

THE
Flexner
DISCOVERY
LECTURE SERIES

PETER AGRE, M.D.

OPENING DOORS WORLDWIDE
THROUGH MEDICAL SCIENCE

JANUARY 21, 2016

4:00 P.M.

208 LIGHT HALL

THE
Flexner
DISCOVERY
LECTURE SERIES

Upcoming Discovery Lecture:

RODERICK J.A. LITTLE, PH.D.
Richard D. Remington Distinguished University

Jan. 28, 2016
208 Light Hall / 4:00 P.M.

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DEPARTMENT OF BIOCHEMISTRY, HNILICA LECTURESHIP
VANDERBILT INSTITUTE OF CHEMICAL BIOLOGY

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OPENING DOORS WORLDWIDE THROUGH MEDICAL SCIENCE

The major lesson I learned from a four-decade career in medical science is that we have a unique opportunity to make the world a better place. As a student at Johns Hopkins in the 1970's, I worked in an international research laboratory on the important, but not glamorous, problem of infectious diarrhea. This work brought me in contact with a group of fascinating and colorful researchers from around the world, and it certainly changed my life. Subsequently as a Johns Hopkins faculty member, our research group discovered the aquaporin water channels that facilitate the movement of water across cell membranes. This led to multiple international collaborations including studies with renal physiologists in Denmark, neuroscientists in Norway, structural biologists in Switzerland and Japan, and field workers in Zambia, Zimbabwe, and Congo. While the practical value of these discoveries is just emerging, valuable new preventive strategies and treatments for multiple disorders are anticipated, including renal failure, brain edema, blindness, wound healing, and infectious diseases. In addition to achievements in the laboratory and clinic, the human contacts we have developed have proven useful to establish scientific friendships in countries traditionally hostile to the U.S. including North Korea, Cuba, Iran, and Myanmar/Burma. Medical science is a source of great optimism for an otherwise troubled planet.



PETER AGRE, M.D.

**BLOOMBERG DISTINGUISHED PROFESSOR
AND DIRECTOR OF JOHNS HOPKINS
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MEMBER, INSTITUTE OF MEDICINE

MEMBER, NATIONAL ACADEMY OF SCIENCES

NOBEL PRIZE IN CHEMISTRY, 2003

A native Minnesotan, Peter Agre studied chemistry at Augsburg College (B.A. 1970) and medicine at Johns Hopkins (M.D. 1974). He completed his residency at Case Western Reserve University in Cleveland and an Oncology Fellowship at the University of North Carolina at Chapel Hill.

Agre joined the Johns Hopkins School of Medicine faculty in 1984 and rose to the rank of Professor of Biological Chemistry and Professor of Medicine. In 2005, Agre moved to the Duke University School of Medicine where he served as Vice Chancellor for Science and Technology and James B. Duke Professor of Cell Biology. Agre returned to Johns Hopkins in January 2008, where he is a Bloomberg Distinguished Professor and Director of the Malaria Research Institute at the Bloomberg School of Public Health.

In 2003, Agre shared the Nobel Prize in Chemistry for discovering aquaporins, a family of water channel proteins found throughout nature and is responsible for numerous physiological processes in humans and is implicated in multiple clinical disorders. Agre is a member of the National Academy of Sciences and the Institute of Medicine for which he chaired the Committee on Human Rights. From 2009-2011, Agre served as President and chair of the Board of Advisors of the American Association for the Advancement of Science.
