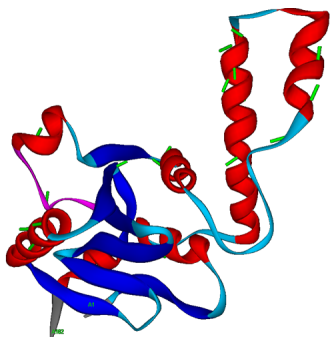
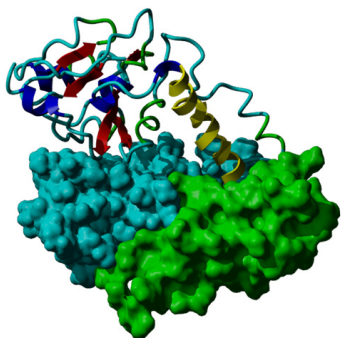


# PATHOGENIC PROTEINS

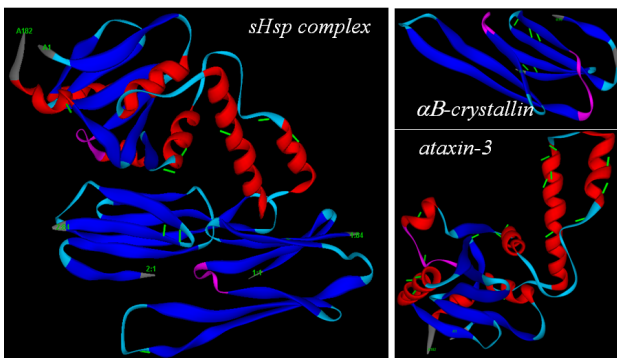
GLOBAL HEALTH & INFECTIOUS DISEASE SYMPOSIUM



Ataxin-3, the causative agent of spinocerebellar ataxia (SCA3)



A model for attachment of Human alpha-crystallin B to ataxin-3



The distribution of dehydron vulnerabilities in ataxin-3, human alpha-crystallin B, and in the predicted complex

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ST. EDWARD'S  
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# PATHOGENIC PROTEINS

GLOBAL HEALTH & INFECTIOUS DISEASE SYMPOSIUM

10.19.2012

9 a.m. | Jones Auditorium  
Robert and Pearle Ragsdale Center  
St. Edward's University

**EAMONN F. HEALY, PhD**  
St. Edward's University

**LARY C. WALKER, PhD**  
Emory University

**NEIL CASHMAN, PhD**  
University of British Columbia

**SIMONETTA SIPIONE, PhD**  
University of Alberta

**KIRA FORTUNE, PhD**  
Pan-American Health Organization

**ELIZABETH GIBBONS**  
Harvard University

A joint event brought to you by the  
**Brother Lucian Blersch Endowment** and  
The **Kozmetsky** Center of Excellence in Global Finance

 ST. EDWARD'S  
UNIVERSITY

# GLOBAL HEALTH AND WHY IT MATTERS

Global health refers to health problems, such as infectious and insect-borne diseases, that can spread from one country to another, transcending frontiers. In an increasingly connected world, diseases can move as freely as people and products. Infectious diseases (such as SARS, avian flu and drug-resistant TB) can easily cross national borders. Indirectly, rising incidences of diseases like HIV/AIDS, malaria and TB are increasing poverty and political instability in many countries, with political and economic consequences worldwide. Working to address global health problems can help prevent civil conflict in some countries. It can support economic stability and improve the quality of people's lives, which benefit both global security and the economy.

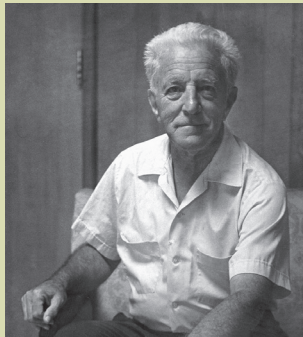
The majority of the world's healthcare resources are spent on diseases that affect 10% of the world's population. Malaria, TB, diarrheal diseases and pneumonia account for 21% of all human illness worldwide, yet they receive 0.31% of all funds devoted to research. Working to solve global health problems will help ensure that resources are distributed more fairly across the globe.

Science and global institutions can align in many ways to improve global health. This event's objective is to celebrate scientists, policymakers, practitioners, communities and philanthropists whose initiatives offer effective approaches to advancing global health, as well as to present some of the latest developments in the field.

## About the Symposium

Organized by the School of Natural Sciences and the Kozmetsky Center of Excellence in Global Finance at St. Edward's University, the event is free and open to the public. This symposium honors Brother Lucian Blersch, CSC, a longtime professor of Engineering at St. Edward's who died in 1986 and in whose name a professorship in the School of Natural Sciences was endowed by a gift from J.B.N. Morris hs '48, '52, and his family.

