CIRM
CALIFORNIA INSTITUTE FOR REGENERATIVE MEDICINE

Memorandum

To: Members of the ICOC
From: Gil Sambrano, Vice President, Portfolio Development and Review
Re: Nominations for Appointment of Scientific Members to the Grants Working Group
Date: September 24, 2026

Executive Summary

The Grants Working Group (GWG) is responsible for conducting scientific and merit reviews to provide recommendations to the board regarding the funding of applications. To serve as a scoring panel member on the GWG, an individual must first be appointed to GWG by the board. The CIRM team regularly assesses whether the pool of GWG reviewers has adequate expertise to review the breadth of applications received for current funding opportunities. This quarter, the CIRM asks that the board appoints five new GWG members and reappoint two GWG members to ensure adequate expertise for the current funding opportunities.

I. Background

The purpose of the Grants Working Group (GWG) is to provide recommendations to the ICOC regarding the merit and funding of grant and loan applications. The GWG evaluates the merit of applications across all five of CIRM's funding pillars in Discovery, Preclinical, Clinical, Education and Infrastructure. The scope of proposals we receive is very broad ranging from fundamental biology projects to advanced clinical trials across numerous disease areas and fields of study that use stem cell-based approaches, gene therapy and regenerative medicine.

To cover this breadth of expertise, CIRM maintains a large pool of Board-appointed GWG members (currently 262 members) with expertise in many areas including education, fundamental biology, translational research, medicine, product manufacturing, drug development, regulatory affairs, and clinical trials. The pool of Board-appointed GWG members allows us to compose and tailor each review panel to the needs of a specific set of applications.

Appointments to the GWG follow a set of requirements prescribed in Prop 71 and Prop 14 including specific durations (terms) of service. The pool of GWG members is in

constant flux due to variable terms of service, changes in members' availability, and also changing expertise needs as scientific fields evolve. As such, we regularly bring for your consideration nominations for the appointment and/or re-appointment of GWG members to maintain a consistently active and relevant pool of experts on hand.

This quarter, we propose to appoint five new GWG members. We also have one GWG member whose appointment term is expiring and propose to reappoint. We have provided a brief bio of each member that provides a summary of their research interests, scientific training, and salient accomplishments.

II. New Appointments

CIRM is seeking the appointment of the individuals listed below so that they may join the pool of members drawn upon to serve as panelists on GWG reviews. These appointments will strengthen the GWG's expertise across several areas as briefly summarized in the following description.

Dr. Chang is a biotechnology executive with cell and gene therapy experience that will strengthen reviews for Discovery and Preclinical applications.

Dr. Kreins is a clinician-scientist and Principal Investigator dedicated to advancing next-generation immunotherapies and regenerative strategies for primary and secondary T-cell deficiencies. Her expertise will strengthen GWG's ability to evaluation applications submitted to Discovery funding opportunities.

Dr. Nagy is a pediatric neurologist with expertise in rare neurological diseases, neurogenetics, as well as clinical trial design, implementation and evaluation. Her expertise will strengthen GWG's ability to evaluation applications submitted to Clinical and Preclinical funding opportunities.

Avi Nandi is a biotechnology executive with experience in developing and scaling cell and gene therapy platforms from early-stage development through commercialization. His expertise has been valuable in Clinical and Preclinical application reviews.

Dr. Sturgeon is a clinician-scientist with expertise in development of cell-based immunotherapies from human pluripotent stem cells will be invaluable in reviewing for Discovery program applications.

Stephen Chang, PhD

Independent Consultant in Cell and Gene Therapy

Expertise Relevance to CIRM GWG: Dr. Chang's expertise in cell and gene therapy will be invaluable in reviewing for Discovery and Preclinical.

Prior Service in CIRM Reviews: N/A

Stephen M. Chang, PhD, is a human geneticist and biotechnology leader with 39+ years of experience in stem cell science, regenerative medicine, cell and gene therapy, and complex biologics. He has led and founded R&D organizations, helped advance 15 INDs across distinct molecular entities, and contributed to more than 50 worldwide patent filings. His leadership experience includes New York Stem Cell Foundation Research Institute, Canji/Schering-Plough, Chiron/Viagene, Histogen, Stemgent, and MultiCell Technologies, with programs spanning gene transfer, viral vectors, RNAi, oncolytic viruses, immunotherapy, vaccines, embryonic stem cells and patient-derived stem cell platforms.

He has served as a reviewer or advisor for NIH, NCI, NIAID, NICHD, NIMH, and Maryland Stem Cell Program for 18 years, and brings direct experience assessing scientific rigor, clinical feasibility, regulatory strategy, budgets, operational readiness, commercialization potential, and scalable manufacturing.

Alexandra Y. Kreins, MD, PhD

Wellcome Career Development Fellow and Principal Investigator, UCL Great Ormond Street Institute of Child Health

Expertise Relevance to CIRM GWG: Dr. Krein's expertise in immunotherapies and regenerative strategies for primary and secondary T-cell deficiencies will be invaluable in reviewing Discovery program applications.

