ROY VAGELOS PRO BONO HUMAMUM AWARD 2022

HONORARY Founding President

ELIE WIESEL*

PEACE NOBEL LAUREATE University Professor and Professor of Philosophy and Religion, Boston University,

⁶⁶ Thanks to their gifts to society and their determination to alleviate and cure its woes, scientists deserve to be ranked among the true friends of the human race. ⁹⁹

* In Memoriam

FOR GLOBAL HEALTH EQUITY

ROY VAGELOS PRO BONO HUMANUM

AWARD

TO STANLEY T. CROOKE



In recognition of his nearly 50 years of dedication to a novel, clinically endorsed concept of using synthetic oligonucleotides to control the expression of genes and proteins that impact disease. His singular dedi-

cation to this RNA-driven antisense platform provided a new, highly personalized pathway to resolving some of the most difficult biomedical challenges, with the ultimate potential of treating multiple infections, inflammatory conditions and cancers targeted to individual patient profiles and with minimal side-effects. Due to Dr. Crooke's years of effort as a researcher, corporate R&D executive, biotech innovator and philanthropist, nearly a dozen antisense oligonucleotides (ASO) have been approved for clinical use since 1998; additional clinical trials focused in high unmet medical need areas like neuroscience are underway.

Dr. Crooke is also recognized for his leadership in being among the first in industry to make a commitment to open science a key element of the modern R&D enterprise and to embrace the principle that even patients with the rarest of afflictions deserve the best talent and expertise our R&D industry can offer. Untold thousands of patients formerly with no hope of a cure stand to benefit from his belief in the promise of this entirely new class of medicines.

OCTOBER 27[™], 2022

AMERICAN MUSEUM OF NATURAL HISTORY New York City







PRO BONO Humanum Award



The committee follows a century-old example set in Sweden. The Prix Galien rewards excellence and novelty, and awards special honors to those who have served humanity at large. Presented at the Ceremony, the Pro Bono Humanum Award recognizes exemplary and innovative efforts in improving the human condition. This special award was presented by the late and beloved Elie Wiesel, in presence of the Prix Galien USA Committee. The Pro Bono Humanum Award was renamed the **Roy Vagelos** Pro Bono Humanum Award in 2017 in recognition of his decades of leadership in improving the state of human health through medicines innovation.



2007 P. ROY VAGELOS

Retired Chairman and CEOMerck & Co., Inc.; Chairman of the Board Regeneron Pharmaceuticals, Inc. For the River Blindness Program and his historic decision to donate the drug Mectizan to more than 530 million people in 34 countries to treat and prevent river blindness "as much as necessary for as long as necessary."

2008 SHELDON SEGAL AND THE POPULATION COUNCIL

Former Director, Center for Biomedical Research, Population Council

For their global efforts in support of reproductive health and family planning.



2010 BILL CLINTON AND PHILIPPE DOUSTE-BLAZY

Founder, Clinton Foundation and Former U.S. President; Chairman, UNITAID

In recognition of their achievements in providing treatment and increasing access to medicines for underserved populations through the UNITAID and Clinton

Foundation HIV/AIDS Initiative (CHAI) partnership.

2012

DR. FRANCIS S. COLLINS Director, U.S. National Institutes of Health Dr. Collins, Director of the National Institutes of Health (N.I.H). In recognition of his contribution

2014

DR. BERNARD KOUCHNER

Co-Founder, Doctors Without Border & Former French Minister of Foreign and European Affairs

In recognition of his role in the creation, from

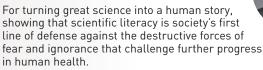
to the ethical implications of scientific research.

amongst French doctors, this group of "Doctors Without Borders" who have lent the modern field of humanitarian medicine both legitimacy and worldwide acclaim and for his fieldwork that has nurtured and developed, not only among public opinion but also within various

governments, the notion of the universality of humanitarian action and the concept of the Non-Governmental Organization.

