UPCOMING RFA MEETING

“THE THEOLOGICAL INSTITUTION OF QUEEN’S COLLEGE: A BRIEF HISTORY OF THE NEW BRUNSWICK SEMINARY”

Speaker:
John W. Coakley, PhD
L. Russell Feakes Memorial Professor of Church History
New Brunswick Theological Seminary

Friday, May 1, 2015
Noon – 1:30 p.m.
Dean’s Conference Room
Rutgers Robert Wood Johnson Medical School
Piscataway

All current and retired faculty, staff, and students are welcome to attend. Lunch will be available, and contributions for the lunch may be made at the meeting.

“NEUROSURGICAL CONTRIBUTIONS TO ANESTHESIA IN THE EARLY 20TH CENTURY”

At the December 5, 2014 meeting of the RWJMS Retired Faculty Association Peter Carmel, MD, discussed two important contributions to anesthesia by neurosurgeons:

- The introduction of the ether chart,
- The introduction of clinical use of endotracheal air insufflation.

Dr. Carmel is professor of neurological surgery at the New Jersey Medical School, founding chair of the department, and former president of the American Medical Association. A brief summary of his talk is presented here.

Ether was found to be an effective anesthetic for major surgery in the mid-19th century. In 1846, John Collins Warren successfully removed a neck tumor from a patient who was sedated with ether administered by William Morton using an ether inhaler. Following the publication of the success of Warren and Morton, ether came into wide use.

Harvey Cushing, as a second-year medical student, treated a patient with obstructive bowel disease whom he anesthetized with ether. The patient vomited and aspirated, and died on the table. Cushing walked the streets of Boston for twelve hours thinking that his medical career was over. To his credit and those of his (continued on the following page)

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Fred Barker in his definitive article on the early history of the Massachusetts General Hospital concludes that the ether chart was actually first invented by Francis B. Harrington, the supervisor of Codman in 1894. The record of an ether chart by Codman made in 1894 has been preserved.

John F. Fulton's massive biography¹ of Cushing shows an ether chart introduced by Cushing and Codman in 1895 almost a year after Codman and Harrington invented it. Thus, the available evidence indicates that Codman and Harrington, and not Cushing, were the first inventors of the ether chart.

Was the ether chart a principal contribution to the technique of surgery? Fulton championed this idea. However, put in perspective, Michael Bliss in his more recent biography² of Cushing said that it was hardly the earth shattering contribution to surgery claimed by Fulton. When writing his biography, Fulton resolved that he would not say anything adverse about Cushing and attributed descriptions of Cushing’s characteristics to others. Bliss was much more objective in his critique.

**Measurement of Blood and Intracranial Pressures**

Cushing went to Bern, Switzerland in 1900 to work with Emil Theodor Kocher, who was preoccupied compiling the records of 2000 thyroidectomies. He directed Cushing to the Physiological Institute under the direction of Professor Kronecker. Kronecker suggested using a small balloon filled with mercury attached to a column to raise and measure the intracranial pressure. Cushing found that as the intracranial pressure was raised, the blood pressure went even higher. This makes teleological sense since there is a need to perfuse the brain as the intracranial pressure increases.

Cushing left Bern abruptly to go to work in Turin, Italy after a dispute with Kocher over who would describe this discovery. There Cushing worked with Angelo Mosso (a former student of Kronecker) who had a similar apparatus. While in Italy, Cushing was shown an inflatable blood pressure cuff invented by Scipione Riva-Rocco. When Cushing returned to Hopkins, he added the measurement of systolic blood pressure using this method to the ether chart.

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Neurosurgical Contributions to Anesthesia
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While the introduction of the ether chart was not a “major contribution to medicine,” discovery of the relationship between systemic and intracranial blood pressure truly was.

Cushing is regarded as the “father” of modern neurosurgery based on the 13 books that he published. He virtually founded a new surgical specialty. A second neurosurgical contribution, more important than the ether chart, was introduced to clinical practice by Dr. Charles Elsberg, who has been termed as the “father of spinal cord surgery,” based on three books he published at the very infancy of this type of surgery. Elsberg received his MD from the Colombia University College of Physicians and Surgeons in 1893 and determined to specialize in neurosurgical cases he joined the laboratory of S.J. Meltzer at the Rockefeller Institute in 1907, the year the new institute opened, joining Meltzer and Alexis Carrel who went on to win the Nobel Prize for Medicine in 1912. Meltzer was working on an experimental method for inflating the lungs with air without producing respiratory movements, facilitating operations on the lungs, heart, and great vessels.

