Chair’s Message

by Wendie Cohick, Ph.D., Professor and Department Chair

Revolutionary for 250 years! After a yearlong series of lectures, concerts, and other events, Rutgers celebrated its 250th birthday on Charter Day, November 10, 2016. “A Day of Revolutionary Thinking” was a universitywide showcase of alumni success and scholarship. Accomplished alumni, nominated by their departments and designated as Rutgers 250 Fellows, returned to campus. Our nominee, Michael Graziano, PhD (CC ‘79), Vice President for Drug Safety Evaluation at Bristol-Myers Squibb, presented an afternoon talk titled “Preclinical Safety Assessment of Immuno-oncology Drugs” to our students, faculty, and staff. That evening, Mike and the other fellows were feted with fireworks and dinner. We are very grateful to Mike and all of our active alumni for sharing their time, talents, and generosity to help us train the next generation of revolutionary thinkers in veterinary medicine, biomedical research, and the pharmaceutical industry!

New Faculty. I’m happy to announce that Elizabeth Snyder, PhD, will be joining our faculty as a tenure-track assistant professor in July. Beth obtained her PhD at Washington State University where she studied male germ cell development. She then traveled across the country to Bar Harbor, Maine, to conduct postdoctoral work at the Jackson Laboratory. As a postdoc and later as an Associate Research Scientist, she used cutting-edge genetic models combined with computational and molecular technologies to study how RNA impacts male fertility. She’ll bring her NIH New Investigator Award to Rutgers. Welcome, Beth!

Awards. Congratulations to Professor Sarah Ralston, VMD, PhD, on receiving the inaugural “Educator of the Year” award from the New Jersey Veterinary Foundation. Up until her June 30th retirement, she serves as the Rutgers prevet advisor. She has directly mentored over 100 students who have gone on to careers in veterinary medicine. For her creation of the Young Horse Teaching and Research Program (1999-2013) and online courses in horse management and equine nutrition, Dr. Ralston won the 2010 SEBS Academic Professional Excellence Award under the category of “Academic Innovation.” She received a 2013-2014 Fulbright US Scholar Grant to travel to Brazil where she taught a course in equine nutrition and did research. She continues to collaborate with Princeton colleagues on their metabonomic studies of Osteochondritis dissecans (OCD). Happy retirement, Sarah!

Board of Governors Professor Dipak Sarkar, PhD, DPhil, received the Research Society on Alcoholism’s Distinguished Researcher Award for his research on the effects of fetal alcohol exposure and role of alcohol in promoting brain dysfunction and cancer. His Neuropsychopharmacology article (Jabbar et al. 2016) reporting how preconception alcohol affects the inheritance of stress-related diseases was highlighted in the February 2017 issue of NIAAA Spectrum, the webzine of the NIH National Institute of Alcohol Abuse & Alcoholism.
Undergraduate News

Eleven Animal Science seniors and two nonmajors working with our faculty will present their G.H. Cook Scholar honors theses in late April. Congrats to all!

- **Rita Baorto**, The effect of cobalt on plasma volume, red blood cell volume, and blood volume in f t Standardbred horses (McKeever)
- **Michael Botros**, The effects of horse pasture grazing system on nutrient content of forages (Williams)
- **Kiera Brennan** (Genetics major), Epigenetic effects of endocrine-disrupting chemicals on the mammalian ovary and uterus (Zama; Co-advisor: Uzumcu)
- **Melissa Gronske**, The effect of chronic exposure to PFNA on morphology, gene expression, and fecundity in zebrafish (Cooper, Biochem & Microbiology)
- **Ankita Gupta**, Taste differences in Engrailed 2 null mice (Bello)
- **Yui Kurakake**, Influence of light on phytoplankton host-virus interactions (Thamatrakoln & Bidle, Marine Sciences)
- **Frehnzel Leyesa**, Circadian rhythms in *Neurospora* (Belden)
- **Gayathri Narayanan** (Biochemistry major), Fetal alcohol effect on neuroimmune development (Sarkar)
- **Lauren Palena**, The effects of nitrogen and phosphorus on *Emiliania huxleyi* fitness and viral infectivity (Bidle & Nissimov, Marine Sciences)
- **Vipa Patel**, The effects of flame retardants on hypothalamic arcuate gene expression and energy homeostasis (Roepke)
- **Elena Rizzo**, The effects of continuous vs. rotational grazing systems on forage soluble carbohydrate content and blood glucose and insulin concentration (Williams)
- **Victoria Simpson**, The effect of co-twin gender on estrous behavior and social affiliation in goats (Katz & Becker)
- **Chi (Michael) Yee**, The effects of equine assisted activities therapy on markers of stress in conditioned therapy horses (Malinowski)

Vipa Patel and Elena Rizzo presented their honors research at NESA, winning second and third place, respectively!

