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Making Music: The CORNET Awards

As modern research methods have become more specialized and the true complexity of today's most pressing health issues and diseases is revealed, coordinating teams of investigators with diverse skills and knowledge has shown to be especially helpful in tackling these obstacles. A growing trend within biomedical research is cross-disciplinary science in which researchers with training and expertise in different backgrounds work together to combine or integrate their perspectives into a single research endeavor.

At Dr. Steven R. Goodman's, Ph.D., first Research Town Hall meeting in January, the newly appointed VC for Research announced plans for a novel award program titled the COllaborative Research NETwork (CORNET) Awards. Based on the ideals of cross-disciplinary team science, the purpose of this program is to "stimulate innovative, interdisciplinary, team research that crosses not only UTHSC's Memphis colleges, but also encourages collaboration across all UT campuses and beyond." According to Chancellor Steve J. Schwab, M.D., "the creation of the CORNET Awards is an important step in stimulating team-based multidisciplinary research. Beginning with cross-college collaboration, then moving to cross-campus, and ultimately multi-institution collaboration meets our vision for UTHSC research."

The CORNET Awards will unfold in three phases: (1) UTHSC CORNET Awards in Memphis; (2) UT CORNET Awards; and (3) Southeastern CORNET Awards. Phase 1 of this innovative program is already well underway. At the inaugural CORNET Awards Ceremony on April 25, nine research groups were granted a total of \$422,504 in funding on behalf of Chancellor Schwab to promote new lines of research amongst collaborators on UTHSC's campus. The awardees and their project titles are as follows:

"Novel Approach to Treat Drug Resistant Clostridium Difficile Infections: Proof-of-pharmacological Concept"- Isaac Donkor, Ph.D.; Michio Kurosu, Ph.D.; Ying Kong, Ph.D.

"Genetic Analysis of Rapid Desensitization of the CB1 Receptor in BXD Mice"- Bob Moore, Ph.D.; Byron Jones, Ph.D.; Megan Mulligan, Ph.D.

"Exploring the Therapeutic Potential of a Novel Drug for the Treatment of Alzheimer's Disease by Targeting Neuroinflammatory Processes"- Detlef Heck, Ph.D.; Francesca-Fang Liao, Ph.D.; Anton Reiner, Ph.D.; Bob Moore, Ph.D.

"Nanogel Delivery of TRIM56-derived Peptide as a Broad-spectrum





Antiviral Against Influenza"- Kui Li, Ph.D.; Tao Lowe, Ph.D.
"Selective Targeting of TRPC3 Ion Channel for Alzheimer's Disease
Therapy"- Catherine Kaczorowski, Ph.D.; Wei Li, Ph.D.;
Kristen O'Connell, Ph.D.

"Clinical, Demographic, Genetic, and Epigenetic Determinants of Health Related Quality of Life Post Aneurysmal Subarachnoid Hemorrhage"- Ansley Stanfill, Ph.D., R.N.; Lucas Elijovich, M.D.; Brandon Baughman, Ph.D.; Claire Simpson, Ph.D.

"Novel 20-hydroxyvitamin D3 (20D3) Analogues for Periodontitis Treatment"- Liang Hong, D.D.S., Ph.D.; Franklin Garcia-Godoy, D.D.S., Ph.D.; Wei Li, Ph.D.; David Tipton, D.D.S., Ph.D.; Yanhui Zhang, Ph.D.

"MFCI, BURST and OMICS: Mining Actionable Insights for the Biomedical Researcher"- Charisse Madlock-Brown, Ph.D., M.L.S.; Robert Davis, M.D., M.P.H.; Panduka Nagahawatte, M.S.

"Scavenger Receptor-mediated Mechanisms in Age-related Macular Degeneration" - Francesco Giorgianni, Ph.D.; Marko Radic, Ph.D.

Phases 2 and 3 are also shaping up with announcements said to come in the near future. Their goal is to highlight and build upon each university's strengths by encouraging collaborative efforts from investigators that crosses UT campuses as well as other universities. Specifically, for UTHSC, this would include all the Areas of Excellence being outlined in the Operational Strategic Plan for Research. Dr. Goodman has met with leaders from across our sister campuses as well as at the University of Arkansas for Medical Sciences and the University of Alabama at Birmingham to name a few, all of whom are eager to "compose music" with UTHSC.

