

# 5TH ANNUAL SAFAR SYMPOSIUM

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DEFENSE ADVANCED RESEARCH PROJECTS AGENCY (DARPA)  
THE LAERDAL FOUNDATION  
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THE SAFAR CENTER FOR RESUSCITATION RESEARCH  
THE DEPARTMENT OF ANESTHESIOLOGY  
THE DEPARTMENT OF CRITICAL CARE MEDICINE  
THE WINTER INSTITUTE FOR SIMULATION, EDUCATION AND RESEARCH



UNIVERSITY OF PITTSBURGH

UNIVERSITY OF PITTSBURGH  
THURSDAY MAY 31 2007

STARZL BIOMEDICAL SCIENCE TOWER SOUTH-ROOM S100A 7:45 AM  
THE WINTER INSTITUTE FOR SIMULATION, EDUCATION AND RESEARCH 2:00 PM

# 5th Annual Safar Symposium

May 31, 2007

## Morning Session

**Location: Starzl Biomedical Science Tower  
200 Lothrop St. – South-Room S100**

7:45 AM	Continental Breakfast	10:35 – 10:45	(JL): Chief, Department of Polytrauma and Resuscitation Research, Division of Military Casualty Research <b>“Rodent Models of Blast-Induced Traumatic Brain Injury”</b> Discussion
8:15 – 12:00	<b>Advances in Resuscitation Medicine “Blast-Induced Traumatic Brain Injury”</b>	10:45 – 11:05	<b>Steven A. Parks, Commander USN (ret)</b> President, ORA <b>“Recent Developments in Large Animal Modeling of Blast-Induced Traumatic Brain Injury”</b> Discussion
<b>Moderators:</b>	<b>C. Edward Dixon, PhD and Larry W. Jenkins, PhD</b>	11:05 – 11:15	
8:15 – 8:25	<b>Opening Comments Arthur S. Levine, MD</b> Dean and Senior Vice Chancellor of the Health Sciences, University of Pittsburgh School of Medicine	11:15 – 11:35	<b>Alia Marie Dennis, MD</b> Research Fellow, Safar Center for Resuscitation Research <b>“Combined Traumatic Brain Injury and Hemorrhagic Shock in Mice: A New Model and Novel Assessment by Perfusion Magnetic Resonance Imaging”</b> Discussion
8:25 – 8:30	<b>Patrick M. Kochanek, MD</b> Director, Safar Center for Resuscitation Research	11:35 – 11:45	
8:30 – 8:50	<b>COL Geoff Ling, MD, PhD</b> Program Manager, Defense Advanced Research Projects Agency (DARPA) <b>“Blast-Induced Traumatic Brain Injury: An Overview of an Emerging Problem in Military Trauma and Terrorism”</b>	11:45 – 11:50	Presentation of the <u>5<sup>th</sup> Nancy Caroline Fellowship Award</u> Presented by Patrick M. Kochanek, MD
8:50 - 9:00	Discussion	11:50 – 12:00	Break
9:00 – 9:20	<b>COL James M. Ecklund, MD, FACS</b> Professor and Chairman, Neurosurgery Program of the National Capital Consortium <b>“Blast-Induced Traumatic Brain Injury: Clinical Perspective from the Iraq War”</b>	12:00 – 12:05	Introduction of the <i>Safar Lecture</i> —John P. Williams, MD
9:20 – 9:30	Discussion	12:05 – 12:10	Introduction of <i>Safar Lecturer</i> —Patrick M. Kochanek, MD
9:30 – 9:50	<b>Faris A. Bandak, PhD</b> Professor of Neurology, F. Edward Hébert School of Medicine, Uniformed Services University of the Health Sciences <b>“Computational Biomechanics in Blast Neurotrauma”</b>	12:10 – 12:50	<b>27<sup>th</sup> Annual Safar Lecture—David M. Gaba, MD</b>
9:50 – 10:00	Discussion	12:50 – 1:00	Questions and Discussion
10:00 – 10:15	Coffee break	1:00 – 1:45	Reception – Foyer
10:15 – 10:35	<b>Richard Bauman, PhD and Joseph Long, PhD</b> <b>(RB):</b> Systems Integrator, Defense Research Projects Agency (DARPA); PREVENT (PREventing Violent Explosive Neurologic Trauma)		

