, evaluation and acquisition of second generation technologies, and he has spearheaded the acquisition or licensing of several technologies, including multiple relationships with Harvard and Brigham and Women's Hospital. Dan also supports financing and M&A activities at Mesoblast, where he was involved in the company's 2015 IPO on NASDAQ and the acquisition by Mesoblast of Osiris' mesenchymal stem cell assets. Prior to Mesoblast, Dan founded Patrys, Inc. out of Columbia University in 2001, which Dan led as CEO and board director to a successful IPO in 2007. Prior to Patrys, Dan headed up an international business development group at Pfizer Inc. Before Pfizer, Dan worked in the office of the CFO at Warner-Lambert, providing financial strategies to support the launch and sourcing of blockbuster products such as Lipitor, and the eventual merger of Warner-Lambert with Pfizer. Dan has a M.B.A. from Columbia University, a J.D. from SUNY Buffalo, and a B.S. in Economics from Cornell University.

KHALID SHAH, MD

Associate Professor, Harvard Medical School and Director, Stem Cell Therapeutics and Imaging Program, Massachusetts General Hospital



Dr. Shah is an Associate Professor at Harvard Medical School. He is also the Director of the Stem Cell Therapeutics and Imaging program at MGH and a Principal Faculty at Harvard Stem Cell Institute in Boston. His laboratory focuses on developing therapeutic stem cells for receptor targeted therapies for cancer and testing their efficacy in clinically relevant mouse tumor models. In recent years, Dr. Shah and his team have pioneered major developments in the stem cell therapy field, successfully developing experimental models to understand basic cancer biology and therapeutic stem cells for cancer, particularly brain tumors. These studies have been published in a number of very high impact journals like *Nature Neuroscience*, *PNAS*, *Nature Reviews Cancer, JNCI*, *Stem Cells* and *Lancet Oncology*, validating the use of therapeutic stem cells alone and in combination with clinically approved drugs for cancer therapy.

Recently, Dr. Shah's work has caught the attention in the public domain and as such it has been highlighted in the media world-wide including features on BBC and CNN. Dr. Shah holds current positions on numerous councils, advisory and editorial boards in the fields of stem cell therapy and oncology. The technologies from Dr. Shah's laboratory have led to the foundation of a biotech company, AMASA Technologies Inc. whose main objective is the clinical translation of therapeutic stem cells in cancer patients.

JEFFREY KARP, PhD

Associate Professor, Brigham and Women's Hospital

Dr. Karp is an Associate Professor at Brigham and Women's Hospital, Harvard Medical School, and is Principal Faculty at the Harvard Stem Cell Institute and affiliate faculty at MIT through the Harvard-MIT Division of Health Sciences and Technology.

His research harnesses materials science and stem cell biology to solve medical problems with emphasis on nanoscale/microscale materials and bio-inspired approaches. He has published more than 100 peer-reviewed papers and book chapters and has given over 200 national and international invited lectures and has 65 issued or pending patents.

Several technologies that Dr. Karp has developed have formed the foundation for multiple products on the market and currently under development and for the launch of two companies, Gecko Biomedical and Skintifique.

KELVIN NG

Laboratory of Jeffrey Karp, PhD

Kelvin's work focuses on strategies and technologies that guide or accelerate the translation and commercialization of extracellular vesicles as therapeutic products. His multidisciplinary research stems from a background in drug delivery, medical devices, and cell therapy. Striving to bring novel therapies to the clinic as rapidly as possible, Kelvin maintains a fervent interest in regulatory and intellectual property landscapes, through collaborations spanning academia and industry. In addition to publishing perspectives on streamlining processes for manufacturing cells versus extracellular vesicles, Kelvin has co-edited a thematic series on 'Extracellular Vesicles and Regenerative Medicine' in the Stem Cell Research & Therapy journal. Other examples of Kelvin's work can be found in journals including Cell Stem Cell, Cell Metabolism, and Nature Protocol. Kelvin is a National Science Scholar at the Agency for Science, Technology and Research in Singapore. Working with Prof. Jeffrey Karp at the Harvard-MIT Division of Health Sciences and Technology, Kelvin will complete his PhD in medical engineering and medical physics this year.