2016 PAULA S. APSELL

Executive Producer, PBS NOVA series & Director, Science Unit, WGBH



2009 BARRY BLOOM AND JEFFREY SACHS



Professor of Public Health, Harvard University; Director, Earth Institute, Columbia University Harvard Professor Barry Bloom for bringing the fruits of basic

Harvard Professor Barry Bloom for bringing the fruits of basic biological science to those who are most needy. Columbia University Earth Institute Director Jeffrey Sachs for bringing the fruits of scholarly economics to bear our problems that have plagued the world for millennia.

2011

PR. PAUL FARMER Chief Strategist and Co-Founder,

Chief Strategist and Co-Founder, Partners In Health

For his humanitarian work in Haiti and throughout the world, including advancing the fight against infectious diseases, including AIDS and tuberculosis.



2013 DR. ANTHONY FAUCI

Director, U.S. National Institute of Allergy and Infectious Diseases

For his paramount contributions to basic and clinical research on the pathogenesis and treatment of immune mediated and infectious diseases.

2015

PR. MARY-CLAIRE KING Professor, Genome Sciences and

Professor, Genome Sciences and Medical Genetics, University of Washington

In recognition of her work in transforming the application of human genetics to medicine through identification of the first gene, BRCA1, responsible for

inherited susceptibility to breast cancer. And for pioneering the application of genetic sequencing in forensics to identify victims of human rights abuse.

2017 JIMMY CARTER Former U.S. President

Former U.S. President & Co-Founder, The Carter Center

For playing a leadership role in the elimination of river blindness in four of the six Latin American countries where it was endemic and halting the

disease's transmission in several locations in Africa where more than 99 percent of the global cases exist.



2018 BILL AND MELINDA GATES

Bill & Melinda Gates Foundation

In recognition of their extraordinary work championing scientific and technological innovation to improve life for the world's poorest

people. As co-chairs of the Bill & Melinda Gates Foundation, they have catalyzed unprecedented progress in global health, poverty reduction, and public education in the U.S.

2019

JIM AND MARILYN SIMONS



The Simons Foundation

In recognition of their proactive support of basic scientific research undertaken in the pursuit of understanding the phenomena of

our world, often including research by scientists in the early stages of their careers, a new collaborative funding model to facilitate cross-disciplinary breakthroughs, and efforts to inspire emerging and current philanthropists to dedicate a portion of their philanthropy to basic science.

2020

DR WILLIAM H. FOEGE

In recognition of this role in building the global strategy that resulted in the eradication of this smallpox virus in 1980, a success that helped foster higher rates

of immunization against many other infectious and communicable diseases throughout the developing world.

2021

In recognition of the monumental feat of having developed, in less than a year, vaccines against COVID-19, as well as having developed several novel antiviral drugs that treat CO-VID-19 symptoms based on innovative monoclonal antibody platforms. The six companies together responded to the pandemic in record time, with safe, effective treatments that hold the promise of reducing mortality and restoring normal life for untold millions of vulnerable patients.



STEPHANE BANCEL CEO - Moderna

ALBERT BOURLA Chairman & CEO - Pfizer



ALEX GORSKY

Chairman, Board of Directors & CEO - Johnson & Johnson

DAVID RICKS Chairman and Chief Executive Officer - Eli Lilly & Co.



PASCAL SORIOT CEO - Astra Zeneca

GEORGE D. YANCOPOULOS Co-Founder, President & Chief Scientific Officer - Regeneron





PRIX GALIEN USA GALIEN FOUNDATION

AN UNRIVALED REPUTATION FOR INTELLECTUAL RIGOR AND INTEGRITY..



Elie Wiesel, Peace Nobel Laureate; BAN Ki-moon, General Secretary, United Nations; Bill Clinton & Philippe Douste-Blazy,

Bill Clinton & Philippe Douste-Blazy, 2010 Prix Galien Pro Bono Humanum Award Laureate The Prix Galien USA Committee, a group of highly accomplished individuals from the scientific and research communities will jude

individuals from the scientific and research communities, will judge which among the candidates, independent of any category, is the Best Pharmaceutical Agent (i.e. small molecule), the Best Biotechnology Product and the Best Medical Technology approved by the FDA in the past five years. As few as one or as many as three prizes may be awarded in each of these categories, and the committee may decide on awards hors prix. The prizes are awarded for products and agents that significantly improve the human condition.