Elsberg was appointed chief of neurosurgery at the Neurological Institute of New York when it was founded in 1909.

In May of 1910 Elsberg described the first use in humans of air insufflation anesthesia for the drainage of a lung abscess. Air insufflation anesthesia rapidly became the standard method for general anesthetics. It was replaced by positive pressure anesthesia using a cuffed endotracheal tube in the 1930’s. Both Cushing’s and Elsberg’s contributions to anesthesia have been widely acknowledged in the anesthesia literature.


Both Sides Now, a Journey from Researcher to Patient

By Alice Lazzarini, PhD
Clinical Assistant Professor of Neurology
Rutgers Robert Wood Johnson Medical School

Approaching the twentieth anniversary of seminal research that my colleagues and I did at Robert Wood Johnson Medical School, I contemplate just how far I have traveled. In 1990, Roger C. Duvoisin, then chairman of neurology, recruited me to be part of his newly endowed William Dow Lovett Laboratory for Neurogenetics to work on the genetics of ataxia. One didn’t work very long in Roger’s department, however, without getting pulled into his Parkinson’s disease (PD) research. One day, “The Boss,” as he was affectionately known by faculty and staff alike, said to me, “Alice, I want you to prove Parkinson’s is genetic.” Little did I realize just how this tall order would come to revolutionize research for Parkinson’s. Along with my Robert Wood Johnson Medical School colleagues and Richard H. Myers at Boston University School of Medicine, I published a family study of Parkinson’s that helped to support Roger’s vision.1 Then, in 1996—the same year I also completed my PhD—our team at Robert Wood Johnson Medical School, NIH, and the University of Naples reported the location of the first PD-causing mutation in a kindred originating from Contursi, a small village southeast of Naples, Italy.2 This was followed by our identification of the mutation, named PARK1, in the protein alpha-synuclein.3 Screening other laboratory samples from persons of Italian descent, I found no other carriers of the mutation. While the mutation proved to be unique to this extended family, evidence of the protein’s involvement in the classic pathology of PD followed almost immediately thereafter.4

In 1999 I was invited to join the newly formed Pharmacogenetics team at Novartis Pharmaceuticals, charged with integrating genetics into all clinical trials. My previous work (continued on the following page)
From Researcher to Patient
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ultimately lent itself to my working in the Neurosciences Department on a drug to treat Parkinson’s. By 2004 I was experiencing a fatigue so debilitating that it was interfering with my ability to maintain a full-time schedule. Soon thereafter, I realized I was developing symptoms of the very disease I researched, and was forced to accept disability. This has led to yet another career: ten years spent transitioning from an academic voice to a conversational one in order to tell this ironic story in my memoir, *Both Sides Now, A Journey from Researcher to Patient* (http://amzn.to/1zuxaew).

It was hoped that our discovery of *alpha-synuclein* would quickly move us beyond symptomatic treatment for PD to being able to modify disease progression. It has taken almost 20 years and millions of research dollars, but our breakthrough in identifying *alpha-synuclein* has come full circle. On July 31, 2014, the Austrian drug development company, AFFiRiS conducted a webinar in which they announced results from the first successful clinical trial of a vaccine (PD01A) targeting *alpha-synuclein* (http://totalwebcasting.com/view/?id=affiris). Their four-month, Phase I, safety and tolerability study suggests some immunological and clinical efficacy for Parkinson’s participants, and it has opened the door to the planning of larger studies. Prothena, an American company, has also begun looking at targeting *alpha-synuclein* with their monoclonal antibody, PRX002. The chance that either of these first-generation therapeutics will be the ultimate cure for Parkinson’s is, perhaps, remote. However, it could not be more relevant for me personally. My story has been covered in several New Jersey papers (links to which are available on the Media page of my blog, www.alicelazzarini.com), and *Psychology Today* has invited me to blog about my views from both sides of the white coat (http://www.psychologytoday.com/blog/neurogenetic-journey). If you decide to read my story, I hope you will enjoy the humor, celebrate the common bonds that sustained us at Robert Wood Johnson Medical School, and rejoice in Roger Duvoisin’s considerable legacy. Because the American Parkinson Disease Association funded some of my critical early research, I have pledged to donate 20% of the book’s proceeds to the APDA.