Chancellor Schwab and VCR Goodman are encouraged by the overwhelming number and caliber of the applications received in Phase 1 and are eager to see future submissions. With a focus on cross-disciplinary team science, together we are making the music that is propelling scientific innovation forward.

SPRINT Study Receives National Awards

At the Top Ten Clinical Research Achievement Awards ceremony in April, the Systolic Blood Pressure Intervention Trial (SPRINT) Study was awarded the Top Ten Clinical Research Achievement Award and the Herbert Pardes Award for Clinical Research Excellence. Winning papers were chosen based on their degree of innovation, representing the best and brightest work in the field, and the ability to lead to advancements in medicine that change lives and patient outcomes worldwide.

The SPRINT Study, a landmark clinical trial sponsored by the National Heart Lung and Blood Institute (NHLBI) of the National Institutes of Health (NIH), was designed to answer the question "Will lower blood pressure reduce the risk of heart and kidney diseases, stroke, or age-related declines in memory and thinking?" More than 9,300 participants were recruited from about 100 medical centers and clinical practices throughout the United States and Puerto Rico. Two of those clinical centers are located here in Memphis: one at the University of Tennessee Health Science Center, headed by Karen C. Johnson, M.D., M.P.H., and one at the VA Medical Center, headed by Barry Wall, M.D. William Cushman, M.D., headed the VA Clinical Center Network (CCN) for SPRINT that included 25 VA sites around the country. Dr. Johnson also served as the Vice Chair of the SPRINT National Steering Committee. Dr. Cushman, also a member of the Steering Committee, served as the Chair of the SPRINT National Intervention Committee.

About 1 in 3 people in the US has high blood pressure (BP), or hypertension, and it is the leading risk factor for heart disease, stroke, kidney failure, and other health problems. When SPRINT was created, clinical guidelines recommended treating systolic BP to less than 140 mm Hg for healthy adults and 130 mm Hg for adults with kidney disease or diabetes. The Study is one of the largest of its kind to date to examine how maintaining systolic blood pressure at a lower than currently recommended level will impact cardiovascular and kidney diseases.

The SPRINT Study population included persons with hypertension who were 50 years and older who were at increased risk for heart disease. SPRINT enrolled women and men, racial/ethnic minorities, and the elderly. It did not, however, include patients with diabetes, prior stroke, or polycystic kidney disease, as other research included





those populations. From 2010 to 2013, participants were separated into two groups that differed according to targeted levels of blood pressure control. The standard group received BP medications to achieve a target of less than 140 mm Hg. On average two different BP medications were needed to get to this goal. The intensive treatment group received medications to achieve a target of less than 120 mm Hg and an average of three medications were needed to get to this goal.

"We found that the intensive intervention reduces rates of cardiovascular events by 25% and mortality rates by 27% compared to the target systolic pressure of 140 mm Hg," says Johnson (pictured left).

Due to the significance of the initial findings, NIH actually stopped the blood pressure intervention earlier than originally planned in order to let participants know this beneficial finding. Publication soon followed.

"The Study showed that maintaining a lower systolic pressure by this more intensive BP intervention could ultimately help save lives in older or high-risk patients who have a combination of high BP and at least one other risk factor for heart disease," says Cushman (pictured right).

Drs. Johnson and Cushman say that while these findings are ground-breaking, patients should still consult their doctors to determine whether this lower goal is best for their individual treatment. They also add that no one site could have done this kind of study alone. It was truly a team effort; one that could not have been achieved without all the hard work and dedication of the research staff and commitment of the participants.

The SPRINT Study is also examining kidney disease, cognitive function, and dementia among the patients. Those results are still being collected and are not yet available. Primary results were published in the New England Journal of Medicine in November 2015. Additional papers from the Study will be published in the next few months.

UT Startup Company Announced as Winner of the Tennessee Venture Challenge

A Knoxville-based startup company, Peroxygen Systems, Inc., claimed the grand prize at the 2016 Tennessee Venture Challenge (TVC) competition for budding entrepreneurs in early April. Ming Qi of Peroxygen Systems, Inc. received \$20,000 from the University of Tennessee Research Foundation (UTRF), winning over five



other startups whose principals pitched their business ideas to a panel of investors.

The Tennessee Venture Challenge, hosted by the University of Tennessee Research Foundation, was created as a business plan competition for the University of Tennessee community. To be eligible for the competition, potential startup companies must be commercializing intellectual property created at a UT campus or institute.