**The 27<sup>th</sup> Peter and Eva Safar Annual Lectureship  
in Medical Sciences and Humanities**

**Guest Speaker: DAVID M. GABA, MD**  
**Associate Dean, Immersive and Simulation-Based Learning**  
**Professor of Anesthesia, Stanford University**  
**Director, Patient Simulation Center of Innovation**  
**VA Palo Alto Health Care System**

**Topic: Challenges in the Use of Simulation to  
Achieve High Reliability Healthcare**

# 5th Annual Safar Symposium

May 31, 2007

## Afternoon Session

**Location: WISER, 230 McKee Place, Suite 300**

2:00 – 5:30	<b>Advances in Human Simulation Education</b>	3:35 – 4:10	<b>Amitai Ziv, MD, MHA</b> Deputy Director, Sheba Medical Center, Tel Hashomer, Israel; Founder and Director, MSR - The Israel Center for Medical Simulation
<b>Moderators:</b>	<b>David M. Gaba, MD and Paul Phrampus, MD</b>		<b>“Simulation-based Education on a National Scale: The Israeli Experience”</b>
2:00 – 2:05	<b>Opening Comments – Afternoon Session</b> <b>Paul Phrampus, MD, FACEP</b> Director, Winter Institute for Simulation, Education and Research (WISER)	4:10 – 4:15	Discussion
2:05 – 2:40	<b>Mark Bowyer, MD, FACS, DMCC, COL, USAF, MC</b> Chief, Division of Trauma and Combat Surgery, Uniformed Services University <b>“Surgical Simulation: The Current and Near Future Promise”</b>	4:15– 4:45	<b>Elizabeth Hunt, MD, MPH</b> Assistant Professor, Johns Hopkins School of Medicine, Director, Johns Hopkins Simulation Center <b>“The Use of Simulation in Pediatrics to Improve Quality of Care”</b>
2:40 – 2:45	Discussion	4:45 – 4:50	Discussion
2:45 – 3:15	<b>William McGaghie, PhD</b> Professor, Medical Education and Preventive Medicine, Northwestern University Feinberg School of Medicine, Chicago, IL <b>“Advances in Simulation-Based Medical Education and Research”</b>	4:50 – 5:20	<b>Amy Seybert, PharmD</b> Assistant Professor of Pharmacy and Therapeutics University of Pittsburgh School of Pharmacy Pharmaceutical Care Coordinator, Critical Care University of Pittsburgh Medical Center <b>“Simulation-Based Learning in Pharmacy Education”</b>
3:15 – 3:20	Discussion	5:20 – 5:25	Discussion
3:20 – 3:35	Coffee Break	5:25 – 5:30	Concluding Comments – <b>Paul Phrampus, MD</b> <b>Patrick M. Kochanek, MD</b>

# 5th Annual Safar Symposium

May 31, 2007

## Morning Session Speakers Advances in Resuscitation Research Traumatic Brain Injury

Location: Starzl Biomedical Science Tower,  
200 Lothrop St. – South-Room S100



**COL GEOFF LING, MC, USA, MD, PHD**  
Program Manager, Defense Advanced Research  
Projects Agency (DARPA)

At the agency, his focus has been on improving warfighter survival from combat related injury. There his program portfolio included Advanced Prosthesis (neural controlled robotic arm), Preventing Violent Explosion Neurotrauma (elucidating the physical mechanism by which IEDs cause traumatic brain injury and mitigating it), Human Assisted Neural Devices (brain control of assistive devices), Freeze Dried Platelets and others.