WHO WAS GALIEN?

Born in 131 AD, Galien is considered the father of modern medicine and pharmacology. As an anatomist, physiologist, clinician and researcher, his work formed the basis of a school of thought known as "Galenism", which dominated medicine until the Renaissance. In fact, Galien's works were used as primary medical reference for nearly two centuries. Raised in Pergamos, he studied in Smyrna, Corinth, and Alexandria, the three centers of medical excellence in the ancient world. Legend has it that Galien was visited by Aesclapius in a dream and that this inspired the direction of his life. A greek physician in Roma: when he was 17, Galien worked as a physician to the gladiatorial school. At the age of 37, Marcus Aurelius summoned him to Rome, where he grew in reputation and stature as a healer, teacher, researcher and writer. His ideas on the functioning of the human body were so well received that he became the personal doctor of young Commodus, the heir to the Emperor. He died in 201AD. During his long and eminent career, Galien completed over 500 learned works addressing anatomy, physiology, pathology, medical theory and practice, and many forms of therapy. He traveled throughout the world, studying local plants and remedies, eventually describing 473 original drugs and many substances of mineral and vegetable origin. Importantly, Galien was the first to codify the art of preparing active drugs using multiple ingredients. Galien's faculties of observation, logic and deduction made him the true successor of Hippocrates, and his declaration that the primary aim of medicine was patient care formed the very cornerstone of modern pharmacy. To quote Jean-Pierre Changeux, "Galen first showed that our mind was in the brain, not in our hearts." It can be said that this was the beginning of experimental medicine.



PRIX GALIEN A RECORD OF LEADERSHIP IN BRINGING TO THE ATTENTION OF THE WORLD



"I know the importance of the Prix Galien which rewards every year therapeutic innovations and research works among the most creative."

Emmanuel Macron French President - 2018



"I applaud Prix Galien for recognizing the pioneering spirit of America innovation and research."

> **John McCain** American Senator - 2008



"The Prix Galien is a prestigious award, a magnificent occasion to pay recognition to our researchers and to encourage our industry."

Jean Chretien Canadian Prime Minister - 1994



"The Prix Galien Awards are a true celebration of the years of hard work that are required to produce lifechanging interventions."

Bill & Melinda Gates - 2018



"I'd also like to congratulate all the candidates for the 5th Annual Prix Galien Awards Competition, which honors those in the pharmaceutical industry who have developed the technical, scientific and clinical research skills necessary to develop innovative medicines and devices. Your work is invaluable."

Margaret A. Hamburg, M.D. Commissioner of Food and Drugs US Food and Drug Administration - 2011



"The Prix Galien since 1970 is dedicated to promoting the research and development of the medicine and medicine industries."

Macky Sall Senegalese President - 2018



"The Prix Galien USA recognizes the important research necessary to develop innovative medicines and devices that have a life-saving impact on individuals and families across the globe."

Kathleen Sebelius American Secretary of Health and Human Services - 2011



"The Galien Foundation, created to honor and catalyze excellence in scientific innovation, recognizes outstanding achievement with the prestigious Prix Galien Award."

Bill De Blasio Mayor of the City of New York - 2015

THE BEST OF BIOMEDICAL DISCOVERY



"I welcome you to the annual Prix Galien awards for innovative excellence in biomedical products and health technologies. The awards are among the highest honors in science and commerce.."

Jimmy Carter American President - 2017



"The Prix Galien is the right event, on the right issue at the right time. I thank the Galien Foundation for bringing us together and for recognizing that a healthier world is a safer world and a more just world."

BAN Ki-moon UN Secretary-General - 2010



"It is a pleasure to congratulate all those who promote the Prix Galien and pharmaceutical research: they play a vital role in the fight against disease throughout the world."

> **John Major** British Prime Minister - 1996



"The Prix Galien is a welcome initiative to stimulate creative research and promote excellence."

Barack Obama American President - 2008



"I look forward to the day when we will celebrate an African winner of the Prix Galien."

Tedros Adhanom Ghebreyesus Director-General, World Health Organization - 2018



"We recognize the importance of the Prix Galien in promoting drug research, and we salute the excellent work of the Jury."