Prior Service in CIRM Reviews: N/A

Alexandra Y. Kreins, MD, PhD, is a clinician-scientist and Principal Investigator dedicated to advancing next-generation immunotherapies and regenerative strategies for primary and secondary T-cell deficiencies. She is a Wellcome Career Development Fellow at the UCL Great Ormond Street Institute of Child Health (GOSICH) and an Honorary Consultant (equivalent to Attending Physician) in Paediatric Immunology at Great Ormond Street Hospital (GOSH) in London, UK. Clinically, she provides specialist leadership within the European Thymus Transplantation Programme, focusing on the diagnosis and management of thymic inborn errors of immunity and allogeneic thymus transplantation.

Her research programme spans the full translational pipeline required to bring novel thymic therapies to first-in-human trials. As Principal Investigator at UCL GOSICH, Dr.

Kreins leads an active laboratory leveraging a functional human thymic organoid platform, incorporating both postnatal thymic epithelial cells (TECs) and iPSC-derived TEC progenitors, to model and rescue T-cell development and tolerance induction. By integrating rare disease-gene discovery, stem cell biology, and bioengineering platforms, her work aims to establish scalable, tolerogenic Advanced Therapy Medicinal Products (ATMPs) for applications in thymic injury, autoimmunity, solid organ transplantation, and thymic rejuvenation.

Amanda Nagy, MD

Pediatric Neurologist at Massachusetts General Hospital and Harvard Medical School

Expertise Relevance to CIRM GWG: Dr. Nagy's expertise in rare neurological diseases, neurogenetics, biomarkers and clinical trial design, implementation and evaluation will be invaluable in reviewing Preclinical and Clinical applications.

Prior Service in CIRM Reviews: N/A

Amanda Nagy, MD, is a clinical investigator and Instructor in Neurology at Massachusetts General Hospital (MGH) and Harvard Medical School whose work focuses on rare neurological diseases, neurogenetics, and translational therapeutics. She received her A.B. in Neurobiology from Harvard College and her M.D. from Case Western Reserve University School of Medicine, followed by residency training in Child Neurology and fellowship training in Neurogenetics and Gene Therapy at Mass General Brigham (MGB). Dr. Nagy's clinical and research expertise spans leukodystrophies and other neurodegenerative disorders along with genetic neurodevelopmental conditions. She serves as Co-Director of the MGH Leukodystrophy Clinic and Co-Director of the MGH Sotos Syndrome Clinic, caring for patients with complex rare neurological disorders across the lifespan. Through her work as a clinician-scientist, she has developed expertise in assessing scientific merit, clinical relevance, feasibility, and patient-centered impact across a broad spectrum of rare disease research and therapeutic development programs.

Dr. Nagy has extensive experience in the design, implementation, and evaluation of clinical research studies, including natural history studies, biomarker development projects, therapeutic clinical trials, and investigator-designed N-of-1 trials. She has served as an investigator and principal investigator on multiple rare disease therapeutic trials and individualized treatment studies, providing her with a comprehensive perspective on study design, endpoint selection, regulatory considerations, and translational potential. Her research has focused on advancing clinical trial readiness through the development of biochemical and neuroimaging biomarkers in Canavan

Disease and through defining the natural history of rare neurogenetic disorders, including published studies of *TBL1XR1*- and *UBTF*-related disorders. Her research program has been supported by competitive funding from the National Tay-Sachs & Allied Diseases Association (NTSAD), the American Academy of Neurology (AAN), and the Global Leukodystrophy Initiative Clinical Trials Network (GLIA-CTN). In addition, Dr. Nagy serves as Education Director for the Neurogenetics and Gene Therapy Fellowship and the Center for Rare Neurological Diseases at MGH/MGB, where she mentors trainees in rare disease research, clinical trial methodology, and translational neuroscience. Her combined experience as a clinician, investigator, educator, and leader in rare disease programs provides a balanced perspective for evaluating research proposals with respect to scientific rigor, innovation, feasibility, and potential impact for patients and families.

Avi Nandi, MS, MBA

President of the Viral Vector Division of SK Pharmteco

Expertise Relevance to CIRM GWG: Mr. Nandi's expertise in developing and scaling cell and gene therapy platforms from early-stage development through commercialization has been invaluable in reviewing Clinical and Preclinical applications.

Prior Service in CIRM Reviews: Mr. Nandi has participated as a specialist for Preclinical and Clinical program reviews.

Avi Nandi is a biotechnology executive with deep experience developing and scaling cell and gene therapy platforms from early-stage development through commercialization. He currently serves as President of the Viral Vector Division of SK Pharmteco, a cell and gene therapy CDMO. Here, he has built and scaled integrated capabilities across development, manufacturing, and testing, while driving significant improvements in capital efficiency, operational performance, and delivery reliability.

Previously, Avi held a leadership role at AveXis, contributing to the commercialization of ZOLGENSMA, helping establish a multi-site manufacturing network, and developing a portfolio of preclinical/clinical assets. Prior to that he worked in big pharma (Novartis and CSL) and academia (Harvard Medical School). Avi's background spans research & development, operations, and general management. He holds an MBA from the University of North Carolina at Chapel Hill, an MS in Biology from Adelphi University, and a BA in Biology from the University of Rochester.

