STAFF REPORT

Meeting Date: March 1, 2016

To: Honorable Mayor & City Council

From: Gisele Grable, Community Services Administrator
Community Services Department

Subject: The Massry Prize Ceremony

Attachment:
1. Information Regarding the Massry Prize and Previous Award Winners
2. Last Year's 2015 Massry Winners
3. Letter from the Meira & Shaul G. Massry Foundation

INTRODUCTION

Over the last 20 years, The Massry Prize has been awarded to scientists who have made outstanding contributions to biomedical sciences and the advancement of health. This prestigious award has occurred annually within the City of Beverly Hills and has included the Mayor and/or City Council participation in the ceremony. The following report provides information regarding this year's awards program which occurs annually in the Beverly Hills Council Chambers. The 2016 program is proposed for Saturday, October 22, 2016.

This report is provided for information only. Unless otherwise directed by the City Council, staff intends to proceed with the coordination of the plans as described in this report.

DISCUSSION

Instituted in 1996 by the Meira and Shaul G. Massry Foundation of Beverly Hills, the Massry Prize honors scientists who have made extraordinary contributions to medicine. (The Massry Foundation is a non-profit, public foundation. Its objective is to promote education and support research in nephrology, physiology and related fields.) The prize is comprised of a monetary award, a Gold Medal and certificate presented to the recipient(s). To date, there have been 34 scientists who have been awarded the Massry Prize and over the years, 12 of the distinguished Massry honorees have proceeded to receive Nobel Prizes in their given fields of science and/or medicine.
Last year's winners were Philippe Horvath, Jennifer Doudna and Emmanuelle Charpentier (*see attachment #2 for details*).

FISCAL IMPACT

Over the years, the City of Beverly Hills has been a co-sponsor of this prestigious event by allowing the use of the Council Chambers for the award ceremony. The Massry Foundation is providing written acknowledgement of the City's contribution on its invitations and programs. No additional funding is required or provided.

RECOMMENDATION

Based on the continued participation of the City Council in the awards ceremony and the prominent nature of The Massry Prize Laureate program, unless the City Council has any concerns, staff will proceed with the coordination of logistics for the 2016 program.

This report is for information only. Staff will work with City personnel to calendar the event and finalize details for the 2016 Massry Prize Ceremony in the City's Council Chambers on Saturday, October 22, 2016.

Gisele Grable
Approved By

Attachment 1

The Massry Prize

The Meira and Shaul G. Massry Foundation established the Massry Prize in 1996 to recognize outstanding contributions to the biomedical sciences and the advancement of health. Founded by Dr. Shaul Massry, professor emeritus of medicine at the Keck School of Medicine of the University of Southern California, the nonprofit foundation promotes education and research in nephrology, physiology, and related fields.

The Massry Prize includes a substantial honorarium and twelve of its recipients have gone on to receive the Nobel Prize.

Each year a scientific theme is chosen by the Foundation. The laureates are then selected by a committee of distinguished professors representing both the University of Southern California (USC) and the University of California, Los Angeles (UCLA).

The Massry Prize is awarded in the context of a three day series of events. On Thursday of the award week, the laureates spend the day at USC meeting with faculty members, students, and postdocs. During this visit, they deliver a lecture on the science for which they have been honored. This is repeated the next day at UCLA. On Saturday morning, a formal awards ceremony is held at the Beverly Hills City Hall.

Massry Prize Winners (1996 – 2014)

2014 Massry Prize Co-Recipients - Immunotherapies for Cancer Patients		
Name, Position, & Affiliation	**Discipline**	**Scientific Contribution**
Steven A. Rosenberg, MD, PhD Chief of Surgery, National Cancer Institute	Surgery	The Curative Potential of T Cell Transfer Therapy for Human Cancer
Zelig Eshhar, PhD Professor of Immunology, Weizmann Institute of Science, Rehovot, Israel	Immunology	Chimeric Antigen Receptor for Adoptive T cell Therapy of Cancer: Emergence of the CAR Strategy
James P. Allison, PhD Professor and Chair, Department of Immunology University of Texas, MD Anderson Cancer Center	Immunology	Targeting Immune Checkpoints in Cancer Therapy

2013 Massry Prize Co-Recipients - Molecular Mechanisms of Intracellular Motility		
Michael Sheetz, Ph.D Director, Mechanobiology Institute, National University of Singapore; William R. Kenan, Jr. Professor of Biological Sciences, Columbia University	Cell Biology, Bioengineering	Mechanosensing by Controlled Myosin Contractions
James A. Spudich, Ph.D Douglass M. and Nola Leishman Professor of Cardiovascular Disease Department of Biochemistry, Stanford University	Biochemistry	The Myosin Family of Molecular Motors: Nature's Exquisite Nanomachines
Ronald D. Vale, Ph.D Professor of the Department of Cellular and Molecular Pharmacology, University of California, San Francisco; Investigator in the Howard Hughes Medical Institute	Biology, Chemistry	Mechanisms of Microtubule-Based Motors

