

Anesthesiology & Critical Care News

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The Department of Anesthesiology
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Editor's Note: Resuscitation of Our Newsletter

We have revived our newsletter. A large and prosperous department such as ours deserves a newsletter to provide relevant and interesting information to its faculty members, physician trainees, staff, and other employees. Indeed one was started a few years ago but entered an arrested state when the editor moved elsewhere. Following Dr. Winter's request, we have resuscitated the newsletter, this being the first edition since 1993. The members of the CPR team are indicated in the message from the Chairman. I wish to thank all of them, especially Francie Siegfried and Lisa Cohn for their excellent and tireless work in producing this issue. We welcome all of you back to the newsletter readership and invite you to submit suitable stories of important events for potential inclusion in the next issue of our newsletter. We intend to publish in the spring and fall each year.

Ake Grenvik, MD, Editor

New Leadership and a New Name for a Center With a Timeless Mission

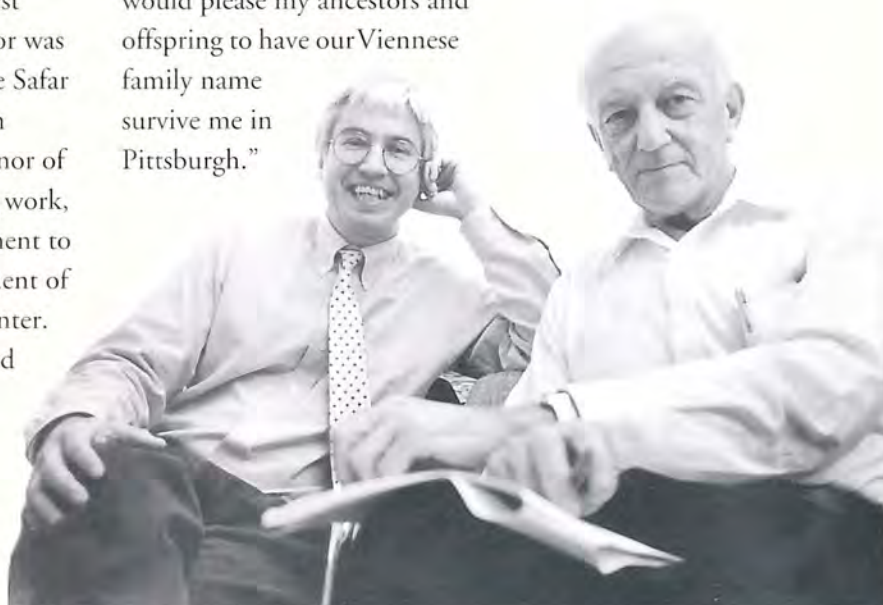
This has been a year of transition for the International Resuscitation Research Center (IRRC). On July 1, 1994, after 15 years as Director of the IRRC, Peter Safar, MD, Distinguished Service Professor of Resuscitation Medicine, turned over leadership of the center to Patrick Kochanek, MD, Associate Professor of Anesthesiology and Critical Care Medicine, and Pediatrics. "At age 55, I decided to give up the Chairmanship (of the Department of Anesthesiology/CCM), at 65, I gave up anesthetizing patients, and at age 70, I wanted to pass leadership of the IRRC on to the next generation," said Dr. Safar.

Representing the next generation, Dr. Kochanek's first official action as Director was to rename the IRRC the Safar Center for Resuscitation Research (SCRR) in honor of its founder's pioneering work, long-standing commitment to this field, and development of the multidisciplinary center. Dr. Safar at first objected to the renaming, but

finally accepted because "it would please my ancestors and offspring to have our Viennese family name survive me in Pittsburgh."

Among his many accomplishments, Dr. Safar is credited with pioneering the development of cardiopulmonary-cerebral resuscitation (CPCR), initiating the nation's first physician-staffed medical-surgical intensive care unit at Baltimore City Hospital, and establishing the world's first critical care medicine physician training program at the University of Pittsburgh. In 1978, Dr. Safar established the IRRC at the University of Pittsburgh School of Medicine to consolidate and intensify ongoing research directed toward saving lives and preventing permanent crippling due to medical emergencies such as cardiac arrest, head injury, shock and disasters.

Continued on Page 2



In the trauma and shock programs, Dr. Safar says the most important achievement has been initiation of research into a totally new approach to resuscitation.

The directorship allowed Dr. Safar to devote himself "almost full time" to resuscitation research, an area he had been involved in since the 1950s.

Cardiac arrest laboratory research at the IRRC resulted in the development of the first reproducible animal outcome models of cardiac arrest and a new treatment using mild hypothermia and cerebral blood flow promotion, which has in dogs doubled the lowest completely reversible normothermic cardiac arrest time from 5 to 10 minutes. In the trauma and shock programs, Dr. Safar says the most important achievement has been initiation of research into a totally new approach to resuscitation, suspended animation for delayed resuscitation, a method of transforming uncontrolled clinical death into controlled clinical death. The study of shock and suspended animation is Dr. Safar's current main interest. "I was convinced by my friends in the Army and the observations of trauma victims that in cases of severe trauma you have to preserve organ viability during arrest in the field to gain time for transport and fixing," said Dr. Safar. The laboratory also developed the only presently available brain trauma outcome model in large animals.