COL Ling is the only practicing neuro critical care specialist in the U.S. military. In that capacity, he has been deployed to both Operation Enduring Freedom (Afghanistan) and Operation Iraqi Freedom. In Afghanistan, he served with the 452<sup>nd</sup> Combat Support Hospital and in Iraq, he served with the 86<sup>th</sup> Combat Support Hospital, "the Baghdad ER," and the 10<sup>th</sup> Combat Support Hospital, where he was "the physician of the month" in November, 2005.

He is also Professor and Vice-Chair of Neurology at the Uniformed Services University of the Health Sciences (USUHS) in Bethesda, Maryland as well as an attending physician at Walter Reed Army Medical Center and Johns Hopkins Hospital.

Dr. Ling earned his undergraduate degree from Washington University, his Ph.D. at Cornell University and his Medical Degree from Georgetown University School of Medicine. Following a medical internship and residency at Walter Reed Army Medical Center, he completed fellowships in Neuroscience Critical Care at Johns Hopkins University in Baltimore, MD and in Neuropharmacology at Memorial Sloan-Kettering Cancer Center in New York.

Dr. Ling's research interests are mainly focused on brain injury – trauma and stroke. His laboratory at USUHS takes a broad approach to injury. Studies are done developing new diagnostic imaging approaches, novel pharmacologic agents and elucidating mechanisms of brain edema formation. He has authored over 50 journal articles and 35 reviews/book chapters, including Cecil's Textbook of Medicine.



**COL JAMES M. ECKLUND, MD, FACS**

Professor and Chairman, Neurosurgery Program of the  
National Capital Consortium

Dr. James M. Ecklund is Professor and Chairman of the Neurosurgery Program of the National Capital Consortium which includes Walter Reed Army Medical Center in Washington, D.C. and National Naval Medical Center and the Uniformed Services University in Bethesda, Maryland. He obtained his undergraduate education at the United States Military Academy at West Point, New York. He attended

medical school at the Uniformed Services University and completed neurosurgical residency at Walter Reed Army Medical Center in 1993. After residency he served as Assistant Chief and Chief of Neurosurgery at Fitzsimons Army Medical Center in Denver, Colorado. He returned to Walter Reed in 1996 and subsequently became the Chief & Residency Program Director of the Walter Reed Neurosurgical Service one year later. In 1998 the Walter Reed and National Naval programs merged into the National Capital Consortium Neurosurgery Program and he assumed the position of Chairman which he still holds.

Dr. Ecklund is a general neurosurgeon with primary clinic interests in neurotrauma, complex spine, and cerebrovascular disease. His research interests include military relevant neurotrauma with an emphasis on blast and penetrating injury. He directs a neurotrauma laboratory at the Uniformed Services University. He holds the rank of COL in the U.S. Army, and has been deployed as a Neurosurgeon to both Afghanistan and Iraq. His Neurosurgery Program has received the vast majority of the American neurotrauma casualties from the Global War on Terrorism.



**FARIS BANDAK, PHD**

Professor of Neurology, F. Edward Hébert School of Medicine,  
Uniformed Services University of the Health Sciences

Faris Bandak, Ph.D. received his doctorate from the Johns Hopkins University Whiting School of Engineering. He completed his undergraduate study in Aerospace Engineering at the University of Maryland and obtained his MS in Structural Mechanics from the George Washington University. His experiences span Academia, as a Professor; Defense Research & Development, as a Scientist and Research Engineer; and Transportation Research & Development, as a Research Engineer and Program Director. He is currently a Professor at the USUHS F. Edward Hébert School of Medicine, Department of Neurology and the President of Integrated Services Group, Inc. an applied science and analysis company. Professor Bandak served as National Expert in Biomechanics at the U.S. Department of Transportation Volpe Laboratory. During his tenure at the USDOT, he served as the Director of the Head Injury Research Program and as Acting Chief of the Division of Biomechanics Research at the National Highway Traffic Safety Administration (NHTSA). He proposed and implemented the establishment of the NHTSA National Transportation Biomechanics Research Center. He conducted extensive research in injury biomechanics, occupant protection, and air bag research. His work contributed to several of NHTSA's regulatory head

(Dr. Bandak continued)

protection initiatives including the Advanced Air Bag Frontal Crash Protection Standard and the Motorcycle Helmet Safety Standard.

