December 6th RFA Speaker

Stephan Schwander MD, PhD
Associate Professor in the Rutgers
School of Public Health

Epidemiological research shows that tuberculosis (TB) is more prevalent, and therapy outcomes altered, in people exposed to air pollution. My research has focused on understanding human lung immunity against *Mycobacterium tuberculosis* (M.tb). Our findings have helped to establish the concept of compartmentalization of immune responses to the lungs in pulmonary TB.

For the past decade we have contributed to the understanding of how air pollution affects human immunity against M.tb. In recent NIH-funded studies with co-investigators at EOHSI, Duke, University of Alberta, and the National Institute for Respiratory Diseases (INER) in Mexico City, we have shown that exposure of human peripheral blood and lung immune cells to diesel exhaust particles (DEPs) and air pollution particles alters M.tb-specific toll-like receptor-mediated cell activation pathways and the production of key protective cytokines.
Acetaminophen: Beyond Fever, Pain and Hepatotoxicity

RFA Seminar  September 20, 2019
Professor GARY MERRILL, PHD

Professor of Cell Biology and Neuroscience
Rutgers University

The following has been assembled from my notes and an essay provided by Dr. Merrill and has been reviewed and edited by Dr. Merrill—Michael Gochfeld—Editor

"Today I’m going to talk about the protective effects of acetaminophen (APAP) on heart, circulation and the brain,” Dr. Merrill began. Acetaminophen is one of the most widely used non-prescription drugs for pain and fever, and it has a reputation for its hepatotoxicity. It is the #1 suicide drug in the U.K. where it is known as paracetamol. Liver damage can occur “if people ignore the advice and take an overdose by accident or with suicidal intent.” Most of an acetaminophen dose undergoes glucuronidation and urinary excretion. A small amount of acetaminophen dose undergoes glucuronidation and urinary excretion. A small amount of acetaminophen is metabolized by P-450s to NAPBQ1 (a benzoquinone) which accounts for the hepatotoxicity. This metabolite is typically inactivated by glutathione. “You have to take huge amounts to damage the liver. [FDA has a black box warning on some prescription drugs for the acetaminophen content-MG].

“Our current work begins with the German physiologist, Oskar Langendorf (1853-1908) who pioneered use of the isolated, perfused, guinea pig heart as an experimental preparation for physiology.” “This 1 g preparation is often used in drug development, before going to larger, whole animals (dogs, primates), and we began using this in the early 1970s. The preparation allows us to change perfusion rates and monitor various physiologic functions as we compare hearts treated with APAP versus vehicle controls. The first observation is that after removal from the body (continued on page 3)
an APAP perfused heart stabilizes more quickly and develops stronger contractions and coronary circulation.

“We were able to demonstrate cardioprotective effects of APAP around the year 2000. We put a balloon in the heart and monitored the mechanical function. The strength of contraction was enhanced in APAP treated hearts.” “We developed an injury/reperfusion (I/R) preparation by causing and then relieving ischemia. Ischemia is a fundamental ‘toxic’ mechanism for any organ, particularly brain, heart, and kidney. We found that the APAP-perfused hearts recovers more quickly from ischemia than vehicle controls.

Whole animal preparations are essential to physiologic research. Using dogs, we prolonged the ischemia to produce myocardial infarction, and measured the size of the infarction. The in vivo dog preparation is an essential step in demonstrating benefit or harm. Slices of canine myocardium showed that APAP reduced the size of the infarcts by about 50%. In the intact ischemic heart, ventricular arrhythmias occur during recovery from hypoxia, and here too, APAP reduced the occurrence of premature ventricular contractions and “salvos” (2 or 3 PVCs in succession). PVCs can be precursors of fatal ventricular fibrillation. APAP reduced PCVs in both the ischemia and reperfusion phases and suppressed ectopic beats. These impressive anti-arrhythmic effects have been published.

Oxidative damage is another widespread toxic mechanism accounting for damage in many organs. Peroxynitrite, an unstable ion (ONOO−) is a model for producing oxidative damage to tissues. APAP is a phenol and anti-oxidant as demonstrated by its ability to attenuate peroxynitrite-mediated chemiluminescence in the early minutes of reperfusion. Ischemia-mediated protein oxidation was also reduced by acetyaminophen. The ability of acetyaminophen to decrease the damaging effects of peroxynitrite and hydrogen peroxide and to limit protein oxidation suggests antioxidant mechanisms are responsible, in part, for its cardioprotective properties during post-ischemia-reperfusion.

