



Physiology News



July – September 2020 · Volume 3 · Issue 3

A Message from the Chair

Patricia Molina, MD, PhD

Dear All,

It looks like we are ready to say goodbye to summer and welcome fall, with all the risks and fears that we may be associating with it. As we keep an eye out and continue to take precautions to decrease risk of COVID infection, it is important that we find a balance between fear and bravery. Exhaustion from lockdown, cancelled events, limited social interactions and distractions, and the constant reminder that we have work to get done can have a huge toll on our mental and physical health. Throughout these last 7 months I have done a lot of reflection and searched knowledge that can be applicable to our situation. The business world is ahead of the game and the wisdom imparted by leaders in the field has frequently resonated with me as I think of our faculty, trainees, and staff and of my interaction with the institutional leadership.

Personally, perhaps one of the most difficult things I have faced during this period is the challenge of synchronizing work habits and patterns of others with mine. But through this time, I have also come to realize and appreciate the multitude of challenges, and diversity in beliefs, views, and priorities of those I work with. In doing so, I have tried to look within for the empathy, patience, energy, resilience, and drive to not just survive but thrive during this period. I do not see our situation changing dramatically before early to mid-2021. I do not see us meeting in person for faculty and lab meetings for the foreseeable future. I do not know what our workplace, schedules, patterns, lectures, will look like when all special provisions come to an end. My hope is that someone is giving thought to this and that this period will be used to modernize the way we function, we evaluate productivity and success, and reward success moving forth.

For those of you who are not working from campus, know you are missed. For those who have been my constant supporters and partners in on campus work, thank you! You make my day brighter. For all, I share some suggestions that I have adapted from those provided by Nathan Blain (Global leader Organizational Strategy & Digital transformation) and David Ginchansky (Career Coach, Korn Ferry)¹.

Meet people in other departments. Several faculty, staff, and trainees are working alternate schedules. You may not see your usual colleagues on the day you are on campus. Get to know people in other departments. New ideas and collaborations could arise.

Find the office influencer. In most organizations, there is at least one person who seemingly has a sixth sense. This individual often has knowledge of the organization's unwritten rules, the necessary steps to getting things done, and hidden landmines.

Reset with your boss. The pandemic has been difficult for managers and subordinates alike, with both groups suffering from frayed nerves, anxieties, and the blurring of work and home lives. Use the return to the office as a chance to improve the relationship. Bosses who are allies will fight for you for raises, promotions, and other work perks. Doing good work makes the boss look good and is a necessary part



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of turning your boss into an ally, but it isn't enough. Set up a regular check-in with your boss, keep them abreast of projects, and ask them for their perspective and offer your own. Building (or rebuilding) rapport and trust with a boss now will pay dividends later.

Make peace with work rivals. Turn old work enemies into allies. Try de-escalating a rivalry by emphasizing how you share a sense of commitment and purpose. "Be the first to open up, because no one is going to open up unless the first person is vulnerable enough to do so".

Experts say a colleague who helps an adversary complete a project not only helps their rival but also can win respect and appreciation from other teammates or superiors who benefitted from the project's completion.

Find a mentor or sponsor. Mentors offer encouragement, advice, and support for both early-career employees and workers learning new roles. Sponsors can push people to take on ever-more challenging roles and become advocates for mid- or late-career employees in front of the highest levels of corporate leadership. Experts say it's important for an employee to figure out what exactly they want support for. Someone who could be a great resource to help navigate the organizational landscape may not be the right person to ask about help with work projects. "Knowing your goal in a mentor is even more difficult than finding a mentor".



In closing, keep the faith, courage, and enthusiasm! We will come out of this stronger, but only if we try to do so. Do not let your career be a castle in the sand.