He held an adjunct appointment as a Professor of Engineering and Applied Science at the George Washington University where he taught mechanics and bioengineering courses and supervised doctoral students. He also served at the USDOT Volpe Laboratory as a Senior Science Advisor and engaged in research program development in the Directorate of Safety and Security. Professor Bandak has nearly 80 publications in addition to being the editor of 4 books including *Traumatic Brain Injury: Bioscience and Mechanics* (Mary Ann Liebert Publishers). He has served in editorial positions on several scientific journals. He is currently serving as the Associate Editor of the International Journal of Crashworthiness.



### **RICHARD BAUMAN, PHD**

Systems Integrator, Defense Research Projects Agency (DARPA); PREVENT (PREventing Violent Explosive Neurologic Trauma)

After graduating SUNY at Plattsburgh in 1970 with a B.A. in Psychology, Dr. Bauman attended graduate school in the Psychology Department at UNC-Greensboro from 1970-1977. Prior to completing his Ph.D., Dr. Bauman was

Assistant Professor of Psychology at East Carolina University and was on the research staff in the ECU Medical for four years. After completing his Ph.D in Physiological Psychology and a post-doctoral appointment at Walter Reed Army Institute of Research (WRAIR), Dr. Bauman was appointed a permanent member of the WRAIR research staff. From 1989 to 1996, Dr. Bauman studied chronic stress-induced impairments of behavior and physiology and the behavioral toxicology of cyanide antidotes. In 1996, Dr. Bauman joined the WRAIR neurotrauma research team of Dr. Joseph Long and for the next 10 years studied the neuropathological changes and neurological and learning impairments resulting from seizure-induced and traumatic brain injury. Dr. Bauman's involvement in the study of blast and brain injury was initiated in 1996 with the publication of an analysis of primary blast overpressure-induced behavioral and metabolic impairments in rats. Currently, Dr. Bauman is the Systems Integrator and a performer for the Defense Research Projects Agency (DARPA) PREVENT (PREventing Violent Explosive Neurologic Trauma) proposal entitled "The clinical and preclinical characterization of the neurotrauma resulting from explosive blast: mechanisms, protection, and therapeutic interventions".



### **JOSEPH LONG, PHD**

Chief, Department of Polytrauma and Resuscitation Research, Division of Military Casualty Research

After graduating with a B.S. in biology from Bucknell University, Dr. Long headed south to Chapel Hill, NC where he received a Ph.D. in Pharmacology from the University of North Carolina School of Medicine in 1982,

working in the laboratory of Dr. John S. Kizer. He subsequently began 7 years of active duty in the U.S. Army, which was spent working in the Neuropharmacology Branch of the Department of Medical Neurosciences at the Walter Reed Army Institute of Research in Washington, D.C. Dr. Long left the military in 1989 but remained at WRAIR as a civilian investigator. In 2004, Dr. Long joined the Division of Military Casualty Research, where he currently serves as the Chief of the Department of Polytrauma and Resuscitation Research.



### **STEVEN A. PARKS, COMMANDER, USN (RET)**

President, ORA

Commander Parks was raised in rural North Carolina and attended the U.S. Naval Academy graduating with a bachelor's degree in engineering and a commission in the U.S. Navy. Following graduation, he entered the naval nuclear propulsion program serving in a variety of operational, weapons, and engineering posts, including Chief Engineer in USS VIRGINIA (CGN 38), a dual reactor nuclear powered cruiser.

Commander Parks attended the U.S. Naval Postgraduate School, Monterey, California from 1994 through 1997 graduating with a master's degree in mechanical engineering and a mechanical engineer's degree. His relevant research experience in the navy included an appointment as an adjunct staff research engineer at the Armed Forces Institute of Pathology, Washington DC and service as a Research Project Officer at the Naval Surface Warfare Center, Carderock, Maryland. While serving, Commander Parks was a designated navy Engineering Duty Officer, an engineering specialist with expertise in weapons effects, biophysics, and protection.