This cardioprotective benefit is quite distinct from aspirin prophylaxis which acts on platelets to inhibit clotting in the coronary circulation. We have replicated this with other oxidative stress models, confirming that APAP is a broad spectrum antioxidant.

Dr. Merrill showed electron microscopy of myocardial injury and mitochondrial damage. APAP protected against the swollen mitochondria seen in vehicle-treated animals. APAP provides protection at the mitochondrial level. Mitochondrial swelling and mitochondrial cytochrome c release were assessed and found to be significantly and completely reduced in APAP hearts following reperfusion.

Fluorescence-activated cell sorting allowed us to demonstrate a significant decrease in late stage apoptotic myocytes in APAP versus vehicle-treated hearts following injury. Analysis of cytochrome C in cytosolic and mitochondria fractions, shows that cyt-C goes up during reperfusion in vehicle controls, and this is blocked by APAP.

APAP also plays a role in protecting against cerebral damage after experimental stroke in an I/R preparation. As with the heart APAP reduced the size of cerebral infarcts in rats. We have shown similar protective effects at the subcellular and physiologic level in the kidney. Hepatotoxicity should not nullify the benefits of APAP prophylaxis or treatment. A plasma level of APAP > 300 µg/ml would be damaging to the liver, but this is an order of magnitude higher than the protective concentration. It would be a suicidal dose.

In conclusion, acetyaminophen increases viability of cells during I/R injury. It is a broad spectrum antioxidant, with demonstrated cardioprotective effects. Similar protection has been now shown in renal and cerebral preparations. Yet now it is only used to treat fever and pain. Armed with abundant evidence of benefit, a clinical trial was an obvious next step. “I proposed to use APAP and control with patients undergoing elective bypass surgery, to test for improved outcomes, but
this proposal did not get IRB approval. However, if I had a heart attack I would like to have aspirin and APAP acutely and then as secondary prevention.”

Dr. Merrill’s talk was followed by a lively question and answer session. “No, I don’t take it daily. I don’t take anything daily. But if I felt at risk, for example, after a lot of cake and ice cream, I would take a 500 mg APAP and an 81 mg aspirin.”

Rutgers Researchers Set Out to Prove Evolution of All Life, Possibility of Extraterrestrial Life

From simple proteins to living cells, NASA-funded research at Rutgers tests theories on the origins of life

By Cynthia Medina (with permission from RUTGERS TODAY)

Biophysics doctoral candidate Douglas Pike, along with postdocs Josh Mancini and Saroj Poudel, are replicating proteins from billions of years ago in an oxygen-free chamber that mimics the conditions of ancient Earth, moving one step closer to proving the origins of life.

Pike explained: "What we are trying to figure out is the alternative places electrons could go in the absence of oxygen, before 'life' arose billions of years ago". Using a computer and a protein synthesizer, Josh Mancini builds proteins that are supposed to resemble those that would have existed 4 billion years ago, before life arose on Earth. He places millions of the tiny protein molecules, resembling white powder, into an oxygen-free chamber that mimics the conditions of the primordial Earth. He adds nickel – an element these pre-life proteins might have bonded with for catalysis to occur. And he tests to see if a similar reaction takes place in his chamber.

If it does, that will mean Rutgers’ NASA-funded ENIGMA team has taken a step closer to understanding how life arose on earth and the likelihood of its happening elsewhere.

ENIGMA is part of NASA’s focus on astrobiology – the study of whether extraterrestrial life exists, and whether we can find it. The Rutgers program focuses on a key astrobiological question: How did proteins emerge from the chemistry of the early Earth, and then evolve to become the basis of life itself? (see the rest of the story at RUTGERS TODAY for Nov 12, 2019).

The Miller Urey Experiment 60th Anniversary

[By Michael Gochfeld: Editors Note:]

The above research is reminiscent of the Miller-Urey (1959) publication 60 years ago. As an undergraduate subscribing to SCIENCE, I tore out the article and still have it in a folder labelled “ASTROBIOLOGY.” Virtually nothing has been added to that folder since, so I have hopes for Rutgers’ ENIGMA researchers bringing new ideas and tools to bear on this story.