JEROME RITZ, MD

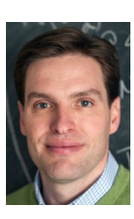
Professor of Medicine, Harvard Medical School and Dana-Farber Cancer Institute

Dr. Ritz is an expert in bone marrow transplantation and cancer immunology, currently serves on the Executive Committees of the Dana-Farber/Harvard Cancer Center and the Harvard Stem Cell Institute. He was a Scholar of the Leukemia Society of America and a recipient of its Stohlman Scholar Award. Ritz is a member of the Hematopoietic Stem Cell Transplantation Program at the Dana-Farber Cancer Institute and Brigham and Women's Hospital. He is Executive Director of the Connell O'Reilly Cell Manipulation and Gene Transfer Laboratory and a Professor of Medicine at Harvard Medical School. He is also a Co-Director of the Center for Human Cell Therapy and the Cancer Vaccine Center.

Recent studies in Dr. Ritz's laboratory have focused on immune reconstitution in patients undergoing hematopoietic stem cell transplantation and have identified several factors that contribute to the development of chronic graft-versus-host disease (GVHD) and the failure to establish immune tolerance after transplant.

CHAD COWAN, PhD

Associate Professor, Harvard University



Dr Chad Cowan is an associate professor at Harvard University in the Department of Stem Cell and Regenerative Biology, and at Massachusetts General Hospital, with appointments in the Center for Regenerative Medicine, the Cardiovascular Research Center and the 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.Chad has led or been a member of several large efforts to use stem cells to better understand disease, including the National Heart, Lung, and Blood Institute's Next Gen iPS Cell Project and the Progenitor Cell Biology Consortium. More recently, Chad has focused on using genome editing tools as therapeutics. He is a scientific founder of CRISPR Therapeutics.

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KATARINA LE BLANC, MD, PhD

Professor of Clinical Stem Cell Research, Karolinska Institutet

Katarina Le Blanc received her M.D. from the Karolinska Institutet in 1993, and her Ph.D. in 1999, also from the Karolinska Institutet. In 2002 she became a certified specialist in hematology.

She has mentored many trainees, PhD students and post docs over the years. Katarina has published well over 100 peer-reviewed publications and review articles, been cited more than 12.000 times, and given some 140 presentations at various national and international meetings over the last 10 years.

Dr Le Blanc's main research interest is mesenchymal stem cells, haematopoietic stem cell transplantation and immunology.

ANTONIO UCCELLI, MD

Neuroimmunology Unit, Dept. of Neurosciences, University of Genoa, IT

He completed his residency of neurology at the University of Genoa in 1993. In 1992 he attended, as post-doctoral fellow, the Laboratory of Neuroimmunology of the Department of Neurology of the University of California San Francisco (UCSF) directed by Professor S.L. Hauser.

From 1993 to 2011 he had a faculty position in the Department of Neurology of the University of Genoa. Since December 2011 he is Associate Professor of Neurology of the University of Genoa. Since 2014 he is Director of Centre of Excellence for Biomedical Research (CEBR). Since 2009 he is the Director of the Center for Research and Cure of Multiple Sclerosis of the University of Genoa. Since 1995 Dr. Uccelli is the Director of the Neuroimmunology Unit of the Department of Neurology, Rehabilitation, Ophthalmology, Genetics, Maternal and Child Health (DINOGMI) of the IRCCS Azienda Ospedaliera Universitaria San Martino – IST Istituto Nazionale per la Ricerca sul Cancro focusing his research activities on multiple sclerosis and more recently on adult stem cells.

AMELIA BARTHOLOMEW, MD

University of Illinois Hospital & Health Sciences System, Cancer Center

Amelia Bartholomew serves as Chief of Translational Research in the Department of Surgery at the University of Illinois, with appointments in bioengineering, anatomy, and the cancer center. She completed her MD at Northwestern University, surgical residency at the University of Illinois, transplant fellowship at Massachusetts General Hospital, and MPH at Johns Hopkins. Her laboratory is focused on developing effective strategies to prevent, treat, and reverse end organ failure. Specific interests include the ability of mesenchymal stem cells to induce long-term acceptance to organ transplants, their ability to initiate tissue regeneration in situ, and how impaired mesenchymal stem cell cross-talk with cells of the hematopoietic niche can lead to dysfunctional tissue repair and regeneration.

ARNOLD CAPLAN, PhD

Professor of Biology and Director of the Skeletal Research Center at Case Western Reserve University

He received his Ph.D. from The Johns Hopkins University School of Medicine. Dr. Caplan is a national and international scholar focusing on experimentation in the area of musculoskeletal and skin development. He has published over 400 papers and manuscripts and has long been supported by the NIH and other non-profit and for-profit agencies for his efforts in trying to understand the development, maturation and aging of cartilage, bone, skin and other mesenchymal tissues and for his pioneering research on Mesenchymal Stem Cells.