5 Neither I, nor any of my immediate family members, have financial disclosures or other conflicts of interest with regard to this vaccine or monoclonal antibodies.

EXPERIENCING MEDICAL PRACTICE IN MEDELLIN, COLOMBIA

By Lauren Evans

[Editor’s Note: The Robert Wood Johnson Medical School Retired Faculty Association provides financial support for the Global Health Fellowship. Ms. Lauren Evans, a second year medical student, and her two classmates spent the past summer observing and working in the medical system of Medellin, Colombia. Below is her account of the experience.]

Lauren Kurlander, Aixa Navia and I wanted to spend the summer between our first and second years of medical school improving our medical (continued on the following page)
Lauren Kurlander (left), Aixa Navia (middle), Lauren Evans (right)

Spanish skills and experiencing medical practice in Medellin, Colombia. For one month, we lived with a host family in barrio El Poblado and participated in several rotations throughout the city. We were able to experience a successful national health care system, learn about illnesses that are uncommon in the United States and experience Colombia in a very different light compared to what people had known only a generation prior.

There are multiple private and public hospitals in Medellin, and we were initially assigned to rotate in Hospital General de Medellin. In this public hospital, we spent three to four days each in surgery, OB/GYN, emergency medicine and internal medicine. In addition to being immersed in the Spanish language, we learned about the process of becoming a doctor in another country, as well as encountered the varied attitudes that some have towards Americans. For example, we met doctors who teased us about our Spanish abilities or completely ignored our presence, but on the other hand, we also met doctors who invited us to personal events such as World Cup celebrations or a Saturday at the National Art Museum to teach us about the political works of Fernando Botero. This was an eye opening experience in that it was not just a chance to experience the changing attitudes between Americans and Colombians, but also a personal glimpse of the parallels with international or immigrant experience in America.

La Clinica Infantil Santa Ana is a private non-profit children’s clinic that mainly serves the population of southern Medellin. The treatments we learned about there were based in malnutrition, such as marasmus and kwashiorkor, as well as a variety of bacterial and viral infections - especially pneumonia. It was here that we were encouraged to take basic histories in Spanish, perform pediatric physical examinations and present on rounds the patients that we followed all week. We also met a member of Colombia’s indigenous population and learned about the language, cultural and socioeconomic gaps that exist which paralleled what the three of us were trying to overcome in our own country.

Our fourth and final week was spent at El Instituto Colombiano de Medicina Tropical. This is a public health clinic and research laboratory that served the coastal regions of Choco, Amazonas and La Guaria. We met and interviewed patients with a variety of diseases that we had learned about in the classroom but never thought we would actually encounter in our careers. This included cases of leprosy, mucosal and cutaneous leishmania and leptospirosis. The faculty here was very receptive to us and by this time our Spanish had improved dramatically, thus allowing us to speak with everyone about Medellin culture, religion, politics and the World Cup.

In addition to our rotations, we took 20 hours of Spanish lessons over the four weeks and

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Named “Most Innovative City in the World-2013”, Medellin is the only city in Colombia with a metroline. This is the view from the free gondola style lift designed to connect residents of one of the most impoverished barrios in the city, Santa Maria, to the Metro station.
Medical Practice in Colombia
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graduated from pronunciation and basic vocabulary to grammar and medical conversation, and ultimately to conversing on abstract concepts. When learning another language, there is no substitute for immersion learning. When we returned to the United States, I felt very comfortable conversing in Spanish and was confident that I knew what was being communicated.

Seleccion Colombia placed 5th in the FIFA World Cup 2014. Civic holidays were announced the afternoons of the Colombia games so that everyone in the country could watch.

The Rutgers Robert Wood Johnson Medical School Office of Global Health and Universidad CES did an excellent job of securing housing for us with a warm and inviting host family in a safe neighborhood. Our host mom made traditional Colombian meals for us, took us to some of her favorite areas of Medellin and even took us to volunteer at the local orphanage where she had adopted her son.