In addition, **Elena Rizzo** was awarded the 2017 Ernest Bell Memorial Scholarship at the January Breeders Award Luncheon sponsored by the NJ Department of Agriculture! The award recognizes outstanding scholarship and commitment to NJ’s horse industry. As Society of Animal Science president, Elena is holding the big yellow ribbon in the NESA photo at bottom left.

The Veterinary Science Club at the American Pre-Veterinary Medical Association (APVMA) symposium in early March. Members attended lectures and labs held at NC State University’s vet school and competed in a “Pre-Vet Olympics” that tested a variety of veterinary-related skills. Rutgers placed frst—out of 52 schools!

Introducing Our New Pre-Vet Advisor

As an Assistant Teaching Professor, **Aparna Mahakali Zama**, PhD., holds one of Rutgers’ new teaching-track faculty lines which are designed to provide career advancement and job stability to faculty who devote a large proportion of their time to teaching. Dr. Zama teaches several different courses each year, including our popular Animal Diseases course, which she revamped in 2012. In addition to her teaching activities, Dr. Zama is an experienced researcher in reproductive biology. She mentors graduate and undergraduate students in the research laboratory, serves on graduate thesis committees, and is the co-investigator on an NIH grant with Dr. Mehmet Uzumcu that examines the role of early developmental exposure to chemicals on female fertility later in life.

We’re excited that she said “yes” to her latest challenge, wearing the “Rutgers Pre-Vet Advisor” hat when Dr. Ralston retires. She will be working to enhance the information we provide to students on preparing for veterinary school and navigating the application process.

Undergraduate Students at the 2017 NESA Competition at the University of Rhode Island. In late February, these Society of Animal Science members represented Rutgers in the livestock judging, quiz bowl, and paper presentation phases of NESA and achieved third place overall! They won many ribbons for individual and team awards.
Graduate Program Highlights
by Carol Bagnell, PhD, Professor and Graduate Program Director

Two students in the Graduate Program in Endocrinology and Animal Biosciences (EAB) earned their degrees in October 2016, others anticipate May 2017 degrees, and two new students plan to join our program in Fall 2017.

Jennifer Yang studied estrogen signaling in the hypothalamus and regulation of KNDy-associated gene expression in mice. She completed her dissertation research under the supervision of Dr. Troy Roepke in August 2016. Jenn is a postdoctoral fellow in the Dept of Reproductive Medicine at the University of California San Diego.

Rana Al-Baghdadi investigated the role of activating transcription factor–4 in guiding the liver’s response to amino acid depletion by asparaginase, a drug used to treat leukemia. Her PhD advisor was Dr. Tracy Anthony. Rana defended her dissertation in September 2016 and is now an assistant professor in the Physiology and Pharmacology Department at AlQadisiyah University’s Veterinary Medicine College (Iraq). Both she and her husband, Ali Janabi (Microbial Biology), were supported by Iraqi government fellowships. Dr. Ken McKeever mentored Ali’s research on the equine microbiome.

In December 2016, Seher Yirtici defended her MS thesis on the effects of endocrine-disrupting chemicals on the rat ovary during fetal and neonatal development and the impact on reproduction. She was supported by a Turkish government scholarship. Pictured with Seher (in white) are Drs. Mehmet Uzumcu and Aparna Zama and undergrads from their lab.

In March, Bill Fritz (Katz lab) defended his dissertation on the adaptive significance of self-enurination, a perplexing behavior displayed by domesticated male goats, and its reproductive implications. Bill is pictured right.

Jennifer Hanke completed her M.S. thesis research in early April. The Cohick lab studies how IGFBP-3 mediates intrinsic apoptosis in mammary epithelial cells. Jen’s project focused on the underlying mechanisms for this effect with emphasis on the BCL-2 family of proteins and pro-survival NF-kB signaling.