Learn more at:  
[stedwards.edu/lucian](http://stedwards.edu/lucian)



## SPEAKERS



**Eamonn F. Healy** is the Brother Lucian Blersch Professor of Science and Professor of Chemistry at St. Edward's University. His current research focuses on the design of structure-activity probes to elucidate enzymatic activity. The interdisciplinary approach includes molecular modeling for the simulation of inhibitor binding, overexpression of the target proteins and in vitro assays of enzymatic activity and inhibition. Targets include HIV-1 integrase, the c-Kit and src-abl proteins, and the metalloproteinases associated with CXCL16 shedding. Dr. Healy received his doctorate in chemistry from the University of Texas at Austin.



**Lary Walker** is a research professor of Neuroscience at Emory University. Research in his lab is focused on understanding the origins of Alzheimer's disease (AD) and other neurodegenerative diseases. Dr. Walker is particularly interested in the characteristics of Alzheimer-associated proteins in the brains of humans and nonhuman primates and why only humans are susceptible to AD. He and his lab team are also interested in how aging affects the cerebral vascular system and how these changes contribute to age-associated cognitive decline. Dr. Walker received his doctorate from Tulane University.



**Neil Cashman** is a professor of Medicine and the Canada Research Chair in the Brain Research Center at the University of British Columbia. Dr. Cashman is a neurologist-neuroscientist working in neurodegeneration and neuroimmunology, specializing in amyloid encephalopathies such as the prion illness, Alzheimer's disease and motor neuron diseases, particularly amyotrophic lateral sclerosis. He serves as scientific director to PrioNet Canada, one of the Networks of Centres of Excellence of Canada, which is focused on basic and applied research in the transmissible spongiform encephalopathies. He is founder and Chief Scientific Officer of Amorfix Life Sciences. Dr. Cashman earned his MD at the University of Massachusetts Medical School.



**Simonetta Sipione** is an assistant professor of Pharmacology and a Canada Research Chair in the Neurobiology of Huntington's Disease (HD) at the University of Alberta. Dr. Sipione's research is directed toward the understanding of the molecular mechanisms underlying HD.

Projects in her laboratory are mainly focused on understanding the effects of brain lipid dysregulation on function and survival of HD neurons, and on identifying the underlying mechanisms and potential therapeutic treatments. Dr. Sipione received her PhD in Biochemistry from the University of Catania, Italy.



**Kira Fortune** has worked in Africa, Asia, Europe and Latin America in public health, gender and social determinants of health. Dr. Fortune has extensive experience working with NGOs, academia and inter-governmental organizations. She has worked with the International Planned Parenthood Federation in London and UNICEF where she was responsible for the program on Prevention of Mother to Child Transmission of HIV in Tanzania. In 2008, she joined the Pan-American Health Organization, the regional office of the UN's World Health Organization, where she is responsible for the social determinants of health. Dr. Fortune holds a master's degree and a Doctorate in Sociology from University of London, and a master's degree in International Public Health from Copenhagen University.



**Elizabeth D. Gibbons** is a Distinguished Fellow at the Kozmetsky Center of Excellence in Global Finance at St. Edward's University, and she is a Visiting Scientist at the FXB Center for Health and Human Rights in the Harvard School of Public Health. Gibbons enjoyed a lengthy and distinguished career in the United Nations Children's Fund (UNICEF). Her career in social development and humanitarian affairs has spanned more than three decades, during which she lived and worked in Togo, Kenya, Zimbabwe, Haiti and Guatemala. She served as strategic regional advisor to UNICEF's Haiti operations following the devastating earthquake of 2010. A graduate of Smith College and Columbia University, Gibbons is the author of *Sanctions in Haiti: Human Rights and Democracy under Assault*.

## EVENT SCHEDULE

9 a.m.–12:15 p.m. Global Health and Infectious Disease: Pathogenic Proteins  
Eamonn F. Healy: *"Desolvated hydrogen bonds as amyloidogenic markers: new avenues for the treatment of Huntington disease"*  
Lary C. Walker: *"Kochs postulates and infectious proteins"*  
Neil Cashman: *"Transmission of SOD1 misfolding and familial ALS"*  
Simonetta Sipione: *"GM1: An Experimental Approach for Huntington Disease"*

12:30–1:30 p.m. Lunch  
Global Health: What Are Some of its Main Challenges?  
1:30–2 p.m. Kira Fortune  
2–2:30 p.m. Elizabeth Gibbons  
2.30–3:45 p.m. Panel Discussion: Health as Human Right

For directions and a map of campus, go to:  
[stedwards.edu/map](http://stedwards.edu/map).