With best wishes for a safe and productive Fall 2020,

Patricia

[¹Referenced article](#)

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Featured story:

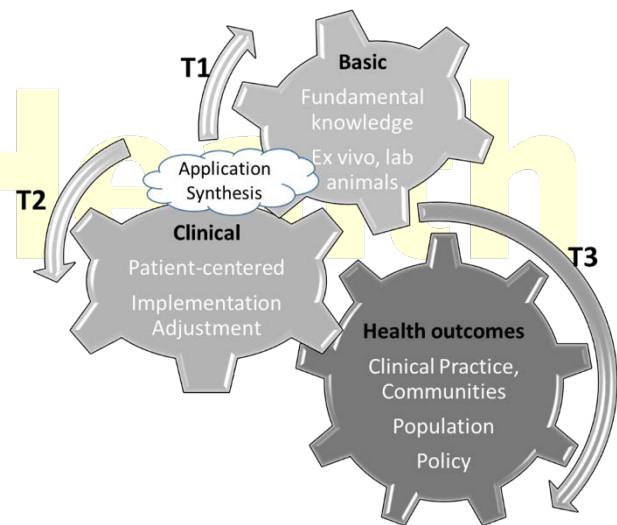
Bench to Bedside to Bench: Translational Research

By: Liz Simon, PhD

Until the turn of the 21st century, research activities among basic and clinical scientists were clearly delineated- **basic research** involved hypothesis driven bench work using cell cultures, animal models and computing geared mostly toward increasing fundamental knowledge; and **clinical research** involved patient-oriented research, clinical trials, therapeutic interventions, epidemiological and behavioral studies, and health services research. Rapid advances in basic biomedical research, particularly epigenomic discoveries led to the concern that these discoveries were not translated at a faster pace for effective clinical interventions. Thus, in the last 15-20 years, emphasis was placed on the amorphous concept of “**translational research**” that is specifically designed to **improve health outcomes**.

What does translational research mean?

1. It is literally “Translating” information taken from one domain and expressed in another. It is often described as **T1** (first stage of translational research) - translating bench discoveries into new methods for diagnosing, preventing, and treating disease (basic to clinical research); **T2** (second stage) translating clinical studies to practice settings (patient-oriented) and communities (population-based, often classified as T3); and **T3** promotes interaction of basic science and population-based research to understand human health and disease. The definition of translational research is evolving and obviously, it is a continuous bidirectional cycle generating new knowledge and hypothesis at all stages. Scientists from many disciplines ranging from the most basic science researchers to those in the clinic are formally or informally trained along the continuum of Bench to Bedside to Bench research.
2. Communication among people, who speak different scientific languages- laboratory scientists, clinicians, biostatisticians, epidemiologists, regulatory experts, and patients, is key.
3. Some of the qualities of an effective translational researcher are listed on the next page. Recognize that these qualities are not unique to translational researchers. Also, appreciate that we, as a physiology department, are at a unique advantage of being translational researchers in various aspects.





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Qualities of an effective translational researcher



Collect data and ideas from basic literature and creatively apply to promote health



Conceptualize and build the idea and create a multidisciplinary team to guide it along the entirety

Projects or parts of the project cannot be transferred from one expert to another

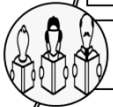


Adaptable



Thinking outside of our comfort zone

- Reading literature outside of the field, integrating pathophysiological concepts, thinking of the body as a whole



Lifelong learner



A team player

4. The main challenges are a) the differences in education and training among basic scientists, clinicians and biostatisticians, b) scientific cultural differences among the interdisciplinary scientists, c) complex regulatory environment d) availability of resources.

Am I translational researcher?

Not that I have formal translational research training, but every part of my training has morphed me into one. As many of you know, I was trained as a veterinarian and decided to pursue graduate school. My graduate research was focused on somatic cell nuclear transfer. Therefore, I acquired skills at the cellular and molecular level involving cell culture and embryo micromanipulation; and the clinical and regulatory burden involved in embryo transfer to owner-owned animals. My postdoctoral training was what I describe as purely basic bench scientist training, working with rodent models, transgenics, genomics, big data mining, cellular, and molecular training. As a faculty at Tuskegee University, I was part of the Health Disparities Scholars Program and I had some formal translational research training and experience. Coming to LSUHSC was a big step forward. By chance and choice, I am involved in translational research. There is a huge learning curve, and I often joke, as a person of few words, I am mastering to communicate the “cellular and molecular language” to biostatisticians and epidemiologists. The multidisciplinary translational Comprehensive Alcohol Research HIV/AIDS research Center team is amazing: visionary leadership; embraces teamwork; “cellular hypothesis and big picture” driven; “multilingual” and most of all considerate, collegial and nice.

