

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

Hans Clevers, M.D., Ph.D.

Dr. Clevers is Director of the Hubrecht Institute and Professor of Molecular Genetics in Utrecht, the Netherlands. He obtained his M.D. and Ph.D. degrees from the University of Utrecht and completed his postdoctoral work with Cox Terhorst at the Dana-Farber Cancer Institute of the Harvard University, Boston, USA. Prior to his appointment as Professor of Molecular Genetics at the Hubrecht Institute, Dr. Clevers was from 1991-2002 Professor in Immunology at the University of Utrecht.

Originally focused on T lymphocyte transcription factors, Dr. Clevers' laboratory cloned Tcf1 in 1991. With the discovery that Tcf factors are the final effectors of Wnt signaling, he changed his interests to the biology of Wnt signaling in intestinal self-renewal and cancer. Dr. Clevers' laboratory has identified a series of adult tissue stem cells with the novel Lgr5 marker, currently his major focus of research.

Dr. Clevers has been a member of the Royal Netherlands Academy of Arts and Sciences since 2000 and is the recipient of several awards, including the Dutch Spinoza Award in 2001, the Swiss Louis Jeantet Prize in 2004, the Memorial Sloan-Kettering Katharine Berkan Judd Award in 2005, the Israeli Rabbi Shai Shacknai Memorial Prize in 2006, and the Dutch Josephine Nefkens Prize for Cancer Research and the German Meyenburg Cancer Research Award in 2008. He obtained an ERC Advanced Investigator grant in 2008. He is Chevalier de la Legion d'Honneur since 2005.

Dr. Christine Mummery, Ph.D.

Dr. Mummery is Chair of the Department of Anatomy and Embryology and Professor of Developmental Biology at the Leiden University Medical Center (LUMC). She studied physics at the University of Nottingham, UK and earned a Ph.D. in Biophysics at the University of London. She received a postdoctoral fellowship from the Royal Society in the UK for research at the Hubrecht Institute where she became group leader and, in 2002, Professor of Developmental Biology of the Heart for the Interuniversity Cardiology Institute of the Netherlands. In 2007 she was awarded a Harvard Stem Cell Institute/Radcliffe fellowship for a sabbatical in Harvard at Massachusetts General Hospital and the department of Disease Biophysics.

Dr. Mummery's research concerns mouse development and differentiation of mouse and human embryonic stem cells. She pioneered studies differentiating and characterizing cardiomyocytes from human embryonic stem cells and was among the first to inject them in mouse heart and assess their effect on myocardial infarction. In 2000, she introduced human embryonic stem cells into the Netherlands and subsequently received the first license to derive new lines from surplus IVF embryos. Four lines were later derived in her lab. Much of the work on

these cells has concerned their differentiation to cardiomyocytes. Since moving to the LUMC in 2008, Dr. Mummery has continued her research on heart development and the differentiation of pluripotent human cells into the cardiac and vascular lineages. Immediate interest of her lab is on using stem cell derived cardiomyocytes and vascular cells as disease models, for drug discovery and future cardiac repair.

Dr. Mummery presently serves on Ethical Councils of the Netherlands Academy of Science and Ministry of Health, providing specialized advice on human embryos and stem cell research. She is a member of several Scientific Advisory Boards and has written a popular book on stem cells. She is presently Deputy Editor in Chief of *Stem Cell Research*, lead reviewer of *Stem Cells*, and on the Editorial (Advisory) Boards of *Cell Stem Cell*, *the International Journal of Developmental Biology and Differentiation*. Dr. Mummery is an elected member of the board of ISSCR and president elect of the International Society of Differentiation. She also serves on boards of the Netherlands Heart Foundation, Netherlands Central Committee for Research on Humans and ZonMW (Netherlands Medical Research Council).

Dr. Hans Schöler, Ph.D.

Dr. Schöler is Director of the Max Planck Institute for Molecular Biomedicine and Full Professor of the Medical Faculty of the Westfälische Wilhelms-Universität in Münster, Germany; Adjunct Professor of the Medizinische Hochschule Hannover in Hannover, Germany; and Adjunct Professor of Biochemistry at the University of Pennsylvania, Center for Animal Transgenesis and Germ Cell Research in Philadelphia, USA. Dr. Schöler received his Diploma in Biology and his Ph.D. in molecular biology at Heidelberg University. Prior to his current position, Dr. Schöler has served as Staff Scientist and Head of Research Group at Heidelberg University Boehringer Mannheim GmbH Research Center and at the European Molecular Biology Laboratory and as Professor of Reproductive Physiology in the School of Veterinary Medicine at the University of Pennsylvania.

Dr. Schöler long predicted that one day we would be able to change cellular fate and identity at will. This has recently been achieved, as exemplified by our ability to redirect a cell with, say, a neuronal program to one with a germ cell program, and *vice versa*. But the basic question that more than a century ago already fascinated scientists such as August Weismann still remains unanswered: How do somatic and germline cells differ? Dr. Schöler is interested in understanding the mammalian germline, the lineage that links one generation to the next. His two broad research areas concern pluripotent stem cells and unipotent germ cells, the two principal parts of the germline. He is intrigued by the molecular mechanisms underlying the differences between somatic and germline cells, specifically regarding differential gene regulation. Most importantly, Dr. Schöler seeks to decipher how pluripotency and totipotency are induced in differentiated cells.

Dr. Schöler has received the Robert Koch Prize in 2008, is an advisory group member of the FP7 Group for Health Research of the European Commission, is a

member of numerous professional societies, and is a scientific advisory board member for the German Alliance for Rare Diseases; the Neuronal Ceroid Lipofuscinosis Foundation; the Max Planck Research Group “Stem Cell Aging” at the University of Ulm, Germany; the DFG Research Center and Cluster of Excellence Center for Regenerative Therapies Dresden; and the Royan Institute in Tehran. He is a member of the editorial boards of several international journals including *Stem Cells Reviews and Reports*; *Cell*; *Cell Stem Cell*; *Stem Cells*; *Cellular Reprogramming*; and *Molecular Reproduction and Development*.