Christopher Sturgeon, PhD

Associate Professor in the Department of Stem Cell Biology and Regenerative Medicine at the Icahn School of Medicine at Mount Sinai

Expertise Relevance to CIRM GWG: Dr. Sturgeon's expertise in development of cell-based immunotherapies from human pluripotent stem cells will be invaluable in reviewing for Discovery program applications.

Prior Service in CIRM Reviews: N/A

Christopher Sturgeon, PhD, is an Associate Professor at Icahn School of Medicine at Mount Sinai. The goal of his research is to understand how the hematopoietic system develops during embryogenesis, so as to translate those findings in the development of cell-based immunotherapies from human pluripotent stem cells. He is particularly fascinated by the role transient developmental programs play in establishing lifelong hematopoiesis, the heterogeneity across these cells, and their postnatal physiologic relevance. He obtains these insights by studying gene expression during both murine embryonic development and the directed differentiation of pluripotent stem cells. Through this, he aims to develop a reliable and robust method to generate hematopoietic stem and progenitor cells from human pluripotent stem cells (hPSCs), a major goal for regenerative medicine. He has a broad background in molecular biology and biochemistry, as well as in developmental and cell biology, with specific training on pluripotent stem cell culture and directed differentiation. During his postdoctoral fellowship with Gordon Keller, he helped establish that the signals regulating early mesodermal patterning of hPSC differentiation cultures will dictate whether a particular developmental hematopoietic program is specified. Critically, this led to the observation that each hematopoietic program originates from a phenotypically and transcriptionally distinct nascent mesoderm population, which we refer to as "hemogenic mesoderm". This paradigm-shift in approach ultimately led to his demonstration of a pivotal role for WNT and ACTIVIN signaling in the specification of different hematopoietic progenitors from hPSCs, which forms the basis of most differentiation platforms in use today (Sturgeon et al., 2014; Ditadi et al., 2015).

As an independent investigator, he characterized the heterogeneity within these nascent mesodermal populations, as only small subsets therein actually harbor hemogenic potential, each with their own unique cell surface markers and transcriptional regulation (Creamer et al., 2017, 2022). Importantly, he recently demonstrated that the temporal sequence of WNT and retinoic acid (RA) signal activation is critical for the faithful recapitulation of definitive hematopoietic progenitors that can persist in an immunodeficient recipient (Luff et al., 2022). From a translational perspective, these insights have tremendous impact, as only RA-dependent progenitors transcriptionally resemble those found in a human embryo. Similarly, by implementing this directed

differentiation system, they have made new insights into telomerase, myeloid biology, and developmental hematopoiesis. For example, in an effort to model a postnatal disease, dyskeratosis congenita, they established and demonstrated for the first time that only hPSC-derived definitive hematopoietic progenitors, but not those from the primitive hematopoietic program, recapitulate DC anemia (Fok et al., 2017; 2019). Further, they demonstrated that exclusively tissue-resident-like macrophages, or exclusively monocyte-like cells, can be obtained from hPSCs (Bredemeyer et al., 2022). And finally, these approaches led to the first-ever demonstration that the yolk sac EMP harbors unique, potently cytotoxic natural killer (NK) cells (Dege et al., 2020).

III. Re-Appointments

CIRM is seeking the reappointment of the individuals listed in the table below. Their updated biographies follow.

Proposed Reappointments to GWG

Last	First	Term	Years	Expertise
Robins	Allan	3	6	Stem Cell Manufacturing; Pluripotent Stem Cells

Allan Robins is currently an Independent Consultant in the area of cell therapy manufacturing, process development and manufacturing scale up. He was previously Senior Vice President, Science and Technology at ViaCyte from June 2012 until June 2017. Dr. Robins was Acting CEO of ViaCyte from May 2011 until June 2012 and Vice President and Chief Technology Officer from 2004 until 2011. He oversaw company-wide cell manufacturing and process development activities along with research operations in Athens, Georgia. Prior to ViaCyte, Dr. Robins served as Senior Vice President and Chief Scientific Officer of BresaGen, Inc., the United States subsidiary of BresaGen Limited, an Australian biotechnology company that has since been acquired by Hospira, Inc. Under Dr. Robins' leadership, BresaGen, Inc. was awarded significant support for its stem cell research from the National Institutes of Health. BresaGen merged with ViaCyte's predecessor companies in 2004. Prior to BresaGen, Inc., Dr. Robins was Vice President and Chief Scientific Officer of BresaGen Limited, where he helped raise over $30 million and developed a proprietary expression system which continues to be used in the production of protein pharmaceuticals. Dr. Robins received a B.S. with honors in biochemistry and a Ph.D. in molecular biology from the University of Adelaide in Australia. He followed his studies with postdoctoral work at Cambridge University in England.

Dr. Robins has served on the GWG for 8 years. He has reviewed for Clinical and Translational programs.

IV. Summary of Requested Action

CIRM requests ICOC approval of the proposed appointments and reappointments to the GWG.