Following retirement from the service in 2002, Commander Parks founded ORA Inc. a defense technology research and development company. He has been actively engaged in programs to characterize blast and ballistic weapon effects leading to more effective protection systems and treatment therapies. He has served as a principal investigator for the U.S. Navy blast biophysics research program since 2003 and as a consultant for a similar U.S. Army program. Additional relevant research experience includes serving as principal investigator on a variety of Department of Defense ballistic and blast trauma research programs. Most recently he completed a one year developmental study for the Defense Advanced Research Projects Agency (DARPA) to implement a large scale blast wave generator model of blast induced neurotrauma. He currently serves as an adjunct instructor for U.S. Bureau of Alcohol, Tobacco, Firearms, and Explosives (ATF) military post blast investigation courses and breaching blast physics courses.



**ALIA MARIE DENNIS, MD**

Fellow, Pediatric Critical Care Medicine and  
Safar Center for Resuscitation Research  
University of Pittsburgh School of Medicine

Dr. Alia Dennis is a senior fellow in the Department of Critical Care Medicine/Division of Pediatric Critical Care Medicine at the University of Pittsburgh School of Medicine. She has worked for three years at the Safar Center for Resuscitation Research focusing on the investigation of the impact of hemorrhagic shock on both the evolution of neuronal death

and secondary disturbances of cerebral blood flow after experimental traumatic brain injury. She has developed a unique mouse model for these studies which set the stage for testing novel resuscitation fluids in this combined insult which is of great importance to both combat casualty care and civilian trauma care. In February 2007 she received the "In-Training Award" from the Society of Critical Care Medicine given for the top abstract submitted by a fellow to the annual congress. After graduation/fellowship completion, Alia will join the faculty at Eastern Virginia Medical School in the Department of Pediatric Critical Care Medicine, and is looking forward to resuming her Wilderness and Urban Search and Rescue career with the Virginia Department of Emergency Management.

**The 27<sup>th</sup> Peter and Eva Safar Annual Lectureship  
in Medical Sciences and Humanities**

**Guest Speaker: DAVID M. GABA, MD**

**Associate Dean, Immersive and Simulation-based Learning  
Professor of Anesthesia, Stanford University  
Director, Patient Simulation Center of Innovation  
VA Palo Alto Health Care System**

**Topic: Challenges in the Use of Simulation to Achieve High  
Reliability Healthcare**



DAVID M. GABA, MD is Associate Dean for Immersive and Simulation-based Learning and Professor of Anesthesia (with tenure) at Stanford University School of Medicine. He is also Director of the Patient Safety Culture Institute and the Patient Simulation Center of Innovation at Veterans Affairs Palo Alto Health Care System where he is a Staff Anesthesiologist. Over the last 22 years his laboratory has worked on human performance and patient safety issues. This lab is a pioneer in applying organizational safety theory to health care—including both Normal Accidents theory and High Reliability Organization

theory. Dr. Gaba and his team invented the modern full-body patient simulator and introduced Crew Resource Management training from aviation to healthcare, first in anesthesia and then to many other healthcare domains. He has been the PI on numerous grants and is currently the PI on projects concerning safety culture in hospitals and on applying simulation to address safety culture in a range of hospitals—from rural to large urban academic centers. Many of his fellows, faculty collaborators, and protégés have gone on to leadership positions on human performance in healthcare, organizational safety, and simulation in healthcare throughout the world.

Dr. Gaba has authored over 75 original articles and editorials. He is the author of 18 book chapters, and one influential book: *Crisis Management in Anesthesiology* (translated into three other languages). He has been visiting professor at many national and international academic sites and has delivered numerous named lectures. He is the Secretary of the Anesthesia Patient Safety Foundation and a founding member of the Research Committee of the National Patient Safety, and a current and founding board member of both the Society for Simulation in Healthcare and the Advanced Initiatives on Medical Simulation. He is a current and founding member of the Committee on Simulation of the ASA.