2012 Massry Prize Co-Recipients - Genetics of Circadian Rythms		
Name, Position, & Affiliation	**Discipline**	**Scientific Contribution**
Jeffrey C. Hall, Ph.D Professor Emeritus of Biology - Brandeis University	Molecular Neuorgenetics	Genetics of Drosphila, function of the nervous system; molecular neurogenetics of courtship and molecular neurogenetics of biological rhythms
Michael Rosbash, Ph.D Professor of Biology and HHMI Investigator - Brandeis University	Behavioral Genomics	RNA processing and the genes and mechanisms that underlie circadian rhythms
Michael W. Young, Ph.D Richard and Jeanne Fisher Professor Head, Laboratory of Genetics Vice President for Academic Affairs - The Rockefeller University	Genetics	Genetics of Sleep and the Circadian Rhythms; Cloed the clock gene period

2011 Massry Prize Co-Recipients - Protein Folding		
F. Ulrich Hartl, M.D. Professor of Cellular Bio Chemistry - Max Planck Institute of Biochemistry	Cell Biology	Chaperone-assisted protein folding
Arthur Horwich, M.D Sterling Professor of Genetics - Howard Hughes Medical Institute, Yale University	Genetics	Chaperonin-mediated protein folding

2010 Massry Prize Co-Recipients - Membrane Fusion		
James E. Rothman, Ph.D. (*) Fergus F. Wallace Professor of Biomedical Scineces; Chair, Department of Cell Biology - Yale University *(*) 2013 Nobel Prize in Physiology or Medicine (with Randy Schekman and Thomas Sudhof)*	Cell Biology	Membrane fusion
Randy Schekman, Ph.D. (*) Professor and Investigator of the Howard Hughes Medical Institute - Univeristy of California, Berkeley *(*) 2013 Nobel Prize in Physiology or Medicine (with James Rothman and Thomas Sudhof)*	Molecular and Cell Biology	Cellular membranes

2009 Massry Prize Co-Recipients - MicroRNA		
Gary Ruvkun, Ph.D. Professor of Genetics - Simches Research Center, Massachusetts General Hospital, Harvard Medical School	Molecular Genetics	Co-discovery of microRNA
Victor Ambros, Ph.D. Silverman Professor of Natural Sciences, Program in Molecular Medicine - University of Massachusetts Medical School	Molecular Genetics	Co-discovery of microRNA

2008 Massry Prize Co-Recipients - Induced Pluripotent Stem Cells		
Name, Position, & Affiliation	**Discipline**	**Scientific Contribution**
Shinya Yamanaka, Ph.D. (*) Professor & Director, Center for iPS Cell Research & Application, Institute for Integrated Cell - Material Sciences; Senior Investigator & Professor of Anatomy - Kyoto University, Kyoto, Japan; J. David Gladstone Institutes, University of California at San Francisco *(*) 2012 Nobel Prize in Physiology or Medicine (with Sir John Gurdon)*	Cell Biology	Contributions to stem cell science that led to the 2007 discovery of induced pluripotent stem (iPS) cells
Rudolf Jaenisch, M.D. Professor of Biology - Whitehead Institute, Massachusetts Institute of Technology	Molecular and Cell Biology	Contributions to stem cell science that led to the 2007 discovery of induced pluripotent stem (iPS) cells
James Thomson, Ph.D. Director of Regenerative Biology and John D. MacArthur Professor; Adjunct Professor of Molecular, Cellular, & Developmental Biology - Morgridge Institute for Research, University of Wisconsin-Madison School of Medicine	Cell biology - stem cells	Groundbreaking discovery made a decade before of human embryonic stem (ES) cells and subsequent work in developing induced pluripotent stem (iPS) cells

2007 Massry Prize Co-Recipients - PET Scan; Its Clinical Applications		
Michael Phelps, Ph.D. Norton Simon Professor & Chair, Molecular & Medical Pharmacology; Director, Crump Institute for Molecular Imaging - University of California at Los Angeles, David Geffen School of Medicine	Pharmacology	The Invention of Positron Emission Tomography

2006 Massry Prize Co-Recipients - Novel Therapeutics		
Akira Endo, Ph.D. President - Biopharm Research Laboratories, Tokyo	Biochemistry	The Discovery of Statin Drugs