BELOW IS AN IMAGE OF THE GROUND-BREAKING ARTICLE IN SCIENCE

31 July 1953, Volume 120, Number 3270

CURRENT PROBLEMS IN RESEARCH

Organic Compound Synthesis on the Primitive Earth

Several questions about the origin of life have been answered, but much remains to be studied.

Stanley L. Miller and Harold C. Urey

Harold Urey (1934 Nobel Prize for discovering deuterium) served as advisor to Stanley Miller (PhD Chicago). Miller published several papers in 1953-1954 describing experimental formation of a variety of simple organic molecules, by subjecting hydrogen, methane, carbon dioxide, ammonia to high voltage shocks. But it was the Miller-Urey 1959 paper that captured public imagination about the beginnings of life and how the primitive earth with its reducing (oxygen-poor) environment, could have harbored the origin of life.

(continued on page 5)
Ironically, today, Earth’s environment is uniquely oxygen rich and would be inhospitable or downright destructive to the process that Miller and Urey simulated. Trying to simulate atmospheric conditions of the pre-biotic earth, they assembled a series of flasks and retorts containing the various gases as well as water, charged them with various high voltage electric shocks for a week, and then identified amino acids (glycine, alanine, etc).

Although it is a long way from an amino acid soup to a Dolphin, their publication was widely cited as revealing a mechanism for the origin of life. More than a dozen organic compounds were isolated from a long series of experiments, and they postulated that these would coalesce in the ocean, allowing the formation of more complex compounds and eventually cells.

Challenges came from various sources. It was viewed as both rejection of and evidence for Genesis. How had life-affirming conditions come together, in the first place. Skeptics included the prestigious and imaginative astronomer-mathematician, Fred Hoyle, (he who had derisively coined the term “Big Bang”). Hoyle likened the chance formation of life to the probability that "a tornado sweeping through a junk-yard might assemble a Boeing 747 from the materials therein.”

BIG DATA MEETS PRIVACY
Michael Gochfeld

On November 12, 2019 it was announced that Ascension medical system had partnered with Google in allowing electronic medical data, including procedures and treatments, to be assembled into a “big data” data base. This is just one example of a briefly high profile story calling attention to need for clarification (probably regulation) on how big data approaches privacy.

Recognizing that most clinical trials are limited in sample size, big data represents a belief that if we have large enough data sets with a large variety of independent and dependent variables (including at some point complex genetic information) imaginative programmers with supercomputers, can extract useful biomedical information applicable to diagnosis, treatment, and prognosis. The Google announcement is just one of several. Presumably big data can provide answers if we are careful to pose appropriate questions (what we call PICOs in Evidence-based Medicine.

However, the juxtaposition of this story with the Miller and Urey experiments struck a chord. What would Fred Hoyle say about the probability of extracting useful information from the chaos of electronic medical records?

I see emails announcements every day about some hospital or health system with unintended privacy breaches resulting in astronomical monetary penalties. Yet, intentional sharing of information that probably should be private, must be examined as well.

Who Cares About Privacy

I have an app that tracks my footsteps on a phone that tracks my location, and who knows what else. I’ve pressed buttons giving the phone permission for the tracking information. My phone is a smart-one. I can retrieve my footsteps and heart rate, data even though they were originally recorded on a different phone, months ago. That data must be available to someone else as well. Does it matter? Who would want it? Does it explain why I receive unsolicited ads for better footwear? Or why Google just bought FitBit (and presumably personal data? What’s the worst that can happen by relinquishing certain amounts of privacy? I’m not paranoid about privacy (or I would have kept my flip phone), but I’m not comfortable with such broad open access.

I had to give the genetic data base, 23 and me, permission to use my genetic data in order for me to find out who might be related to me. Good news---my daughter and a 3rd cousin somewhere. No testing of my son. He explains, “I don’t want that data out there for anybody”.

“Where exactly is ‘there’?” I ask. I wonder also about ‘anybody.’
Someone Does Care About Privacy

A new bill proposed by Senators Amy Klobuchar, D-Minn., and Lisa Murkowski, R-Alaska, on June 14 would expand HIPAA's reach to include regulation of wearable devices, digital health apps and DNA testing kits.

“The Protecting Personal Health Data Act calls for increased regulation of genetic, biometric and personal health data not currently covered by HIPAA. It would allow consumers to access, alter and delete the health data collected and used by companies, and would establish a task force to address cybersecurity and privacy risks from these devices, services and software.