Another important area of study has been disaster reanimatology, which looks at life saving potentials in mass disaster. The IRRC initiated the first fellowship training program in this area. During his 15 years at the helm of the IRRC, Dr. Safar and his associates trained 60 research fellows, many of whom have gone on to academic leadership positions worldwide. He counts this passing of knowledge as one his most important achievements as Director. The "crowning of the last 15 years" according to Dr. Safar was the International Resuscitation Research Conference in May 1994, which was organized by IRRC fellows. The conference brought clinical leaders and scientists representing multiple disciplines from around the world to Pittsburgh to "brainstorm" on future research.

The Safar Center today is a "forum and facility" where scientists from various disciplines come together to focus on new lifesaving approaches. Research at the Safar Center involves the study of the pathobiology and therapy of resuscitation. The primary goal of the center is to improve outcome from brain trauma, cardiopulmonary arrest, and shock through an improved understanding of the mecha-

nisms of secondary injury after these events and the development and application of novel therapies.

Before assuming leadership of the SCRR, Dr. Kochanek was Director of Pediatric Critical Care Medicine Research at Children's Hospital of Pittsburgh, a position he still maintains. In 1993, Dr. Kochanek received the first Established Investigator Grant from the Society of Critical Care Medicine. The directorship came as a surprise to Dr. Kochanek, but the position has enabled him to continue his research in a collaborative facility with additional space and resources. "I was very satisfied with my position at Children's Hospital, but I had recognized over the last few years that a large, collaborative interactive group of investigators working within the same area represents the optimal research environment," reflected Dr. Kochanek. His research focus is in the area of pathobiology and mechanisms of secondary brain injury with a specific concentration on the inflammatory response to traumatic brain injury.

Thus, the change in leadership has brought a new emphasis on the area of traumatic brain injury to the Safar Center.

There has also been a shift from studies assessing functional outcome and physiological mechanisms to those investigating cellular and molecular mechanisms. "We have worked from the cell to community level in the past 15 years and Dr. Kochanek has added the molecular level," said Dr. Safar of the change. Although Dr. Kochanek has left researchers "doing their thing," he says his mechanistic

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approach may be spilling over. "Dr. Safar has traditionally focused on what intervention will produce an effect on outcome, which is spilling over into what we're doing, while our mechanistic thinking about inflammation, apoptosis, a how neurons die is spilling over into his thinking about shock...

the research directions are melding," says Kochanek. This change in focus has been accomplished through collaboration with basic scientists at the University of Pittsburgh.

Looking back over his first year in the Director position, Dr. Kochanek says the highlight has been getting to know how Safar thinks, "there is a genuine drive in this guy. For myself tackling the 'science' of an experiment or answering a simple question are important enough challenges; however, for Dr. Safar potential applicability is always a key goal. This has made for an interesting collaboration." Dr. Safar is also extremely pleased with his successor whom he credits with "bringing the center to new heights." Although its name and leadership have changed, the center continues to serve Dr. Safar's founding mission to "save hearts and brains too good to die."

— FS.

Faculty Christmas Party

Anesthesiology and CCM faculty mark your calendars for the annual Department Christmas Party. The festivities will be held at the Pittsburgh Athletic Association on December 8, 1995.

SCCM Reunion

Multidisciplinary Critical Care Training Program alumni, current fellows, and Critical Care Division faculty past and present are invited to attend a reunion during the annual meeting of the Society of Critical Care Medicine. The reception will be held on February 7, 1996 from 6:00 - 8:00 PM at the New Orleans Hilton Riverside Hotel.

Alumni Reception at ASA

By all accounts the alumni reception was a great success this year. The reception, held during the 1995 Annual Meeting of the American Society of Anesthesiologists in Atlanta, was well-attended by alumni of the department and faculty registrants. Special thanks to Dr. David Watkins for organizing and hosting the event.



Dr. W. David Watkins

New Program Targets Industry Sponsors

In April 1994, the department officially inaugurated its Clinical Trials Program (CTP), a research support program designed to serve both faculty investigators and industry sponsors.