2005 Massry Prize Co-Recipients - RNA Interference		
Andrew Fire, Ph.D. (*) Professor of pathology and genetics - Stanford University School of Medicine *(*) Nobel Prize in Physiology or Medicine (with Craig Mello)*	Molecular Genetics	Co-discovery of RNA interference
Craig Mello, Ph.D. (*) Blais University Chair in Molecular Medicine and Howard Hughes Medical Institute Investigator - University of Massachusetts Medical School *(*) 2006 Nobel Prize in Physiology or Medicine (with Andrew Fire)*	Molecular Genetics	Co-discovery of RNA interference
David Baulcombe, Ph.D. Professor of Botany at Cambridge University - The Sainsbury Laboratory, University of East Anglia	Plant Scientist and Geneticist	Work in plants leading to the discovery of RNA interference

2004 Massry Prize Co-Recipients - Ribosomal Structure		
Name, Position, & Affiliation	**Discipline**	**Scientific Contribution**
Harry Noller, Ph.D. Director, Center for Molecular Biology of RNA, Sinsheimer Professor of Molecular Biology - University of California at Santa Cruz	Biochemistry & Molecular Biology	Groundbreaking research on the structure and function of the ribosome
Ada Yonath, Ph.D. (*) Director, Helen & Milton A. Kimmelman Center for Biomolecular Structure & Assembly; Martin S. & Helen Kimmel Professorial Chair - Weizmann Institute of Science, Rehovat, Israel *(*) 2009 Nobel Prize in Chemistry (with Venkatraman Ramakrishnan and Thomas Steitz)*	Crystallography	Groundbreaking research on the structure and function of the ribosome

2003 Massry Prize Co-Recipients - Nuclear Chromation		
C. David Allis, Ph.D. Head, Laboratory of Chromatin Biology and Epigenetics; Joy & Jack Fishman Professor - Rockefeller University	Molecular Biology	Deciphering and translating the histone code
Roger Kornberg, Ph.D. (*) Professor of structural biology - Stanford University Medical School *(*) 2006 Nobel Prize in Chemistry*	Biochemistry & Molecular Biology	Studies of the process by which genetic information from DNA is copied to RNA, "the molecular basis of eukaryotic transcription". Deciphering and translating the histone code
Michael Grunstein, Ph.D. D Distinguished Professor of Biological Chemistry - UCLA Geffen School of Medicine	Molecular Genetics	Deciphering and translating the histone code

2002 Massry Prize Co-Recipients - Transgenics		
Mario Capecchi, Ph.D. (*) Distinguished professor of human genetics & biology - University of Utah *(*) 2007 Nobel Prize in Physiology or Medicine (with Oliver Smithies and Martin Evans)*	Molecular Genetics	The discovery of principles for introducing specific gene modifications in mice by the use of embryonic stem cells
Oliver Smithies, Ph.D. (*) Excellence Professor of Pathology & Laboratory Medicine - University of North Carolina at Chapel Hill *(*) 2007 Nobel Prize in Physiology or Medicine (with Mario Capecchi and Martin Evans)*	Molecular Genetics	Discovery of principles for introducing specific gene modifications in mice by the use of embryonic stem cells

2001 Massry Prize Co-Recipients - The Ubiquitin System		
Alexander Varshavsky, Ph.D. Smits Professor of Cell Biology - California Institute for Technology	Molecular biology	The discovery of the role of ubiquitin in protein degradation
Avram Hershko, M.D., Ph.D. (*) Distinguished Professor - Rappaport Faculty of Medicine at the Technion, Haifa, Israel *(*) 2004 Nobel Prize in Chemistry (with Aaron Ciechanover and Irwin Rose)*	Biochemistry	The discovery of the role of ubiquitin in protein degradation

2000 Massry Prize Co-Recipients - Cell Cycle		
Lee Hartwell, Ph.D. (*) President & Director; Professor of Genetics - Fred Hutchinson Cancer Research Center, University of Washington *(*) 2001 Nobel Prize in Physiology or Medicine*	Molecular Genetics	The discovery of more than 50 genes crucial to controlling the cell cycle, cell growth, and cell development

1999 Massry Prize Co-Recipients - Protein Traficking		
Name, Position, & Affiliation	**Discipline**	**Scientific Contribution**
Gunter Blobel, Ph.D. (*) John D. Rockefeller, Jr., Professor - Rockefeller University *(*) 1999 Nobel Prize in Physiology or Medicine*	Cell Biology	The discovery that proteins have signals that govern their movement and position in the cell

1998 Massry Prize Co-Recipients - Growth Factors		
Judah Folkman, M.D. (deceased) Director, Vascular Biology Program; Julia Dyckman Andrus Professor of Pediatric Surgery - Children's Hospital, Harvard Medical School	Surgery and Cell Biology	Mechanisms of angiogenesis. This work founded the anti-angiogenic approach to cancer therapy.