"New technologies have made it easier for people to monitor their own health, but health tracking apps and home DNA testing kits have also given companies access to personal, private data with limited oversight." The legislation is intended to protect consumers' personal health data by requiring that regulations be issued by the federal agencies that have the expertise to keep up with advances in technology."

President Barchi’s 2019 Report to the University Senate
Our New Rutgers: A Seven-Year Perspective

In September, 2019, Rutgers University President Bob Barchi submitted a report to the University Senate. Here are a few excerpts of particular interest to the faculty. The report with many interesting details and observations is built around the Strategic planning initiative.

“As I enter my eighth and final year as president of Rutgers, I am pleased to present my seventh annual report to the University Senate.

“Let’s take this opportunity to look back at what Rutgers University has accomplished over the past seven years: to recount our achievements, note some of the work that remains, and evaluate where we stand.

“When I arrived at Rutgers in September 2012, major changes were already on the horizon—from the higher education restructuring that would lead to Rutgers Biomedical and Health Sciences and a new university organization to the statewide construction bond act that would go on the ballot that November to the negotiations that would lead to our Scarlet Knights’ entrance into the Big Ten. And that was before Superstorm Sandy hit New Jersey the next month and caused disruptions to the University and devastation to many parts of the state we call home.

“The University Strategic Plan defined four overarching strategic priorities—build faculty excellence, transform the student experience, enhance our public prominence, and envision tomorrow’s university”…“As we have been building faculty excellence, we have found new academic strength—with greater research productivity, state-of-the-art academic and research facilities, and a renewed commitment to our core strengths in the humanities and sciences. (continued on page 7)
In transforming the student experience, we have created better tools to serve our students, maintained and even increased our commitment to access and affordability, and attracted increasing numbers of high-achieving students to our academic community.

“Building Faculty Excellence

“The strength and reputation of a university are the product of many factors, but none more essential than the quality of its faculty. Over our history, Rutgers has been fortunate to attract outstanding scholars, many of whom have brought special distinction through their groundbreaking research and discoveries. But the best universities must constantly renew and build the excellence of their faculty.

“In the University Strategic Plan, Rutgers committed to add 150 new tenure-track appointments, to create more endowed professorships and term chairs, and to equip faculty with the tools to flourish, including first-rate research facilities, mentorship programs, and strategic investments in graduate education. Rutgers also committed to targeted investments to maintain excellence in the sciences and humanities.

Although financial considerations and other challenges have kept the University from reaching all its targets in this area, Rutgers has made significant progress in building faculty excellence. An influx of newly endowed chairs in critical disciplines has brought Rutgers a world-class cohort of senior and mid-career scholars. Long-awaited academic and research facilities for chemistry, life sciences, nursing, engineering, and nutritional sciences have been constructed to replace outdated buildings across Rutgers. And more than $50 million is being invested to strengthen Rutgers’ prominence in the humanities and commitment to faculty diversity and mentoring.

“While reputation-building is a long game, Rutgers has already experienced growth in faculty research activity and, through the synergies created by school mergers in nursing and law, raised its academic profile and made notable gains in national rankings.

More than Doubled Externally Endowed Professorships

“Since 2013, the number of externally endowed professorships at Rutgers has more than doubled, from forty-one to eighty-nine, thanks to the addition of professorships coming to Rutgers in the integration of the former University of Medicine and Dentistry of New Jersey and the
establishment of nineteen new named chairs across the University. All but two of those new chairs were created through a match program called the eighteen-chair challenge, by which an anonymous donor agreed to contribute $1.5 million toward each of eighteen academic chairs if other individuals donated the remainder of the required $3 million to endow each chair.

“These endowments have enabled Rutgers to appoint world-class scholars in a wide range of fields from cell biology and cancer genomics to public history and humanities, engineering to entrepreneurship, water resources and watershed ecology to philosophy….

“Between 2014 and 2019, nineteen Henry Rutgers Professorships were created, benefiting Newark, Camden, New Brunswick, and RBHS and bringing Rutgers acclaimed scholars in such fields as chemistry, law, global health, philosophy, African American studies, and advanced manufacturing. In addition, eleven Henry Rutgers Term Chairs have been created, supporting mid-career faculty in areas including digital film, ethics, women’s and gender studies, piano, data science, health sciences, philosophy, planetary geology, and comparative sexuality, gender, and race….