The CTP's mission is to promote excellence in clinical research and to foster collaboration between the sponsors of clinical trials and investigators on our faculty. Our department offers an outstanding environment for clinical research in surgical and intensive care unit (ICU) settings. To help make the academic medical center accessible and attractive to study sponsors, the CTP provides essential support services to ensure maximum efficiency and quality in executing clinical trials. For example, CTP staff handle the following:

- Field inquiries from sponsors
- Handle communications with appropriate investigator
- Prepare research protocols and patient consent forms
- Submit materials to institutional review boards
- Develop budgets and arrange contracts

- Assure compliance with federal regulations and Good Clinical Practices
- Train and supervise clinical research coordinators
- Coordinate trial initiation
- Monitor and facilitate patient enrollment and study progress
- Provide quality control of data collection and record keeping
- Offer expert assistance with study design and data analysis
- Follow through with reporting after study completion

Directed by David Watkins, MD, PhD, the program staff also includes Lisa Cohn, Administrative Director; Ray Policare, RRT, MPH, Senior Clinical Research Coordinator; and Maggie Soncini, Operations Manager. Faculty consultants include Derek Angus, MB, ChB, Arthur Boujoukos, MD, Barbara Bandom, MD, Ryan Cook, MD, Peter Davis, MD, Barbara DeRiso, MD, Michael Pinsky, MD, Thomas Rudy, PhD, Carl Sirio, MD, Richard Stiller, PhD, and William Tullock, MD. A team of Clinical Research Coordinators (CRCs) has been recruited and trained to assist investigators with patient screening, enroll-

Continued on Page 4

ment, and data collection. They are Lisa Dotterweich, Beth Malley, RN, Kathy Fertal, RN, and Cindy Slivka, RN. Student research assistants work with the CRCs on some studies.

During fiscal year 1994/95, the CTP had 30 projects in progress involving 12 corporate sponsors and 22 faculty principal investigators. A total of 558 patients were enrolled,

and 11 studies were completed in that period. The PIs, their topics of study, and sponsors appear below.

All faculty are encouraged to become involved with the Clinical Trials Program. For more information, call 648-9613, email ctp@smtp.anes.upmc.edu, or visit our web site at <http://www.anes.upmc.edu>.

Clinical Trials Program Participants

<i>Principal Investigator</i>	<i>Topic of Study</i>	<i>Sponsor</i>
S. Ramanathan	Org 9487	Organon
H. Jacob/P. Linden	GM-CSF	Immunex
S. Ramanathan	Ropivacaine	Astra
J. Alpers	Sameridine	Astra
P. Dalby	CP-122,721	Pfizer
D. Angus	E5 Monoclonal Antibody	Pfizer
A. Thompson	Perflubron	Alliance
D. Watkins	Pharmacoeconomics	Glaxo
P. Linden	Synercid	Rhône-Poulenc Rorer
M. Hudson	Remote Data Entry	Astra
M. Bloom	Bispectral Analysis	Aspect
L. Firestone	Aprotinin	Miles
B. Brandom	Mivacurium	Burroughs-Wellcome
G. Mandell	Sufentanil	Janssen
L. Firestone	Rocuronium	Organon
A. Miro	Inhaled Nitrous Oxide	Ohmeda
D. Watkins/W. Chen	Remifentanil	Glaxo
V. Scott	Propofol	Zeneca
A. Boujoukos	TNF Monoclonal Antibody	Miles
W. Tullock	Rocuronium	Organon
P. Davis	Remifentanil	Glaxo
M. Mandel	Ondansetron	Glaxo
T. Boerner	Ondansetron	Glaxo
W. Tullock	Fentanyl Oralet	Abbott
N. Uy	Remifentanil	Glaxo

Teacher and Trainee Awards

At a graduation dinner held on June 10, 1995 at the Riverwatch Banquet Facilities, Dr. Jonathan Beutel was selected as the 1994-95 recipient of the Mark Gillian, MD Award for Best Clinical Resident. CCM Fellow of the Year was Dr. J. Perren Cobb.

Dr. James Green was awarded the Leroy Harris Award for Excellence in Teaching in Anesthesia by the graduating CA-3 class. In the Critical Care division, Dr. Paul Rogers was once again selected by CCM fellows as Faculty of the Year for 1994-95. Dr. Rogers also received the Golden Apple Award for best teacher in the medical school in May 1995. The recipient for this award is chosen by the graduating medical school class.

WPA Awards

Research is a valuable component of residency training. Currently we have one Schertz Fellow, Brian Williams, MD, and several other residents involved in research with a variety of faculty mentors throughout the department. In 1994-95, several awards were presented to anesthesia residents by the Western Pennsylvania Society of Anesthesiologists.

Original Research

First Prize

Elizabeth Sinz, MD



"Phenytoin, medazolam, and naloxone protect against fentanyl induced brain damage in rats"

Case Studies

First Prize

Brian Williams, MD



"Snoring and sleep apnea as risk factors for perioperative postobstructive pulmonary edema"

Second Prize

Helene Finegold, MD



"Epidural blood patch to treat persistent headache after retromastoid craniectomy"

Training Program Graduates

Anesthesia

Another successful training season was completed in June 1995, with 22 anesthesia residents and fellows graduating. Of the 15 CA-3's who graduated, all secured positions in private practice, received academic faculty placements or went on to fellowships (see list). This was an excellent result given the highly competitive job market.