Dr. Gaba served on the editorial boards of *Anesthesiology*, *Human Factors*, and *Teaching and Learning in Medicine*. He is the current and founding Editor-in-Chief of the journal *Simulation in Healthcare*, published by the Society for Simulation in Healthcare.

Dr. Gaba was awarded the 2003 David M. Worthen Award for Academic Excellence, a national award from the Department of Veterans Affairs as well as the 2003 Duke Award for Excellence and Innovation in Anesthesia Education from the Society for Education in Anesthesia. He was one of two foreign scientists invited to address Her Majesty Queen Elizabeth II at the opening of the simulation center in Perth, Western Australia in April, 2000.

## Afternoon Session Speakers

### Advances in Human Simulation Education

**Location: WISER, 230 McKee Place, Suite 300**



#### **MARK BOWYER, MD**

Associate Professor of Surgery  
Chief, Division of Trauma and Combat Surgery; Surgical  
Director of Simulation  
National Capital Area Medical Simulation Center  
Uniformed Services University, Bethesda, Maryland, USA

Recently returned from service as the Chief of Surgery at the Air Force Theatre Hospital in Balad, Iraq, Dr. Bowyer is the Surgical Director of the world renowned National Capital Area Medical Simulation Center of the Uniformed Services University of the Health Sciences (the military medical school) in Bethesda, MD. In this role, he is responsible for the training of current and future military doctors learning to care for those in harms way. He has been on the forefront of adopting the use of surgical simulators as a replacement for animals in the teaching of advanced trauma skills. Dr. Bowyer has been integrally involved in developing a simulation based surgical curriculum for medical students and residents. Dr. Bowyer has an ongoing interest and involvement in developing and validating robust trauma, laparoscopic, triage, and critical care based simulators. Dr. Bowyer also has an interest in and is currently working on projects that utilize simulation to improve patient safety. As an acknowledged expert in the field he is in great demand as a speaker having presented in many national and international forums on simulation. Dr. Bowyer has also published widely on a diverse range of critical care, trauma, and simulation topics.



#### **WILLIAM MCGAGHIE, MD**

Professor, Medical Education and Preventive Medicine,  
Northwestern University Feinberg School of Medicine, Chicago,  
IL

Dr. McGaghie is professor of medical education and professor of preventive medicine at the Northwestern University Feinberg School of Medicine in Chicago, Illinois where he has served since 1992. He has previously held faculty positions at the University of Illinois College of Medicine at Chicago (1974 to 1978) and at the University of North Carolina School of Medicine (1978 to 1992). Dr. McGaghie's research and writing in medical education and preventive medicine ranges widely including such topics as personnel and program evaluation, research methodology, medical simulations, attitude measurement, medical student selection, concept mapping, curriculum development, faculty development, standardized patients, and geriatrics.

(Dr. McGaghie continued)

He serves on the editorial boards of six scholarly journals including *Evaluation and the Health Professions*, *Medical Teacher*, *Advances in Health Sciences Education*, *Teaching and Learning in Medicine*, *College Teaching*, and *Simulation in Health Care*. Dr. McGaghie served on the Research Advisory Committee for *Academic Medicine* (1999 to 2001) and reviews manuscripts for many other scholarly journals including the *Annals of Internal Medicine*, *JAMA*, the *New England Journal of Medicine*, and *The American Statistician*. He has been awarded research and training grants from a variety of NIH Institutes (e.g., NHLBI, NIA) and eight private foundations (e.g., Josiah C. Macy, Jr., Foundation, Charles E. Culpeper Foundation). McGaghie has served on several National Institutes of Health and Agency for Healthcare Research and Quality Study Sections (NHLBI, NIA, HUD) and as a grant application referee for several private foundations including the NBME Stemmler Fund and the Spencer Foundation. He has served as a consultant to a variety of professional organizations including the National Board of Medical Examiners, the American Board of Internal Medicine Foundation, the American Physical Therapy Association and to universities and medical schools worldwide. Dr. McGaghie has authored or edited seven books and has published more than 190 journal articles, textbook chapters, and book reviews in health professions education, preventive medicine, and related fields.



