



FROM: **Albert and Mary Lasker Foundation**
New York, NY
www.laskerfoundation.org

CONTACT: **Rubenstein Communications, Inc.**
Courtney Greenwald +1-212-843-8093 cgreenwald@rubenstein.com
Janet Wootten +1-212-843-8024 jwootten@rubenstein.com

FOR IMMEDIATE RELEASE

**2016 LASKER AWARDS HONOR SCIENTISTS FOR
BASIC AND CLINICAL MEDICAL RESEARCH AND SPECIAL ACHIEVEMENT**

William G. Kaelin, Peter J. Ratcliffe, and Gregg L. Semenza for the discovery of the pathway by which cells from humans and most animals sense and adapt to changes in oxygen availability – a process essential for survival.

Ralf F.W. Bartenschlager, Charles M. Rice, and Michael J. Sofia for development of a system to study the replication of the virus that causes hepatitis C and for use of this system to revolutionize the treatment of this chronic, often lethal disease.

Bruce M. Alberts for fundamental discoveries in DNA replication and protein biochemistry; for visionary leadership in directing national and international scientific organizations to better people's lives; and for passionate dedication to improving education in science and mathematics.

(New York, September 13)—The Albert and Mary Lasker Foundation today announced the winners of the 2016 Lasker Awards for medical science: **William G. Kaelin, Peter J. Ratcliffe, and Gregg L. Semenza** for basic medical research; **Ralf F.W. Bartenschlager, Charles M. Rice, and Michael J. Sofia** for clinical research; and **Bruce M. Alberts** for special achievement. The 2016 Lasker Awards, which carry an honorarium of \$250,000 for each category, will be presented on Friday, September 23, in New York City.

“The work of this year’s honorees epitomizes the power and impact of dedication to rigorous and innovative medical research. These outstanding advances have illuminated fundamental aspects of life, developed a cure for a deadly disease, and raised public engagement with science,” said Claire Pomeroy, President of the Lasker Foundation. “The innovative and highly original achievements of these scientists highlight the critical importance of sustained support for biomedical research in attaining a healthier future for all.”

“The 2016 Lasker winners combined exceptional insight, creativity, and perseverance in pursuing crucial questions in medical science,” said Joseph L. Goldstein, University of Texas Southwestern Medical Center, and Chair of the Lasker Medical Research Awards Jury. “This year’s Basic Award laureates have deepened our understanding of the fundamental pathways by which we sense and respond to the presence of oxygen; the 2016 Clinical Award winners have provided an ingenious method to study the replication of the hepatitis C virus and

developed a potent cure for the disease; and the Special Achievement award laureate has tirelessly promoted science education as a means for improving human welfare and exemplified the best in research excellence and scientific statesmanship.”

The 2016 Albert Lasker Basic Medical Research Award:

William G. Kaelin, Peter J. Ratcliffe, and Gregg L. Semenza for their discovery of the pathway by which cells sense and adapt to changes in oxygen availability

The 2016 Albert Lasker Basic Medical Research Award honors **William G. Kaelin, Jr.**, 58, Dana-Farber Cancer Institute/Harvard Medical School, **Peter J. Ratcliffe**, 62, University of Oxford/Francis Crick Institute, and **Gregg L. Semenza**, 60, Johns Hopkins University School of Medicine, for their discovery of the pathway by which cells from humans and most animals sense and adapt to changes in oxygen availability, a process that is essential for survival.

Animals require oxygen to extract energy from food, but too much of the chemical creates peril, as certain oxygen-containing compounds wreak molecular havoc. To handle this challenge, organisms have evolved elaborate systems to furnish optimal supplies.

Kaelin, Ratcliffe, and Semenza deciphered the core molecular events that explain how almost all multicellular animals tune their physiology to cope with varying quantities of life-sustaining oxygen, thus exposing a unique signaling scheme. The biological processes that these findings revealed have unearthed possible strategies to rev up or reign in the body’s response to oxygen, possibly leading toward new therapeutics for a wide range of disorders such as anemia, cardiovascular disease, macular degeneration, and cancer.