Residents

Jennifer Adams, MD

Private practice in Chesapeake, Virginia

Jon-Eric Baillie, MD

Indian Health Service, Gallup Indian Medical Center, Gallup, New Mexico

Carol Baker, MD

Franklin Foundation Hospital, Franklin, Louisiana

Jonathan Beutel, MD

Jersey Shore Medical Center

Craig Cartia, MD

Fellowship in Pain Management, Texas Tech Health Science Center

Daniel Chess, MD

Temporary faculty position at the University of Pittsburgh; Private practice in Carlisle, Pennsylvania

David Demangone, MD

Fellowship in Pain Management, Allegheny General Hospital

Vitaly Gordin, MD

Fellowship in Pain Management, University of Pittsburgh

Sushma Jain, MD

Butler County Memorial Hospital

Colleen Niedzwiecki, MD

Coral Springs Medical Center, Fort Lauderdale, Florida

Daniel Sabo, MD

Faculty position, University of Pittsburgh, Magee-Womens Hospital

Elizabeth Sinz, MD

Fellowship in Critical Care Medicine, University of Pittsburgh

Anh Tran, MD

Fairfax Hospital, Virginia

Joseph Thimons, MD

Faculty position, University of Pittsburgh, Magee-Womens Hospital

Brian Williams, MD

Schertz Memorial Research Fellow, University of Pittsburgh

Fellows

Mounir Banoub, MD

Cleveland Clinic Hospitals

John Caldwell, MD

Faculty position, University of Pittsburgh

Teresa Holland, MD

Sun West Anesthesia, El Paso, Texas

Kenneth Jacobson, MD

Faculty position, New York University

Richard Kuntz, MD

Faculty position, Mercy Hospital of Pittsburgh

Steven Levin, MD

Faculty position, University of Pittsburgh

Amber Steinberg, MD

Faculty position, Thomas Jefferson Hospital, Philadelphia

Critical Care

Another successful training year also was completed by the CCM fellows in June 1995, with 25 fellows graduating and four continuing on for a second year. All graduates secured positions in private practice, hospitals, university-affiliated faculty positions, or fellowships.

Bruce Ackerman, MD

Private practice - Medical Specialist of Indiana, Intensive Care Consultative Medicine, Indianapolis, Indiana

Raye Budway, MD

Department of Surgery, Director, Surgical ICU, Western Pennsylvania Hospital

J. Perren Cobb, MD

Department of Surgery/ Surgical Critical Care, Washington University, St. Louis, Missouri

Alfredo Conde, MD

Internal Medicine/CCM Attending, Veterans Administration Medical Center, Big Springs, Texas

Diane Gowski, MD

Locum tenens

Amy Hutchinson, MD

Department of Anesthesia, Western Reserve Care System, Youngstown, Ohio

Barbara Kerwin, DO

Department of Medicine/ ICU Attending, Baptist Medical Center, Oklahoma City, Oklahoma

Suresh Lakshminarayanan, MD

Nephrology/CCM, Munster Community and St. Margaret's Hospital, Munster, Indiana

Kang Lee, MB

Department of Medicine,
Registrar at National
University Hospital &
Clinical Tutor, Singapore

Prudencio Lucero, MD

Cardiology Fellowship,
Allegheny General Hospital

Carlos Lopez, MD

Department of Anesthesia/
Critical Care, Health Science
Center at Syracuse, Syracuse,
New York

Paul McHenry, MD

Infectious Diseases/CCM,
Munson Medical Center,
Traverse City, Michigan

Donna Pearce, MD

Private Practice - Anesthesia
Attending, Tyrone,
Pennsylvania

Jeffrey Plotkin, MD

Department of Anesthesia,
Director, Liver Transplant
ICU, University of
Maryland, Baltimore

Evan Ramser, DO

Internal Medicine/CCM,
Central Maine Medical
Center, Lewiston, Maine

Ovais Raza, MD

Internal Medicine/CCM
Attending, Ball Memorial
Hospital, Inc., Muncie,
Indiana

Philippe Rico, MD

Department of Medicine,
Hopital Du Saere Couer,
Montreal, Quebec

Rafael Rico, MD

Anesthesia Residency,
University of Pittsburgh

Roland Rizzi, MD

Department of Anesthesia,
Lenox Hill Hospital, New
York, New York

Daniel Rosenblatt, MD

Internal Medicine/CCM,
JFK Medical Center, Edison,
New York

Aaron Roth, MD

Surgical/CCM, St. Agnes
Hospital, White Plains, New
York

David Ryon, MD

Internal Medicine/
Pulmonary/CCM, Holmes
Regional Medical Center,
Melbourne, Florida

Mark Wulkan, MD

Fellow - Department of
Pediatric Surgery, University
of Alabama, Birmingham

Hugo Yamada, MD

Department of Medicine,
Department of Health and
Hospital, Lake Charles,
Louisiana

Faud Zeid, MD

Department of Medicine/
Pulmonary, Centerville,
Tennessee

Pediatric Critical Care Fellows

Diane Begany, MD

Columbus Children's
Hospital, Ohio State
University

Robert Clark, MD

Children's Hospital of
Pittsburgh

Hector Wong, MD

Children's Hospital of
Cincinnati, Ohio

Welcome to New Trainees for 1995-96 CA-1 Anesthesia Residents

Fourteen new CA-1's were
welcomed to our institution in
July from the following
medical schools.