You can be a basic, clinical or translational researcher, but the way you do science is the same – effective communication, extensive collaboration, rigor and reproducibility, intellectual and technical expertise, ethical responsibility, support, time and passion.



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Recognition

Drs. Jason Gardner and **Liz Simon** received the Alcoholism: Clinical and Experimental Research journal Annual Reviewer's Award.

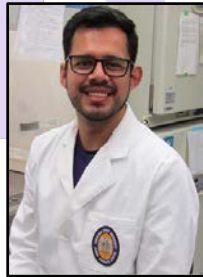
Jessi Cucinello-Ragland was selected for the Teaching Experiences for Bioscience Educators Fellowship through the American Physiological Society.

New Faces



Anna Whitehead (left) officially joined **Dr. Xinpeng Yue's** laboratory as an MD/PhD student in August after rotating with Dr. Yue this past summer. She earned a B.S. in Biology and M.S. in Molecular Science and Nanotechnology from Louisiana Tech University, where she also spent one year working as a research associate before starting her training at LSUHSC.

Diego Torres (right) graduated from Texas State University with a major in Biology and minors in Biochemistry and Spanish. He recently joined the department as a PREP Scholar in the laboratory of **Dr. Liz Simon**.



Roshaun Mitchell-Cleveland (left) received a BS in Biology and Mathematics from Southern University at New Orleans in May of 2020. She is member of Beta Kappa Chi/National Institute of Science, Tri-Beta Honor Society, and a member of Zeta Phi Beta Sorority Incorporated. She has researched the effects of radiation on *C. Elegans*, participated in developing a Mission Concept to Titan, preparation of mooncrete roads for the Artemis and Lucy missions, and researched the effects of Mars regolith in the gut of an astronaut's gut. She joined our department as a member of the PREP program under the mentorship of **Dr. Scott Edwards**, where she is researching

neuroadaptations in combined alcoholic neuropathy and complex regional pain syndrome in a female rat model.

Welcome to the students who have recently joined the department through the School of Medicine Honors Program: **Jeanette Zavala** (Molina Lab), **Mick Dubic** (Molina Lab), **Katie Adler** (Simon Lab), and **Ari Saravia** (Simon Lab).

Graduate Student Milestones

Brittany Foret and **Brianna Bourgeois** submitted their F30 applications.

Grants

Regulation of pain by alcohol and endocannabinoids in the basolateral amygdala. NIH/NIAAA 1F31AA028445-01. PI: **Jessica Cucinello-Ragland**. Mentor: **Dr. Scott Edwards**.

Role of neuropeptides in stress-induced escalation of alcohol drinking. NIH/NIAAA R01 AA023305 (renewed for 2020-2025). PI: **Dr. Nick Gilpin**.

Long-term effects of adolescent alcohol on pain. NIH/NIAAA U01 AA028709 (2020-2025). PIs: **Drs. Nick Gilpin** and Tiffany Wills.

An NIH/NHLBI supplement to study the cardiopulmonary effects of vaping was awarded to the multi-PI team: **Drs. Jason Gardner, Xinpeng Yue**, and Eric Lazartigues.

LSUHSC-NO CARC NIAAADA Administrative Supplement. NIH/NIAAA P60 AA009803-27S1 (2020-2024). PI: **Dr. Patricia Molina**. (Organize, clean, and standardize data from CARC clinical translational studies of alcohol use disorder PLWH that include questionnaire, physical exam, clinical lab, and functional performance test variables from human subjects over five years to those of the NIAAA Data Archive [NIAAADA] data variables and definitions).

LSUHSC-NO CARC RC1 COVID Administrative Supplement. NIH/NIAAA P60 AA009803-27S3 (2020-2024). PI: **Dr. Patricia Molina**. (Investigate the impact of COVID-19 related stress on psychiatric and medical comorbidities, drinking behavior, and



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risk for comorbidities in persons living with HIV and HIV seronegative subjects enrolled in the New Orleans Alcohol and HIV study).

Publications

Cucinello-Ragland, JA, and Edwards, S. Motivational aspects of pain in the context of alcohol use disorder. *International Review of Neurobiology*. *In press*.