The 2016 Lasker~DeBakey Clinical Medical Research Award:

Ralf F. W. Bartenschlager, Charles M. Rice, and Michael J. Sofia for the development of a system to study the replication of hepatitis C virus and for use of this system to revolutionize the treatment of this chronic, often lethal disease

The 2016 Lasker~DeBakey Clinical Medical Research Award honors **Ralf F. W. Bartenschlager**, 58, University of Heidelberg, **Charles M. Rice**, 64, Rockefeller University, and **Michael J. Sofia**, 58, formerly at Pharmasset, now at Arbutus Biopharma, who developed a system to study the replication of the virus that causes hepatitis C (HCV) and used this system to revolutionize the treatment of this chronic, often lethal disease.

HCV causes chronic liver infection in somewhere between 130 and 170 million people worldwide and leads to more than 350,000 deaths each year. No vaccine is available and, without treatment, about 15-30 percent of infected individuals develop liver failure or cancer. Until the work of Bartenschlager, Rice, and Sofia, therapy included drugs with side effects that many people could not tolerate and that often did not cure the disease.

Bartenschlager and Rice created a method whereby HCV can be replicated inside lab-grown human cells. Sofia then exploited this HCV replicon system to develop a medicine with unprecedented potency and safety that revolutionized treatment for this previously chronic and potentially deadly viral disease. These victories culminated in a safe, effective, oral therapy for HCV that set a new standard and transformed the treatment of a devastating viral illness.

**The 2016 Lasker~Koshland Special Achievement Award in Medical Science:
Bruce M. Alberts for fundamental discoveries in DNA replication and protein
biochemistry; for visionary leadership in directing national and international scientific
organizations to better people's lives; and for passionate dedication to improving
education in science and mathematics**

The 2016 Lasker~Koshland Special Achievement Award honors **Bruce M. Alberts**, 78, University of California, San Francisco, for fundamental discoveries in DNA replication and protein biochemistry; for visionary leadership in directing national and international scientific organizations to better people's lives; and for passionate dedication to improving education in science and mathematics.

Alberts devised powerful biochemical tools that helped him understand the mechanism by which cells copy DNA, thereby establishing a new paradigm of molecular machines that perform crucial physiological functions. Through leadership, vision, and hard work, he has improved science education for students from K–12 to postdoctoral studies. He co-authored the widely-used textbook, *Molecular Biology of the Cell*, now in its 6th edition, that has inspired countless individuals worldwide to find joy in experimentation, discovery, and logical reasoning.

As president of the US National Academy of Sciences and in other leadership roles, Alberts has advocated tirelessly to improve science education in the classroom and among the public. He has championed the notion that science and the institutions that support it provide a crucial foundation for any successful nation, arguing that evidence-based knowledge and value systems are vital for sound decisions that enhance citizens' welfare. Alberts has earned universal respect and trust from scientists and policy-makers in every corner of the planet.

About the Foundation: Founded in 1942, the Albert and Mary Lasker Foundation envisions a healthier world through the advancement of medical research. It seeks to improve health by accelerating support for medical research through recognition of research excellence, education, and advocacy. For much of the 20th century, the Foundation was led by Mary Lasker, who was America's most prominent citizen-activist for public investment in medical research. She is widely credited with motivating the White House and Congress to greatly expand federal funding for medical research, particularly through the NIH.

About the Awards: For 71 years, the Lasker Awards, America's most prestigious biomedical research awards, have recognized the contributions of scientists, clinicians, and public citizens who have made major advances in the understanding, diagnosis, treatment, cure, or prevention of human disease. Recipients of the Lasker Medical Research Awards are selected by a distinguished international jury chaired by Joseph L. Goldstein, recipient of the 1985 Lasker Award for Basic Medical Research and the Nobel Prize in Physiology or Medicine. Eighty-seven Lasker laureates have received the Nobel Prize, including 41 in the last three decades. More details on the Lasker Award recipients, the full citations for each award category, video interviews and photos of the awardees, and additional information on the Foundation are available at www.laskerfoundation.org. Follow the Awards on [Facebook](#) and [Twitter](#).

###