Gregory Chang, MD

University of Pittsburgh

Barbara Fried, MD

University of Virginia

Victor Kubit, MD

University of Pittsburgh

Joy Lederman, MD

Case Western Reserve
University

Alexander Lim, MD

University of Pittsburgh

Henry Malarkey, MD

SUNY HSC at Syracuse

David Metro, MD

University of Pittsburgh

Todd Oravitz, MD

University of Pittsburgh

George Ranier, MD

University of Pittsburgh

Rafael Rico, MD

Instituto Tecnológico de
Santo Domingo School of
Medicine

Denise Scaringe, MD

University of Connecticut

Victoria Sepesky, MD

University of Pittsburgh

Regis Switala, MD

University of Pittsburgh

Kenichi Tanaka, MD

School of Medicine,
Keio - Japan

This is the smallest starting class the residency has seen. Only 10 CA-1 positions will be offered for the 1997 Match, in line with the national trend to downsize training programs in an era of perceived surplus. Former residents and faculty who are outside the University can help to keep us informed regarding potential job opportunities for our trainees.



Significant changes in the training program have paralleled changes in the medical center in general. With the consolidation of Montefiore University Hospital, Presbyterian University Hospital and Eye and Ear Institute Pavilion under the UPMC banner, we are now working toward central scheduling of residents so that they can obtain the maximal clinical exposure while they are at these institutions. Responsibilities of call residents have also undergone some exciting changes, which should improve the clinical experience of our trainees.

We are always looking for new and interesting ways to challenge the residents and to improve their training. For example, we are changing the didactic seminars to a combination of problem based learning (PBL) scenarios. This change reflects the national trend of PBL training in medical education. We plan to use several faculty facilitators and possibly the Human Simulation Center (see story p. 9) to make this a worthwhile endeavor.

If you are interested in any component of the residency or in any of the trainees, please do not hesitate to contact our office at:

Anesthesia Residency Program
3471 Fifth Avenue
Suite 910 Kaufmann Building
Pittsburgh, PA 15213
(412) 692-4503
(412) 692-4515 - fax

Information about our department may be assessed on the World Wide Web:
<http://www.anes.upmc.edu>

Critical Care Fellows

Pediatric Critical Care Fellows

Danny Kofos, MD
Baylor University

Neal Thomas, MD
University of South Carolina

Anesthesiology Critical Care Fellows

Husni Dweik, MD
Monmouth Medical Center;
New York Medical College

David Hertzog, MD
Mercy Catholic Medical Center; Mercy Hospital of Pittsburgh; West Penn Hospital

Sten Rubertsson, MD, PhD
Uppsala University Hospital,
Sweden

Elizabeth Sinz, MD
University of Pittsburgh
Medical Center

Patrick Tan, MD
Royal London Hospital;
Middlesex Hospital; Faculty,
University of Malaya, Kuala Lumpur

Francis Whalen Jr., MD
SUNY at Buffalo

Internal Medicine Critical Care Fellows

Daud Ashai, MD
Deaconess Hospital,
St. Louis

Wissam Chatila, MD
Maryland General Hospital;
Bridgeport Hospital/Yale University

German DeJoya, MD
Muhlenberg Medical Center/
UMDNJ Robert Wood Johnson Medical School

James Dy, MD
St. Vincent Hospital,
University of Oklahoma;
University of Texas Medical Branch, Galveston

Abdul Garuba, MD
Harbor Hospital Center/
Johns Hopkins University

Uche Iloeje, MD
University of Connecticut Hospitals

Martine Leblanc, MD
University of Montreal Hospitals

Edwin Lee, MD
Lehigh Valley Hospital,
Allentown, Pennsylvania

Raul Santos, MD
University of Alabama,
Birmingham; Harvard University Medical Center

William Swoger, MD
Doctor's Hospital
Masillon, Ohio

Jimmy Uy, MD
SUNY Brooklyn, Kings County Medical Center;
Long Island College Hospital

Surgical Critical Care Fellows

Stephen DiRusso, MD
Vanderbilt University

Irene Medary, MD
University of Miami,
Jackson Memorial Hospital;
Memorial Sloan-Kettering Cancer Center, New York

Peter Carrillo, MD
Akron General Medical Center; McKeesport Hospital; University of Pittsburgh Medical Center