Philippe Douste-Blazy French Minister of Foreign Affairs – 2006



"I am particularly grateful to receive this Award."

Bill Clinton American President - 2010



"When Olympic rhymes with Galenic: there is a gold medal that can be won for an extraordinary achievement: this is the Galien Award, the Oscar of pharmaceutical research."

> Walter Sutter Swiss State Advisor, Director of the Public Economy - 2004



"Prix Galien recognizes men and women from the pharmaceutical and biomedical industries whose contributions of science have improved and saved countless lives."

Michael Bloomberg Mayor of the City of New York - 2010

PRIX GALIEN USA COMMITTEE 2022



Susan DESMOND-HELLMANN, MD, MPh Committee Chair Former Chief Executive Officer Bill & Melinda Gates Foundation



Richard AXEL, MD Nobel Laureate Co-director The Kavli Institute for Brain Science, Columbia University Medical Center



Linda B. BUCK, PhD Nobel Laureate Fred Hutchinson Cancer Research Center member, and Professor of Physiology and Biophysics University of Washington



Laurie GLIMCHER, MD President and CEO Dana Farber Cancer Institute; Professor of Medicine Harvard Medical School





Mary-Claire KING, PhD American Cancer Society Professor of Genome Sciences and Medical Genetics University of Washington



Robert S. LANGER David H. Koch Institute Professor Massachusetts Institute of Techonology



Cato T. LAURENCIN, MD, PhD University Professor University of Connecticut



Retired Chairman and CEO, Merck & Co., Inc. Chairman of the Board, Regeneron Pharmaceuticals, Inc.





Steven LESTER, MD Chief Medical Officer Mayo Clinic-ASU MedTech Accelerator



Michael ROSENBLATT, MD Chief Medical Officer Flagship Pioneering



Marc TESSIER-LAVIGNE, PhD President Stanford University





Pr Elie WIESEL In Memoriam Honorary Founding President The Galien Foundation Peace Nobel Laureate Boston University



Michael S. BROWN, MD Nobel Laureate Professor of Molecular Genetics and Internal Medicine UT Southwestern Medical Center at Dallas



Paul GREENGARD, PhD Nobel Laureate Professor of Molecular and Cellular Neuroscience Rockefeller University



Barry S. COLLER, MD Vice President for Medical Affairs and Physician-in-Chief, Rockefeller University



Walter GILBERT, PhD Nobel Laureate Professor Emeritus Harvard University



Eric R. KANDEL, MD Nobel Laureate Professor of physiology and Cellular Biophysics Columbia University



Joshua LEDERBERG, MD, PhD Nobel Laureate Professor Emeritus, Laboratory of Molecular Genetics and Informatics, Rockefeller University



Joseph GOLDSTEIN, MD Nobel Laureate Professor of Molecular Genetics and Internal Medicine UT, Southwestern Medical Center at Dallas



Richard A. LERNER, MD Professor of Immunochemistry, Chair in Chemistry Scripps Research Institute



Paul A. MARKS, MD Laboratory Head of Cell Biology Memorial Sloan Kettering Cancer Center



Bengt SAMUELSSON, MD, PhD

Nobel Laureate Professor Karolinska Institutet; Former President Karolinska Institutet; Former Chairman Nobel Foundation



Jan T. VILCEK, MD Professor of Microbiology New York University School of Medicine



Gerald WEISSMANN, MD Professor of Rheumatology and Director of Biotechnology Study Center New York University School of Medicine



THE GALIEN FOUNDATION INNOVATION TO IMPROVE THE HUMAN CONDITION

MISSION

The Prix Galien Award recognizes outstanding achievements in improving the global human condition through the development of innovative drugs and other treatments.

The Prix Galien was created in 1970 in honor of Galien, the father of medical science and modern pharmacology.

Worldwide the Prix Galien is regarded as the equivalent of the Nobel Prize in biopharmaceutical research.

The Prix Galien is more than an award: it is a movement with a mandate to foster, recognize and reward excellence in scientific innovation to improve the state of human health. Building on an unrivaled network of top biomedical scientists including Nobel Laureates in medicine, the Prix Galien manages an independent, cross-functional and geographically diverse program of events and sponsorships to brand "the best of the best" in new medicines and diagnostics.