In conclusion, Medellin, “The City of Eternal Spring” as it is affectionately named, taught me more about myself in one month that I could ever have dreamed. Traveling abroad gives students the perspective they need to have a deeper understanding of the people they will encounter in their careers as well as a firm grounding of their role as physicians in society. At times, medical school can be an isolating and difficult journey but this trip served as a reminder to always strive to broaden my horizons and reminded me of the larger purposes of becoming a doctor.

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NEWS FROM AFAR

Norman Edelman, MD: I thank the Robert Wood Johnson Medical School Retired Faculty Association for inviting me to write this although I’m not sure I qualify as I am not yet retired. It’s been about eighteen years since I left Robert Wood Johnson Medical School so a few things have happened. The first ten years were spent as dean of the Medical School and vice-president for health sciences at Stony Brook. They were turbulent times with severe economic and equally severe political challenges; accordingly [I like to tell myself] there were no really great accomplishments. I did focus on developing interdisciplinary programs, which turned out to be fortunate as I now am comfortably ensconced in the Public Health Program which I established. After administrative life ended I did a sabbatical year with the health policy people at Colombia. That is now my main teaching and research area at Stony Brook and to a lesser degree at Colombia. My focus is on the healthcare workforce, especially medical residency training. I am convinced that medical educators waste a lot of time fine tuning the medical school experience when the issues of both numbers and type of practitioners must be solved at the GME level. My research model makes great use of MPH students. It’s a slow but mutually rewarding model.

Late in my career I have discovered that I enjoy teaching and now do a lot of it over a wide range, from college freshman to specialty fellows. I have managed to keep my hand in pulmonary medicine, supervising the fellows’ pulmonary diseases clinic and retaining my consulting position as de-facto medical director for the American Lung Association. I am pleased with the success of the nationwide Airways Clinical Research Centers network we have developed in that venue.

My personal and family life remains quite rewarding. I feel honored that my son went into the family business and is now a successful health services researcher at Duke. He remembers his years at Robert Wood Johnson Medical School fondly. My wife Ida and I would like to travel more than we do but are constrained by her limited mobility due to Parkinson’s disease. Nevertheless we still get to some of our favorite places.

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News from Afar: N. Edelman
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Oh yes, there is one more thing. I was recently appointed to the Rutgers Board of Trustees with assignment to sit with the Health Affairs Committee of the Board of Governors. I am immensely pleased that the absorption of UMDNJ into Rutgers, which I strongly supported, has been accomplished. There is no doubt that when the necessary transformations are completed RWJMS will emerge as a much stronger institution. However, there is also no doubt that there will be some significant challenges along the way. I fully support the current leadership in their efforts to make necessary changes and am keenly aware that my responsibility as a trustee is to the University as a whole and not to a single unit. Nevertheless I will do my best to keep an eye on our still active colleagues at RWJMS.

Norman
norman.edelman@stonybrookmedicine.edu

Photos of the Month

(Left photo) Michael Gallo sailing to the pier to pick up his family. Michael and his wife, Carole Ann, spend most summer months with their children and their families bird watching, sailing on the Nantucket Sound, and enjoying the beach.

(Right photo) Michael Gallo and his daughter, Colleen, at Wychmere Harbor, Harwich Port, Massachusetts, about to go sailing on his catboat "Notuition."
Arthur Hess, PhD, 1927 - 2015

Dr. Arthur Hess, who was first chair of the Department of Anatomy at the newly formed Rutgers Medical School of Rutgers University (eventually renamed Robert Wood Johnson Medical School) from 1967 until his retirement in 1993, died at his home in Highland Park, New Jersey on January 5, 2015.

Throughout his career Dr. Hess contributed broadly to the neuroanatomy of vertebrates and invertebrates, beginning with the first demonstration of nodes of Ranvier in the central nervous system in his thesis at University College London and with fundamental work on the organization of skeletal and extra-ocular muscle and carotid body chemoreceptors. Later at Robert Wood Johnson Medical School he worked on the pathology of Parkinson’s disease. He published over 80 scientific papers during the course of his academic life, including a 1986 article co-authored with his son, Doug, on the mammalian cerebellum. Throughout his career he organized and taught yearly courses required for medical students in neuroanatomy/neuroscience from which he derived great satisfaction.

He received a full scholarship to the undergraduate program at the University of Arkansas in Fayetteville where he obtained a BS in 1946. He stayed an additional year and received an MS in 1947.