Datta, U, Kelley, LK, Middleton, JW, and Gilpin, NW. (2020) Positive allosteric modulation of the cannabinoid type-1 receptor (CB1R) in periaqueductal gray (PAG) antagonizes antinociceptive and cellular effects of a mu-opioid receptor agonist in morphine-withdrawn rats. *Psychopharmacology*. doi: 10.1007/s00213-020-05650-5.

Levitt, DE, Chalapati, N, Prendergast, MJ, Simon, L, and Molina, PE. (2020). Ethanol-impaired myogenic differentiation is associated with decreased myoblast glycolytic function. *Alcoholism: Clinical and Experimental Research*. Sept. 17, ahead-of-print. PMID: 32945016. DOI: 10.1111/acer.14453.

Marcellin, F, Jaquet, A, Lazarus, JV, **Molina, P,** and Carriero, P. (2020). Alcohol use disorder and hepatitis c prevention and care in people who inject drugs: The state of play. *Semin Liver Dis*. Aug 26. PMID: 32851613.

McGinn, MA, Edwards, KN, and Edwards, S. Chronic inflammatory pain alters alcohol-regulated frontocortical signaling and associations between alcohol drinking and thermal sensitivity. *Neurobiology of Pain*. *In press*.

Montanari, C, Secci, ME, Driskell, A, McDonald, KO, Schratz, CL, and Gilpin, NW. (2020). Chronic nicotine increases alcohol self-administration in adult male Wistar rats. *Psychopharmacology*. DOI: 10.1007/s00213-020-05669-8.

Stielper, ZF, Fucich, EA, Middleton, J, Hillard, C, Edwards, S, Molina, P, and Gilpin, NW. (in press) Traumatic brain injury (TBI) and alcohol drinking alter basolateral amygdala (BLA) endocannabinoids in female rats. *J Neurotrauma*.

Presentations

Dr. Lauri Byerly presented a virtual poster entitled "Dietary Walnuts Effect on the Gut Microbiome of Cachectic Tumor-Bearing Rats" at the Cachexia Society meeting in September 2020. The abstract will be published online in December.

Jessi Cucinello-Ragland virtually presented a poster entitled "Neurobiological Correlates of Pain Avoidance Behavior in Alcohol- and Opioid-Withdrawal" at the International Behavioral Neuroscience Society Virtual Conference and an invited talk entitled "Neurobiological adaptations in a female rat model of combined alcoholic neuropathy and complex regional pain syndrome" at The STEM Village Virtual Symposium (an international symposium for and featuring members of the LGBTQ+ STEM community at all career stages; pictured below).



On September 19th, 2020, **Dr. Scott Edwards** gave a talk entitled "Why Alcohol Use is So Common in Chronic Pain Patients: A Basic Science Perspective" at the 19th Annual American Society of Regional Anesthesia and Pain Medicine (ASRA) International E-Congress.

Dr. Jason Gardner gave an invited presentation at the 2020 American Heart Association Basic Cardiovascular Sciences Annual Meeting (held virtually this year) entitled "Cardiac Effects of Chronically Inhaled Nicotine".

Dr. Patricia Molina was an invited keynote lecturer for the New Orleans VA Medical Center's Federal Women's Equality Day on August 28, 2020. She also gave a plenary talk entitled "Diversifying the



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Biomedical Workforce: Critical, Urgent, and Long Overdue” at the Brown University Center for Disease Risk Exacerbation (CADRE) Annual Symposium and Retreat on September 14, 2020.

Professional Service

Dr. Michael Levitzky chaired the SACSCOC site visit of the University of Tennessee Health Sciences Center accreditation reaffirmation (September 2020).

Dr. Christian Montanari participated with the Society for Research on Nicotine and Tobacco (SRNT; August 20-31) as a reviewer for scientific activity to be presented at the Society’s 2021 Annual Meeting that will take place in February 2021.

Jessi Cucinello-Ragland organized and moderated two skills workshops (Study Skills for Graduate School & Choosing a Mentor) for incoming graduate students as part of their orientation.

Notable Events

Congratulations to **Dr. Patrick McTernan** on welcoming baby Maddux (right), born August 5, 2020!



Team Edwards is waiting for habaneros to ripen!



Dr. Liz Simon, her sister, and their families took a corona-cation to the Great Smoky Mountains! Pictured (below) at Rainbow Falls.



Meet Beanie Basha!!