Our scope is global, and our commitment to progress in medicine is both measurable and concrete. Our members express this through the establishment of productive relationships to build lasting bridges between the commercial research enterprise and local communities engaged in public policy, science, finance, academic research and the media.

In addition to recognizing advances in promising therapies, the Prix Galien's annual Roy Vagelos Pro Bono Humanum Award for humanitarian achievements (www.galienfoundation.org/index.php/2017/01/31/probono) brings a unique focus to the intersection between science, business and politics. The outcome we seek is guided by the synthesis principle that underpins the conduct of science itself: successful innovation where financing, physical assets, knowledge and skills are combined from many sources to move new ideas quickly **"from the bench to the bedside,"** on behalf of patients everywhere.

A truly global program present in 15 countries*

Our program includes a review of contributions from a new generation of innovators representing diverse sectors in health. Our mission is to advance crosscultural contacts and harmonize regulation, internal business processes, new information technologies and public-private partnerships to remove barriers to the commercialization of good medicines and expand across to these benefits to all who need them.

* Africa, Belgium, Canada, China, France, Germany, Greece, Italy, Netherlands, Poland, Russia, Spain, Switzerland, United Kingdom and the United States.



Sue Desmond-Hellmann, Ethiopia Clinic site visit

2022 : Prix Galien's 50th Anniversary

The Prix Galien Golden Jubilee : 2022 is a landmark year celebrating 50 years of progress in recognizing excellence in biopharmaceutical and med tech innovations to improve the human condition.

As a special feature our 50th Golden Jubilee year will honor the "global best of the very best" in: A- Pharmaceutical; B- Biotechnology; C- Orphan and Rare diseases; D- Vaccines; E- Medical technology products. Eligibility will be drawn from the 250 products awarded the Prix Galien by our 14 membercountry chapters between 1970 and 2019, developed by more than 80 innovative companies, most of whom continue to bring new therapies for today's patients with unmet medical needs.

The Galien Forum and Prix Galien USA Ceremony will take place on **October 27 in New York City** at the Alexandria Center for Life Science and Museum of Natural History, respectively. During the Ceremony, we will also announce the laureates for the "Awards of the Jubilee" – which will be selected by all past and present Committee members across the globe.

The Golden Jubilee Short list was announced on December 11, 2021 in Dakar in the presence of the President of the Senegalese Republic, H.E. Macky Sall, alongside many African heads of state and ministers of health and/or environment, the WHO Director-General as well as hundreds of scientists and industry and innovation leaders.

The best locale to pursue our mission is the African continent, whose young population is destined to double to 2.5 billion people by 2050. According to the World Economic Forum, early-stage entrepreneurial activity is nearly 15% higher in Africa than the global average – yet while the continent is today home to 11% of the world's population, it accounts for a mere 1% of total health spending and carries a crippling 25% of the global disease burden. Taken together, these statistics reveal the progress inherent in what in a few years will be the world's youngest and potentially most productive population, but whose prospects depend on more investment in health care as the key driver of development.

Our diverse geographic reach is evident with the International Prix Galien Awards, which launched in 1990, and is conducted every two years to highlight the "best of the best" in research that brings dividends to patients across geographies with differing health needs. This desire to make biopharmaceutical and med tech innovation a global endeavor, bringing progress to patients in all corners of the world, will now be a key priority for the Prix Galien community going forward.

Under the sponsorship of the government of Senegal and the WHO Regional Office for Africa, the Prix Galien Africa is our first truly region-wide initiative. It stands as a living tribute to the vision of Foundation co-founder, 1986 Nobel peace laureate Elie Wiesel, who believed in medical innovation not only as an industrial policy asset but as a source of social progress, where private enterprise and public engagement combine to deliver a greater public good – health equity and access for all.

We invite all communities with a commitment to the conduct and promotion of life sciences innovation to contribute to this important work.







www.galienfoundation.org The Galien Foundation 99 John Street, Suite 2502 New York, NY 10038 / Tel: 212-685-1592