#### **AMITAI ZIV MD, MHA**

Deputy Director, Sheba Medical Center, Tel Hashomer, Israel;  
Founder and Director, MSR - The Israel Center for  
Medical Simulation

Dr. Ziv was a veteran combat pilot and instructor in the Israeli Air-Force. He is responsible for Risk Management, Quality Assurance and Medical Education. He trained as a Pediatrician in Israel (Hebrew University - Hadassah Medical Center) with sub-specialties in Adolescent Medicine (University of Pennsylvania, USA) and in Medical Management, and a Masters degree (Tel-Aviv University) in Health Administration. Dr. Ziv is on the editorial board of the Journal of the Society for Simulation in Healthcare. He is also chair of the Credentialing, Accreditation, Technology, and Standards (CATS) Committee. Dr. Ziv is a clinical senior lecturer at the Department of Behavioral Sciences of the Tel Aviv University Medical School. He also holds an Adjunct Associate Professor position at Mayo Clinic school of Medicine (Medical Education) and at Case Western Reserve University (Pediatrics).



### **ELIZABETH HUNT, MD, MPH**

Assistant Professor, Johns Hopkins School of Medicine,  
Director, Johns Hopkins Simulation Center

Elizabeth A. Hunt, MD, MPH, "Betsy", is the Director of the Johns Hopkins Simulation Center. She graduated AOA from Albany Medical College, completed a combined residency in Internal Medicine and Pediatrics, and a Pediatric Chief Residency at Duke University and

a Pediatric Critical Care fellowship at Johns Hopkins. She also completed a Masters in Public Health at the Johns Hopkins Bloomberg School of Public Health where she is now nearing completion of a PhD in Clinical Epidemiology. Her thesis involves the use of simulation to assess the performance of pediatric residents during pediatric cardiopulmonary arrests. Her work analyzing in-hospital resuscitation systems through the use of simulation has resulted in receipt of the 2003 "Pearl M. Stetler Grant for Women Researchers", the First Place Award for a Platform Presentation at the 2004 International Meeting on Medical Simulation, the 2004 Johns Hopkins "Helen Taussig Young Investigator Award" and the 2004 Johns Hopkins "Harriet Lane House Staff Appreciation Award". Dr. Hunt has been fortunate to have the opportunity to present, practice or teach about pediatric resuscitation issues throughout the world, including such diverse places such as England, Kosovo, Sweden, Uganda, Portugal, Russia and Cuba. She is currently an Attending Pediatric Intensivist in the Johns Hopkins Pediatric Intensive Care Unit, and an Assistant Professor in the Department of Anesthesiology and Critical Care Medicine.



### **AMY SEYBERT, PharmD**

Assistant Professor of Pharmacy and Therapeutics  
University of Pittsburgh School of Pharmacy  
Pharmaceutical Care Coordinator, Critical Care  
University of Pittsburgh Medical Center

Amy Lynn Seybert received her Bachelor of Science in 1994 from the University of Pittsburgh School of Pharmacy. She then completed the

post-BS Doctor of Pharmacy program at the University of Pittsburgh School of Pharmacy in 1996. After receiving her degree, Dr. Seybert completed a Cardiovascular Critical Care Specialty Pharmacotherapy residency at Tampa General Hospital. Dr. Seybert then joined the faculty at the University of Pittsburgh School of Pharmacy in August of 1997. She currently coordinates the Pharmacotherapy of Cardiovascular Disease course. Dr. Seybert also directs the Cardiovascular Specialty and Critical Care Specialty residency at the University of Pittsburgh School of Pharmacy. She is the Pharmaceutical Care Coordinator for Critical Care at the University of Pittsburgh Medical Center Department of Pharmacy. Dr. Seybert is the cardiovascular critical care pharmacy specialist at UPMC. Her clinical research specialty areas include heart failure, acute coronary syndromes, antiplatelet therapy, acute myocardial infarction, and dysrhythmia management. She is the first pharmacist to publish on simulation based learning within a school of pharmacy curriculum.