Academic departments need periodic changes in leadership. New ideas and ways of doing things can be brought to the institution

As you may have noticed, there has been a hiatus in the publication of the Department's newsletter. This delay was occasioned by the departure for Loyola University Medical Center of our former editor Dr. Helena Gunnerson. I am very pleased to say that Dr. Ake Grenvik, Distinguished Service Professor of Critical Care Medicine, has kindly agreed to become the new editor. He will be ably assisted by Doctors D. Ryan Cook, Patrick Kochanek, Michael Pinsky, and Robert Willenkin and by Ms. Lisa Cohn, Director of Publications, and Francie Siegfried, Scientific Editor. It is the purpose of the newsletter to acquaint many people associated with the department, either currently or formerly, with events, activities, accomplishments, and other matters of importance as they occur. Our department is now so large, with approximately 150 faculty, 70 trainees, and 400 non-physician members, that dissemination of information is not simple, but remains of great importance. It is hoped that this medium will alert the recipients to matters of common or individual interest.

It is also my responsibility, through the vehicle of this rejuvenated publication, to inform you of my personal plans. On June 28, 1995, I informed our departmental faculty and Dean George Bernier of my intention to step down from the position of Chairman of the Department of Anesthesiology/CCM. This was not a sudden decision, but one arrived at after considerable reflection. I had discussed the matter with Dr. Bernier a year previously. I have been in this position for 16 years — approximately twice as long as I originally intended. During this time, our department has tripled in the number of faculty, increased its

ing sevenfold, and evolved research and teaching programs of high national stature. We are now, by objective criteria, one of the dozen best departments in our field. By most criteria we rank higher than that.

My role in this evolution has been multifaceted, but largely consisted of 1) recruiting a highly talented faculty with diverse arenas of creativ-

ity, 2) organizing and managing ourselves in such a fashion that we generated sufficient funds to

support evolving department excellence, and 3) providing a dignified and supportive atmosphere in which academic accomplishments were fostered and rewarded. Simultaneously, I have tried to be a contributing and constructive member of the senior faculty of the School of Medicine.

I am delighted by our collective accomplishments and proud of them. I also believe, however, that departmental chairs should not become institutions in themselves. I have had little respect for leaders who have clung to their posts because they lacked the imagination to do otherwise. Academic departments need periodic changes in leadership. New ideas and ways of doing things can be brought to the institution. New intellectual priorities can be introduced. We all tend to assume that the ways in which we have done things over the years are the right ways, often not realizing the alternatives.

Finally, I believe that academic medicine is entering a radically new era. I have lived happily in the NIH era and the practice plan era. The





Doctors René Gonzalez and John Schaefer

coming managed care era will impose challenges that will require different leadership talents, and I have no reason to believe that I would be the ideal person for this new future. That is the way life should be.

I hope that the departmental friends and colleagues will see this evolution as an opportunity for themselves and the department. While some anxiety over pending changes is inevitable, I am certain that the coming era will be one of new growth and challenge. Personally, I am delighted with the pending changes, with the opportunity to spend more time with my wife and new daughter, and with the potential for new intellectual challenges. Last but not least, I wish to thank the many friends and associates who have and continue to be the real substance of this wonderful department. It has been the greatest privilege of my career to have been allowed to play the role I have over the last decade and a half.

New Center Expands Learning Opportunities

The University of Pittsburgh Human Simulation Center was inaugurated on May 23, 1995 by the Department of Anesthesiology and Critical Care Medicine. This exciting new resource, located on the third floor of the Montefiore University Pavilion of UPMC,

is Director and Dr. John Schaefer, III, Associate Director of the Simulation Center. The center is staffed three days a week by Joanne Fletcher, CRNA, EdD, the Coordinator and Education Specialist.

The center features the CAE Electronics full-scale human simulator. The simulator

wave form, various pressure waves, temperature appropriate CO₂ production and even urine output. The instructor may program or "create" a patient with specific pathology (i.e., coronary artery disease or pulmonary disease) and then overlay various rare or critical events. All parameters can be tailored for the level of the

trainee, and possible combinations of events and patients are virtually limitless.

The center has conducted a Crisis Resource Management course for CA-3 Anesthesiology residents since May. The day-long course involves several full-scale simulations with a full cast of OR personnel, lectures, small group discussions, and in



consists of a mock operating room (which can be converted to a mock ICU), a remote control room with a one-way mirror, a conference room and a computer-based instruction lab. A sophisticated audio-visual system was obtained for the center through an Advanced Instructional Technology grant from the University. Dr. René Gonzalez (pictured)

utilizes complex physiologic and pharmacologic computer models to mimic patient responses to drugs and therapy. It consists of a life-size mannequin with palpable radial and carotid pulses, anatomically correct airway, and normal and abnormal heart and breath sounds. The mannequin communicates with the computer to produce an EKG

depth debriefing of each resident's performance. The course provides a unique opportunity for residents to experience being the team leader in a dynamic crisis environment, followed by critique using videos of the simulation. Residents' evaluations of the course have been very positive.