A separate \$5,000 "Crowd Favorite" prize went to Shawn Butler, Austin Scott, and Daniel Wiggins of Farm Specific Technology LLC. Attendees voted through a text-in voting system sponsored by Launch Tennessee. Second-and third-place winners overall were Farm Specific Technology, with a \$3,000 prize, and CZ Nutrition, which won \$2,000 respectively.

Stacey Patterson, vice president of the Research Foundation, says the competition showcases broad-based technologies throughout the state, hopefully leading to significant economic growth in the region.

"We're pleased to present Peroxygen Systems with this honor and look forward to seeing how Peroxygen Systems grows in the future. The 2016 Tennessee Venture Challenge saw technologies that represented the broad spectrum of research occurring at the University of Tennessee that have the potential to solve problems and bring tremendous innovations to the global marketplace," says Patterson.

Ming Qi, a former postdoctoral researcher at UT, started Peroxygen Systems to change the hydrogen peroxide production and delivery process to make it more energy

efficient and cost effective. Hydrogen peroxide is used for its oxidizing properties, working as a bleaching agent and disinfectant against bacteria, viruses, spores, and yeasts.

According to Qi, the onsite production of hydrogen peroxide reduces costs for manufacturers by over 50 percent, and more impor-

tantly it is environmentally friendly and prevents the dangerous transportation of the chemical.

"We are pretty happy," said Qi of the prize. "We will really make use of the money to build our first prototype."

Farm Specific Technology LLC, winners of the \$5,000 crowd favorite prize sponsored by Launch Tennessee, is patenting the Flex Roller Crimper, a flexible twist on a piece of farm equipment used to manage cover crops and get rid of pesky weeds.

This year's panel of four investor judges included: Ken Woody of Innova Memphis; Grady Vanderhoofven of Meritus Ventures; Brian Laden of TriStar Technology Ventures; and Tim Wilson of Artiman Ventures who scored each group's eight-minute presentation.

The final six teams were selected from university-affiliated startup companies. TVC 2016 preparation began earlier this year with a seven-week "entrepreneurial bootcamp" that helped inventors tweak their pitches and define their markets. Eight potential startups were selected after the seven-week series to compete in the semifinals. The field was then narrowed again during semi-finals to the six teams that competed in April.

"Moving intellectual property from the lab into the marketplace is one of UTRF's primary functions, and we're excited about the enthusiasm for commercialization we've seen among the UT research community during this competition," says Patterson.

This is the second year the UTRF has hosted the challenge. The award funding comes from royalty revenues gained through other UT-owned intellectual properties.

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The Research Rainmaker

Dr. Datta Honored for Achievement in Physiology

Subimal Datta, Ph.D., Professor of Anesthesiology and Professor of Psychology at the UT College of Arts and Sciences, received the 2015 B. K. Anand Oration Award at the All India Institute of Medical Sciences in Asari Nagar, New Delhi. The international award is given annually to an eminent basic medical scientist with special contributions related to neurosciences. The award was first given in 2004 and is named for Dr. B. K. Anand, an eminent neurophysiologist who established the Department of Physiology at AIIMS and made significant contributions to the field of physiology. The award is given to eminent Indian or foreign scientists for outstanding basic science or clinical contributions to the field. Dr. Datta's oration was, "Gift of Sleep

and Dreaming: A Cellular and Molecular Mechanism for Converting Today's Experience into Tomorrow's Memories."

Dr. Datta is recognized as one of the world's leading experts on the neurobiology of sleep and cognitive neuroscience. He joined Anesthesiology's neuroscience research team in January 2015. Current research led by Dr. Datta aims to understand disorders such as insomnia, addiction, depression, and different types of anxiety disorders (including PTSD). Understanding the cellular, neurochemical, and molecular mechanisms underlying regulation of REM sleep and processing of different types of memory, including emotional memory, during different stages of sleep and wakefulness have been the main focuses of Dr. Datta's research to date. Dr. Datta's research is currently funded by a grant from the Na-



tional Institutes of Health totaling \$1,385,000. His work has been continuously funded by NIH research grants since 1995.

Prior to joining the UT Graduate School of Medicine, Dr. Datta was Professor in the Departments of Psychiatry and Neurology, the Director of Sleep and Cognitive Neuroscience Research laboratories, and an Associate Director of Clinical Sleep Medicine Fellowship Training program in Boston University School of Medicine.