New students join EAB program. Three students began full-time in Fall 2016: Nick Margolies, a Rutgers alum working in Dr. Tracy Anthony’s lab; Jennifer Weinert, a University of Wisconsin alum working with Dr. Carey Williams; and Ali Yasrebi, who has been taking courses for several years while employed as Dr. Troy Roepke’s lab manager. Several others will begin in Fall 2017, including Eli Berger (SUNY-Binghamton) and Anam Fatima (Rutgers).

NEFS 2017. The 2017 Nutrition, Endocrinology and Food Science (NEFS) Graduate Student Conference, scheduled for April 18, will highlight keynote addresses by Dr. Kevin Osteen of Vanderbilt University and Dr. Sharon Donovan from the University of Illinois, graduate student talks, and a poster session. PhD candidate Ashley George (pictured right) is the lead coordinator.

Global Reach. Ali Al-Yasari (pictured right) presented a poster of his PhD research (Sarkar lab) at ENDO 2017. His abstract, “Preconception alcohol drinking alters glucose homeostasis and increases diabetes susceptibility in the offspring,” was featured in the Research Summaries Book, a resource for reporters. Dozens of online posts around the world reported these findings.
Animal Science Update
The Department of Animal Sciences

Newsletter 2016-2017

4-H Honors Campus Farm Staff and Extension Faculty
The Junior Breeder’s Livestock Symposium is hosted each year by the campus farm and includes sessions on cattle, horses, pigs, small ruminants, rabbits, poultry, and meat. 4-H County Agent Carol Ward of Somerset County runs the program with Lynn Matthews of the NJ Department of Agriculture with assistance from our farm staff and students, extension agents, and Animal Sciences extension faculty. The 2017 symposium was held on April 1 with over 300 in attendance.

In recognition of their long-standing contributions to the event, the “Educators of the Year” Award was presented at the February 2017 annual awards program of the NJ Association of 4-H Agents to Drs. Mike Westendorf and Carey Williams, County Agent Bob Mickel, farm manager Clint Burgher, and farm staff Joanne Powell, Felicia Kleiman, Rebecca Potosky, Laura Comerford, and Anthony Sacchetti.

“Horses 2017” Celebrates the Equine Science Center’s 15th Birthday
Check out the Rutgers Equine Science Center’s Facebook page for photos and videos from “Horses 2017: The Best of the Best”, held on March 18-19 at the Livingston Student Center. In conjunction with Merial Animal Health and other sponsors, the ESC offered equine industry updates for horse enthusiasts as well as veterinarians and equine professionals. Throughout the weekend, attendees could choose from 26 different workshops by equine specialists. Each day concluded with an “Ask the Experts” panel moderated by Dr. Carey Williams and a closing address by Director Karyn Malinowski. Happy Birthday, ESC! (Logo: Kyle Hartmann)

Remembering “Doc” Meirs, Equine Veterinarian and Rutgers Alumn
David Meirs II, VMD (B.S., Agriculture, 1950), an equine veterinarian and strong supporter of Rutgers equine programs, died on March 27, 2017, at the age of 87. The founder of Walnridge Equine Clinic in Cream Ridge, Doc Meirs helped develop our department’s equine program and the Rutgers Equine Science Center. He served as Chair of the RU Board for Equine Advancement. He will be missed! Memorial contributions can be made to the Center; contact Dr. Malinowski.

Direct Your Gift Donations
Your donations to our department help us continue to offer a quality educational program in this difficult funding environment. Our Academic Excellence Fund allows us to update equipment for teaching and research, send students and faculty to scientific conferences, support our Ag Field Day activities, and run an outstanding seminar program with outside speakers, just to name a few uses. Our Undergraduate Student Award Fund and our Graduate Student Scholarship Fund support student scholarships. Our Animal Care Fund goes to support our farms. To make a donation, go to makeagift.rutgers.edu or send a check (payable to “The Rutgers University Foundation”) to Dr. Wendie Cohick, Animal Sciences Dept, Rutgers University, 84 Lipman Drive, New Brunswick, NJ 08901-8525. Mention the fund you’d like to support. Thank you!

Rutgers School of Environmental and Biological Sciences