“The total number of named or endowed professorships and term chairs at Rutgers is now nearly 120, close to triple the 41 endowed professorships we had in 2012.

Dedicated $42 Million to Strengthen Faculty Diversity

“As stated in the strategic plan, successful programs to enhance diversity and inclusion start with the right “tone from the top.” In late 2015 Senior Vice President Barbara Lee developed, and I approved, a plan to invest nearly $22 million in presidential strategic funds to recruit, retain, and mentor diverse faculty. Earlier this year, I committed an additional $20 million to the program, which will run until June 2024. Under the initiative, the University provides half the salary support for the first three years of each newly hired faculty member’s service at Rutgers, along with additional funds to support mentoring and retention activities.

“Since its inception in 2016, seventy-nine faculty have been hired through this salary support program, in addition to many other diverse faculty whose salaries are fully supported by departments and schools.

Invested $10 Million to Maintain Rutgers’ Prominence in the Humanities

“In 2015 I asked a key group of faculty from across Rutgers to work with Senior Vice President Lee to recommend strategies for supporting and enhancing the humanities at Rutgers, and for ensuring that the humanities retain their traditional strength and viability as Rutgers grows and changes.

“The task force recommended investments in graduate programs, diversity initiatives, and public awareness campaigns, as well as targeted investments in highly ranked disciplines and in areas where strong scholars would raise the profile of the discipline. The task force identified English, history, women’s history, and philosophy as areas of strength meritling targeted investments to maintain their leadership among the nation’s top programs.

In 2016 I committed the University to a five-year, $10 million plan, using presidential strategic funds, to implement key recommendations of the task force. The plan supported recruitment of distinguished faculty in English, history, women’s history, and philosophy within the School of Arts and Sciences–New Brunswick in anticipation of the retirement of distinguished professors in those disciplines to ensure a continuity of excellence. Three Henry Rutgers Term Chairs in the humanities were also supported by these funds to attract strong junior scholars or retain strong mid-career scholars….
Increased the Number of National Academies Members at Rutgers

“Membership in the National Academies is the gold standard of excellence within U.S. research universities.

“With the 2019 election of Professors Gabriel Kotliar and Masayouri Inouye to the National Academy of Sciences, Rutgers now claims fifty-four faculty who are members of the National Academies and/or the prestigious American Academy of Arts and Sciences, an increase from thirty-four since 2012.

This is only excerpted from the first part of Dr. Barchi’s report which should be viewed online to take full advantage of the photodocumentation and the sections on Student Experience, Public Prominence, and Tomorrow’s University.


Bad “Evidence-based” Medicine Can Mislead Practice & Behavior
By Michael Gochfeld

Based on Papers in Annals of Internal Medicine
October 1, 2019

In October, news media hyped a paper by Bradley C. Johnson et al in the Annals of Internal Medicine which recommended: “continue to eat red and processed meat”—based on a series of meta-analysis and systematic reviews published in the same issue, which purported to show no significant decrease in risk among people who reduced their red/processed meat intake by 3 servings a week.

“Continue to do what you have been doing” is probably easy to follow, if uninformative. The fact that this advice contradicts decades of dietary advice based on many prior studies, made it a good news story. For example, CNN: “New guidelines published Tuesday in the Annals of Internal Medicine flip this long-held understanding on its head.” [italics mine-Ed]

It also requires careful review of the data and consideration of what constitutes “evidence” and “recommendation”.

The new recommendations come from an international, self-appointed group, NutriRECS, with an attractive website that claims...

| NutriRECS is an independent group with clinical, nutritional and public health content expertise, skilled in the methodology of systematic reviews and practice guidelines who are unencumbered by institutional constraints and conflicts of interest, aiming to produce trustworthy nutritional guideline recommendations based on the values, attitudes and preferences of patients and community members [italics mine-Ed] |

I take “unencumbered” to mean unaffiliated with FAO, CDC, Cochrane, or any group that is usually relied on for evidence-based nutritional advice. The incorporation of “attitudes” and “preferences” is novel, but not unprecedented. The early advocates of evidence-based medicine, came under fire, and had to temper their reliance on randomized controlled trials (RCTs) by recognizing that evidence-based clinical decision-making had to include “patient values” as well as “doctors’ experiences”.