Continued on Page 10

Working under a grant from CAE Electronics, the faculty have developed a difficult airway scenario. The mannequin has been adapted to offer trainees the opportunity to insert laryngeal-mask airways or combitubes and perform cricothyrotomies and transtracheal jet ventilation. Critical Care Medicine fellows participated in emergency airway management training using the simulator in October under the direction of Doctors Paul Rogers and Marie Baldisseri. The center also hosted a segment of the department's "Comprehensive Update on Airway Management '95" meeting for CME in September. The simulator is also being used for a dynamic problem-based learning curriculum for 2nd year medical students during their anesthesiology rotations under the direction of Doctors Julie Tome and Joanne Fletcher.

Those interested in obtaining more information or a tour of the Human Simulation Center should contact Dr. Gonzalez or Schaefer at (412) 647-5076, or Dr. Fletcher at (412) 648-6095.



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Dr. Leonard Firestone,
Vice Chairman for
Research



Dr. Michael Pinsky,
Director of Research,
CCM

Anesthesiology

Despite the necessary consolidation of both our research faculty and facilities in recent years, we can proudly report that 1994-95 was, by far, the most successful year in our department's history. Extramural support for research programs is a reliable indicator of such success, and even in the stiffly competitive federal funding arena, several of our faculty garnered new National Institutes of Health grants (Doctors Homanics, Xu, Firestone, Kochanek, and Miro) or awards from the Department of Veterans Affairs (Dr. Stapelfeldt). Other prestigious national and international support recently awarded to our investigators on a competitive basis came from the Foundation for Anesthesia Education and Research (Doctors Stapelfeldt, Rothfield, Yland, and Zar), the International Anesthesia Research Society (Dr. Firestone), the Society of Critical Care Medicine (Dr. Pretto), the Epilepsy Foundation (Dr. Xu), The Max Kade Foundation (Dr. Watkins), and the Laerdal Foundation. The third uniquely successful facet of our recent funding endeavors is the Clinical Trials Program. Conceived several years ago as an administrative catalyst

between our clinical scientists and industries, the program has grown exponentially during this interval (see story p. 3). Our publishing productivity has also grown both in terms of quality and quantity, and our representation at national research conferences and on national research committees has never been higher.

Division of Critical Care Medicine

Critical care research efforts are evolving, diversifying, and maturing, as our interest in cardiopulmonary physiology continues to grow. We are starting to apply results from the laboratory at the bedside using state-of-the art 2D echocardiographic automated border detection algorithms to assess left ventricular contractility to a degree only dreamed of before. Last year, 10 manuscripts utilizing this technique were published. We plan to determine if myocardial contractility really is depressed in sepsis and whether therapies such as anti-TNF alpha therapy can reverse it.

The evolution of basic science to the bedside has also occurred with the application of a novel form of partial ventilatory support called transtracheal assist. These studies examine the effects of continuous

Our program is maturing with several investigators coming to stride. Overall, more than twenty-five peer-reviewed manuscripts came out of our division last year.

transtracheal gas flow on gas exchange efficiency in patients with both ARDS and COPD. The ease of application and potential clinical benefit of transtracheal assist make this series of projects one of the most promising recent new developments in ventilatory management. Not forgetting our interest in resuscitation and sepsis, we have been exploring acid-base status, regional blood flow distribution, and the physiologic effects of fluid resuscitation in both animal models and patients. These data suggest that iatrogenic acidosis (dispositional acidosis) is not only possible but common in most resuscitated patients and that the assumptions used to measure pHi using a tonometer are probably invalid in many critically ill patients. These studies serve as a window into understanding cellular metabolic adaptations to sepsis.

Our research is diversifying as new studies from our group focus on long term outcome from critical illness and methods of assessing risk on a daily basis and across populations. Recent papers in *JAMA* and *Critical Care Medicine* by our group have placed Pittsburgh in the group of academic centers with expertise in this socially and politically relevant field of investigation. We have ex-

panded in the other direction as well, studying cytokines and cell adhesion molecule upregulation in human sepsis and tissue culture models. These developments illustrate our desire to expand vertically in critical care research from the basic molecular biology level to quality of life issues.

Finally, we developed a critical care medicine section of the Clinical Trials Program to help oversee, coordinate and recruit trials in the ICU setting (see story p. 3). To this end, we were part of the HA-1A CHES trial and are part of the ongoing E-5 (anti-endotoxin) and anti-TNF alpha trials in patients with sepsis, as well as inhaled nitric oxide and computerized protocol-controlled ventilation trials in patients with acute lung injury. In essence, Pittsburgh is becoming a one-stop shopping research program in critical care.