1997 Massry Prize Co-Recipients - Regulation of Transcription		
Mark Ptashne, Ph.D. Ludwig Chair of Molecular Biology - Memorial Sloan Kettering Cancer Center	Molecular biology	Discoveries leading to the understanding of how regulatory proteins control the transcription of genes

1996 Massry Prize Co-Recipients - Signal Transduction		
Michael J. Berridge, Ph.D. Emeritus Babraham Fellow, Signalling Programme Department; Honorary Professor of Cell Signalling - Babraham Institute, University of Cambridge	Physiology and biochemistry	The discovery that inositol triphosphate acts as second messenger, linking events at the plasma membrane with the release of Ca2+ within the cell

Attachment 2

2015 - Massry Winners Helped Launch Gene Editing Revolution

The winners of the 2015 Meira and Shaul G. Massry Prize — Philippe Horvath, Jennifer Doudna and Emmanuelle Charpentier — come from different parts of the world and different backgrounds. What they have in common are significant contributions to biomedical science produced in an unexpected way: They study the immune system of bacteria.

Horvath, PhD, senior scientist at DuPont Nutrition and Health, previously worked for Danish food maker Danisco. He began researching bacteria in an effort to protect the integrity of the company's starter cultures, which are sold to companies that make cheese and ice cream.

These strains of bacteria jump-start the fermentation process in a number of foods, as long as they are active and healthy. But they are often subject to attack by viruses, called bacteriophages, a major source of product failure in the food industry.

He began researching sequences in the bacteria genome called clustered regularly interspaced short palindromic repeats, or CRISPR sequences. Between the sequences were pieces of DNA taken from viruses that had previously attacked the bacteria. If the same virus returned, those pieces of DNA would permit the bacteria to recognize and destroy it.

Horvath and colleagues later tested this by manipulating the DNA of a Streptococcus bacteria. By integrating sequences from the bacteriophage into the CRISPR sequences, they were able to create bacteria that were resistant.

In doing so, Horvath solved a long-standing problem for food companies. He also opened the door for scientists to build on his discovery and take it in a new direction.

Doudna, PhD, professor of chemistry and molecular and cell biology at UC Berkeley, and Charpentier, PhD, director of the Max Planck Institute for Infection Biology in Berlin, were also studying CRISPR sequences in bacteria. After meeting in 2011, they began working together to unravel the mechanism underlying this ability to guard against repeat attacks.

They figured out that two pieces of RNA join with protein made by the bacteria, called Cas9, to cut the DNA at a specific spot. They realized this system, which they called CRISPR-Cas9, could be used to edit genomes, not just kill viruses.

Their technique gave scientists a simple and powerful tool to add or remove genetic material at will. In laboratories, scientists have found potential therapeutic uses, including correcting sickle cell anemia and altering cancer cells to make them more amenable to chemotherapy. In theory, using CRISPR-Cas9, scientists could alter any human gene.

"And so a revolution began," said Shaul Massry, MD, professor emeritus of medicine at the Keck School of Medicine of USC. "What started as an obscure problem in commercial microbiology begat a revolution in the modification of animal genomes that will transform understanding of normal development and therapies for a wide range of diseases."

The Meira and Shaul G. Massry Foundation established the international Massry Prize in 1996 to recognize contributions to the biomedical sciences and the advancement of health. Founded by Shaul Massry, the nonprofit foundation promotes education and research in nephrology, physiology and related fields.

Attachment 3

MSMF Meira and Shaul G. Massry Foundation

Honorable Julian A. Gold, M.D.
Mayor, City of Beverly Hills
455 North Rexford Drive
Beverly Hills, CA 90210

Dear Mayor Gold:

I am writing to request the use of the Council Chamber of the City of Beverly Hills for the Award Ceremony of the Massry Prize.

As you know, this Prize was established in 1996 by the Meira and Shaul G. Massry Foundation of Beverly Hills. Since its inception and during the last 20 years the Award Ceremony was held in the Council Chamber of the City of Beverly Hills with the Mayor of Beverly Hills taking part in the ceremony and presenting the Prize. This arrangement was agreed upon many years ago by the Council of the City. As you may recall you, yourself, participated last year in the Award Ceremony.

The Massry Prize is awarded yearly to the distinguished scientist(s) who have made an extraordinary contribution to the medical and biological field that contributed to the advancement of health. The Prize consists of a 10-ounce Gold Medal, a certificate and 200,000 US dollars. To date it has been awarded to 34 scientists and 12 of them went on to win the Nobel Prize. Thus the Massry Prize becomes a good predictor of the Nobel Prize and is coveted by the Scientific Community. It indeed gives pride to me, the Massry Foundation and the City of Beverly Hills.

We would like to continue the tradition to hold the Award Ceremony in the Council Chamber of the City. I, therefore, request the use of the Chamber on Saturday, October 22, 2016, between 8:45 a.m. and noon for the 2016 Award Ceremony of the 2016 Massry Prize.

I look forward for your consideration and approval of this request.

Respectfully,

Shaul G. Massry, M.D.
President of the Meira and Shaul G. Massry Foundation