However, increased cardiovascular and cancer risks have been consistently reported in large cohort studies, appropriately referenced by the NutriREC group. The recommendations, from the self-endorsed committee, essentially rejected all of the cohort studies, on the basis that cohort methods intrinsically have flaws and potential biases, hence by definition, all are of “low quality”. A reader might wrongly conclude that RCTs results are above reproach.

Although the RCT is often mentioned as the gold standard in epidemiology and evidence-based medicine, relatively little of what we know (or think we know) about risk and causation is derived from RCTs. Indeed for many important questions, particularly with outcomes far in the
future, RCTs are impossible, impractical, and/or unethical, not to mention prohibitive in cost and time. Cohort analysis, particularly prospective cohorts, provide most of what we know about many aspects of health and medicine.

In quest of applicable RCTs, the Zeraatkar et al. (2019) provided a useful tabulation of randomized nutritional trials, including a few comparing high vs low meat, although most lasted only 6-12 months. The authors focused on a randomized trial nested in the Women’s Health Initiative, showing no significant cardiovascular benefit from “lower meat” intake. However, that trial randomized to low vs high fat, not low meat and was conducted mainly in obese women (70%). The authors overvalued this one randomized trial compared with observational studies.

With time and patience the results of cohort studies, converge on similar conclusions, which allows us to build confidence in certain information, for example, that high intake of red and processed meats is a risk factor for several killer diseases. In a way, medical judgement and practice is as much about confidence as fact.

It’s hard to know why the Annals published as apparently valid, nutritional recommendations, from such a group, particularly since the group’s systematic reviews offered in support of the recommendations, contradict the recommendations.

The Zeraatkar et al authors do acknowledge “Regarding important outcomes, systematic reviews of observational studies assessing diets that vary in red meat have, reported positive associations between red meat intake” and all-cause mortality, cardiovascular disease or cancer. They recognized confounding in observational studies and low power and short-time frame in the randomized trials. Hence the non-recommendations in the NutriREC recommendation paper are indeed, contradicted by the supporting papers.

The October 1, Annals paper recommendations, have been widely criticized already, in just the first month after publication. The authors wrote that, “omnivores enjoy eating meat and consider it an essential component of a healthy diet….most omnivores are hesitant to give up meat, even understanding the “potentially undesirable health effects.”

Does that sound to anyone like an appropriate rationale for applying evidence? The fact that 11 out of 14 panel members acknowledge eating red and/or processed meat at least once a week, some multiple times a week, might reflect on their objectivity. On the other hand, you might find such a study conducted by vegetarians subject to criticism to as well.

On Oct 4, 2019, the New York Times published an exposé by Parker-Pope and O’Connor showing that NutriREC lead author, Johnston, failed to report former agric-industry fundeding. That work, funded by the sugar industry also contradicted the consensus on sugar, and has since been discredited. At that time, Johnston likewise failed to disclose that the industry had not only funded, but ‘reviewed’ the paper. This is a common practice, but one requiring disclosure. Johnston, the Times’ authors suggest, is at best, predisposed to find flaws with recommendations to eat less of something, and at worst——they don’t say.

For the journal’s role, Dr. Christine Laine, editor of the Annals of Internal Medicine, responding to Times inquiry: “said the medical journal asks people to disclose their financial interests but relies on the integrity of the researcher and does not attempt to verify the forms.” That, too, is standard practice, I believe.

If I were fond of processed meats and felt guilty about splurging at a breakfast buffet, I would take great solace, in the NutriREC recommendation, and, with my guilt assuaged, heap my plate with sausage and cold cuts. A really interesting study would examine the extent to which people have changed (increased) or not changed behavior in response to this new risk communication. How many, will return to former unhealthy habits, now reassured.  

*Ed Note: I thank Dr. Eckhard Kemmenn for pointing me to the NY Times article.*
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.

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 mailing it to:

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

All contributions are tax deductible as charitable contributions. The RFA is a 501(c)(3) tax-exempt organization.

Retired Faculty Association

The annual dues period now corresponds to the calendar year. Dues are due now for calendar year 2020.

RWJMS Retired Faculty Association 2019 (January 1, 2019 – December 31, 2019)

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., The AAUP Emeriti Assembly of Rutgers University, The Rutgers Retired Faculty and Staff Association).

Name: ___________________________ Address: _______________________________
Phone: ________________ E-mail address: ____________________________________

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.

Global Health Program (indicate dollar amount) _____________ RFA DUES ($15 for 2020) _______

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