JAN A. NOLTA, PhD

Director of the Stem Cell Program at UC Davis School of Medicine and Director of the Institute for Regenerative Cures

She also serves as the Scientific Director of the large UC Davis Good Manufacturing Practice Facility, and as Scientific Director of the Statewide California Umbilical Cord Blood Collection Program. In 2013 she was ranked as one of the "Global Top 50 Most Influential People in the Field of Stem Cells."

The current research in Dr. Nolta's laboratory is focused on developing therapies that will use gene-modified bone marrow - derived mesenchymal stem/ stromal cells to deliver factors for treating Huntington's disease and vascular disorders. The group that she oversees in the UC Davis Shared Translational Laboratory is helping UC Davis teams develop numerous clinical trials of gene and cell therapy, with eleven adult stem cell therapies already in the clinic, and another nineteen in the pipeline.

GUANGWEN (GARY) REN, PhD

Associate Research Scholar, Princeton University

Dr. Ren is currently an associate research scholar at Princeton University with a research focus on the bidirectional interactions between MSCs and the immune cells in physiological and pathological processes. His research interests include MSC-mediated immunoregulation, mesenchymal stromal regulation of cancer progression and MSC-based adjuvant immunotherapy.

Oren Levy, PhD, MBA

Instructor of Medicine, Harvard Medical School/Brigham and Women's Hospital

Dr. Oren Levy carried out his PhD research in Ben Gurion University (BGU, Israel), focusing on key signaling pathways and their involvement in mesenchymal stem cells (MSC) biology. Dr. Levy then joined the lab of Dr. Jeffrey Karp at Harvard Medical School/Brigham and Women's Hospital as a postdoctoral research fellow. During his postdoctoral research, he focused on developing engineering techniques to augment the MSC secretome and improve cell homing to disease sites following transplantation to boost their therapeutic impact. Currently, as Instructor of Medicine at Harvard Medical School, Dr. Levy is focused on developing cutting-edge bio-engineering strategies to advance cell-based therapies for an array of diseases, including multiple sclerosis and prostate cancer.

NORMA KENYON, PhD

Martin Kleiman Professor of Surgery, Microbiology and Immunology and Biomedical Engineering, Diabetes Research Institute, Leonard M. Miller School of Medicine, University of Miami

Norma Sue Kenyon, Ph.D. is the Martin Kleiman Professor of Surgery, Microbiology and Immunology and Biomedical Engineering at the Diabetes Research Institute, Leonard M. Miller School of Medicine, University of Miami. She and her team have focused on ways to transplant islet cells without the need for anti-rejection drugs (tolerance), including the incorporation of stem cells into transplant protocols. The team has also undertaken extensive work to assess the efficacy of alternative sites of islet implantation, incorporating scaffolds and encapsulation technologies.

DOUGLAS MELTON, PhD

Xander University Professor at Harvard University, HHMI Investigator & Co-director of the Harvard Stem Cell Institute

Dr.Melton's laboratory is interested in the genes and stem cells that give rise to the pancreas and insulin-producing beta cells, with possible therapeutic implications for diabetes. He is the scientific founder of Semma Therapeutics.

REZA ABDI, MD

Assistant Professor, Harvard Medical School and Brigham and Women's Hospital

Dr. Abdi is a physician-scientist with a focus on exploring the mechanisms of allograft rejection and autoimmunity with ultimate goal of establishing novel immunoregulatory strategies to promote graft acceptance and to treat autoimmune diabetes. Over the past several years, he has built a multidisciplinary team encompassing experts in tissue engineering, department of material sciences, and bioinformatics to address some of the challenges in transplantation and other complex diseases such as type 1 diabetes.

DAVID SCADDEN, MD

Gerald and Darlene Jordan Professor of Medicine, Harvard University, Director of the Center for Regenerative Medicine, MGH, Co-Director, Harvard Stem Cell Institute and Chair, Harvard Dept. of Stem Cell and Regenerative Biology

Dr. Scadden is a member of the Institute of Medicine of the National Academies of Science, the Board of External Experts for the National Heart, Lung and Blood Institute and a former member of the National Cancer Institute's Board of Scientific Counselors. He has received multiple honorary degrees, awards and memberships in honorary societies. His work emphasizes targeting the stem cell niche to attain novel therapies for blood diseases. He is a scientific founder of Fate Therapeutics.