He then moved to London where he became a PhD candidate under J.Z. Young, a prominent neuroscientist of his era, at University College London, receiving his PhD in 1949. His first professional appointments were as instructor and then assistant professor in the Department of Anatomy at Washington University School of Medicine in St. Louis, Missouri, from 1951-1961. While there, he met and married his wife, Gloria Joy Tomsen, and they had a son Doug in 1954. In 1956, Dr. Hess took a year-long sabbatical and returned to England where he worked at Cambridge University and continued a life-long affinity for all things British. Upon returning to Washington University, he and his wife, Gloria, had a daughter, Elisa in 1958. In 1959, Arthur received the degree of Doctor of Science (DSc) from University College London in recognition of a substantial contribution to scientific knowledge beyond that required for a PhD. He served as an associate professor in the Department of Physiology at the University of Utah College of Medicine from 1961 to 1967. Following that he became chair of the Department of Anatomy at Robert Wood Johnson Medical School.

A year after retiring from Robert Wood Johnson Medical School, Arthur suffered a stroke that left him with unilateral paralysis, dysphagia, impaired ability to read and wheelchair-dependent. After extensive rehabilitation and physical therapy at the JFK Johnson Rehabilitation Institute, he slowly regained the ability to speak clearly and with much persistence he taught himself to read again. His wife, Gloria, cared for him for several years until she began experiencing health issues herself. She died in 2009 and Elisa Rossetti, his daughter, left California where she had been for many years and moved in with her father at his home in Highland Park, New Jersey. His daughter was with him for the last five and a half years of his life. He is survived by his daughter, Elisa Rossetti of Berkeley CA, and son, Doug Hess of Cleveland, Ohio.
Robert Wood Johnson Medical School Retired Faculty Association
Global Health Fellowship Fund

The RFA is sponsoring medical students to learn, help, and teach in foreign countries, a potentially life-changing experience under the aegis of the Global Health Initiative of Rutgers Robert Wood Johnson Medical School. The RFA is helping to support summer programs or international electives for medical students and is asking you to consider adding your support to this effort. All funds go to help the students without any deduction for administrative expense. In calendar year 2014, the RFA members donated $3,393 for the support of the fellowship fund.

You can submit your donation to support the RFA Global Health Fellowship Fund by sending a check made payable to the “RWJMS Retired Faculty Association” and mail it to Paul Lehrer, PhD, Department of Psychiatry, Rutgers Robert Wood Johnson Medical School, 671 Hoes Lane, Piscataway, NJ 08854. All contributions are tax deductible as charitable contributions. The RFA is a 501(c)(3) tax-exempt organization.

The following people have made donations to support this fellowship in the 2014/2015 (September 1, 2014 – August 31, 2015) cycle:

- James Chandler
- Michael Gallo
- Norma Greenfield
- Eckhard Kemmann
- Avedis Khachadurian
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- Paul Lehrer
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RWJMS Retired Faculty Association Membership

The members listed below have paid their RWJMS RFA dues during the 2014/2015 (September 1, 2014 – August 31, 2015) cycle.

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- Joseph Zawadsky
Retired Faculty Association

If you have not already done so, please send in your 2014-2015 (September 1, 2014 – August 31, 2015) dues. Also, if you like to support medical students to have an opportunity to participate in the Global Health Program, consider donating to the RFA Global Health Fellowship Fund. Please send your check to Paul Lehrer. Both contributions are tax deductible as charitable contributions. Thank you.

RWJMS Retired Faculty Association 2014-2015 (September 1, 2014 – August 31, 2015) Dues

Benefits of RFA Membership:

- Defining, advocating for and publicizing the benefits of retired faculty at RWJMS,
- Fostering ongoing engagement and participation of retired faculty in RWJMS activities,
- Promoting continuing interaction among retirees,
- Providing information and options for faculty considering retirement, and
- Interacting with other academic retired faculty associations (e.g., Rutgers Retired Faculty Association, The Rutgers Retired Faculty and Staff Association).

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Please enclose a check for a donation to the Global Health Program and/or for dues ($15) made payable to the “RWJMS Retired Faculty Association” and mail the check to Paul Lehrer, PhD, at the address shown below.

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Paul Lehrer, PhD
Department of Psychiatry
Rutgers Robert Wood Johnson Medical School
671 Hoes Lane West
Piscataway, NJ 08854

Please include any personal information that you wish to share with others. Thank you.

April 2015