Our program is maturing with several investigators coming to stride. Overall, more than 25 peer-reviewed manuscripts came out of our division last year. We presented nine abstracts at SCCM, 15 at ATS, and 12 at ASA. Furthermore, we secured two new NIH grants and several industry-sponsored contracts to conduct clinical trials. Finally, we have and continue to submit grant applications to a wide

range of funding agencies with an overall success rate of about 25%. In these days of severe cost-containment, we are making waves and plan to continue to do so in the future.

Pediatric and Neonatal Critical Care Medicine

Research highlights in the Pediatric Critical Care Medicine program for the 1994-95 academic year include the successful acquisition of a Fellowship Grant by Dr. Robert Clark from the American Heart Association, Pennsylvania Affiliate for his grant entitled "The role of inflammation in cerebrovascular failure after head injury." In addition, Dr. Clark received one of the three Scientific Awards for best paper at the 24th Educational and Scientific Symposium of the Society of Critical Care Medicine (SCCM) in San Francisco. Two other Pediatric CCM fellows, Doctors Leslie Doughty and Hector Wong, received Educational Awards for top papers submitted by fellows at the annual SCCM meeting. Fellows or faculty presented twelve first author papers at the Annual Meeting of the SCCM and seven papers at the 105th Annual Meeting of the Society for Pediatric Research.

Safar Center for Resuscitation Research

Several investigators at the Safar Center for Resuscitation Research recently received special recognition for national or international achievements. Dr. Peter Safar received the Distinguished Investigator Award from the American College of Critical Care Medicine in January 1995. Thus, two of Critical Care Medicine's most prestigious research awards, the Distinguished Investigator (to P. Safar) and Established Investigator Award (to P. Kochanek) are held simultaneously by investigators at the Safar Center. Dr. Nicholas Bircher represented the Society of Critical Care Medicine at the Coalition Conference on Informed Consent in Emergency Research. Dr. Patrick Kochanek received five years of funding from the National Institute of Neurological Disorders and Stroke for both a grant entitled "Neutrophils and the acute inflammatory response to traumatic brain injury in rats" and a Core within the University of Pittsburgh Brain Trauma Research Center program project headed by Dr. Donald Marion in the Department of Neurosurgery. The Laerdal Foundation funded six grants to investigators at the Safar Center during the 1994-95 academic year.

**Peter and Eva Safar
Lectureship**

The Sixteenth Peter and Eva Safar Annual Lectureship in Medical Sciences and Humanities was held on April 13, 1995. Quality was the theme of the lecture given by Dr. Henrik H. Bendixen, former Vice President for Health Sciences and Dean of the Faculty of Medicine at Columbia University.

The Seventeenth Peter and Eva Safar Lecture will be given on May 9, 1996. Dr. Marcus Raichle, Professor of Radiology at Washington University, will deliver a lecture entitled "Images of the Mind." Dr. Raichle is a world renowned authority on functional brain imaging. In addition to being Co-director of the Mallinckrodt Institute of Radiology at Washington University, he is a member of the National Academy of

Science's Institute of Medicine. Dr. Raichle pioneered the use of positron emission tomography (PET) to map the human brain during cognition, emotion, and sensitivity, as well as while performing motor tasks.

The lectureship honors Peter Safar, MD, and his wife Eva for their professional and personal contributions to the scientific community.

**Ake and Inger Grenvik
Lectureship: Dual Honors
for Critical Care Professor**

The first annual Ake and Inger Grenvik Lectureship opened on January 24, 1995. Contributions from alumni, colleagues, corporations and friends support the endowed lectureship. The first lecturer was Timothy Buchman, MD, PhD, Professor of Surgery, Anesthesiology and Medicine and Head, Section of Trauma, Burn and

Critical Care, Washington University School of Medicine, St. Louis. Dr. Buchman spoke on molecular changes in circulatory shock.

Dr. Grenvik was named Distinguished Service Professor of Critical Care Medicine by University of Pittsburgh Provost James Maher during ceremonies surrounding the first lectureship. This honor was based on Dr. Grenvik's over 25 years of dedicated service to the University of Pittsburgh and to the field of critical care medicine. It was the first such academic title to be bestowed in the United States. Dr. Grenvik formally marked his installation as Distinguished Service Professor through his inaugural lecture entitled "Organ Crisis in Transplantation" on October 19, 1995 at the University of Pittsburgh.

The Critical Care Alliance Program (CCAP) was formed in January 1995 in an effort to create an alliance between community physicians and University of Pittsburgh Medical Center (UPMC) critical care physicians.

Critical Care Alliance Program

The goal of this outreach program is to build trust with community physicians to increase referral of critically ill patients from community hospitals to UPMC intensive care units. Critical care support services will be made available to primary care community hospital patients with life threatening illnesses. The CCAP also reaches out to local hospitals through educational programs on current issues in the management of ICU patients, a newsletter on topical critical care issues, an ICU nurse exchange program. For more information about the program, call (412) 647-7000.

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