At Boston University School of Medicine, Dr. Datta and his team of researchers identified an intracellular signaling enzyme that regulates the wake-sleep cycle, which could help lead to the development of more effective sleep aid medications. The results of the study point to a specific

enzyme inside neurons in the brain that trigger an important shift in consciousness from sleep to wakefulness and wakefulness to sleep.

Dr. Datta has authored and co-authored numerous chapters and scientific publications. He is the Associate Editor of Sleep and of Frontiers in Neuroscience and serves on the editorial board of several additional professional journals. He serves regularly on the review committees of several national and international scientific funding agencies.

Dr. Datta earned his doctoral degree in Human Physiology and Neuroscience from AIIMS and completed postdoctoral training in Neurophysiology at Laval University School of Medicine and at Harvard Medical School.

Have a story we should include?

Submissions and ideas can be sent to: Sarah Fenderson at sfenderson@uthsc.edu

New Faculty Spotlight: Dr. Claire Simpson

Claire Simpson, Ph.D., B.S., Assistant Professor in the Department of Genetics, Genomics and Informatics (GGI) within the College of Medicine, joined the faculty in January 2016. She graduated with a Ph.D. in Neurogenetics from the Institute of Psychiatry at Kings College in London and has a background in biomedical sciences and chemistry. Dr. Simpson is a genetic epidemiologist with expertise in vision research and in psychiatric, neurological and autoimmune diseases. Genetic epidemiology is the study of the causes and spread of diseases among human populations. Looking at both genetic and environmental factors, genetic epidemiologists are specifically concerned with how these factors interact to produce various diseases and traits in human populations. By using mathematical, statistical and lab methods to do studies, genetic epidemiologists seek to derive a statistical and quantitative analysis of how genetics work in large groups.

Dr. Simpson's focus is the application of genetic and genomic methods to study the common and pervasive diseases and quantitative phenotypes that are influenced by multiple DNA variants and by many environmental and technical factors. She is interested in the development of improved methods for deciphering the genetics of common diseases and complex traits, using population genetic and computational approaches. Specifically, Dr. Simpson's research is focused on four areas: Pediatric neurodevelopment; eye diseases and traits; gastrointestinal disorders; and genetic epidemiological methods development.

She is also helping to build up new clinical biorepositories at UTHSC for genetics and genomics. Together with the information in biorepository, Dr. Simpson has the unique ability to help design, study and analyze projects with researchers from across UTHSC. Essentially, Dr. Simpson can take a disease or trait a researcher is interested in testing and help design studies that reduce researcher-induced errors and make the best use of available resources. She is presently collaborating with several investigators from across all six colleges at UTHSC to shape the way they approach and perform their investigations.

Human diseases have been the focal point of genetic epidemiologic studies, with recent efforts directed towards complex disorders such as coronary heart disease,



diabetes and cancer. Dr. Simpson and genetic epidemiologists alike believe that understanding the genetic basics of such diseases will revolutionize medicine in the 21st century, enabling better preventive measures, diagnosis, prognosis and novel treatments. With the recent advances of the Human Genome Project, in sequencing technologies, and the creation of powerful statistical methods of analysis, genetic epidemiologists are at the forefront of this transformation.

Dr. Simpson is a member of the International Genetic Epidemiology Society (IGES): Communications Committee and is a past member of the National Human Genome Research Institute (NHGRI): Genome Trainee Advisory Committee. She also served as chair and member of the IGES Ethics, Legal and Social Issues Committee.

Her honors and awards include multiple grant funding from private charities and companies, the National Institutes of Health (NIH) Summer Research Mentor Award, NHGRI's Genome Recognition of Employee Accomplishments and Talents (GREAT): Diversity and Community Outreach Award for teaching at the University of DC, and multiple travel awards from various organizations. Furthermore, she has taught at multiple universities and is published in over 30 peer-reviewed journal articles and abstracts.

Paving the Way for Next Phases of Experimental and Human Genetics

Established in 2014, the Department of Genetics, Genomics and Informatics (GGI) is a new basic science department within the College of Medicine. The department is comprised of Robert W. Williams, Ph.D., an experimental neurogeneticist and its founding chair; Professors Lu Lu, M.D., and Byron Jones, Ph.D., both of whom are experts in addiction and toxicogenetics; and three new faculty; Megan Mulligan, Ph.D., a molecular neurogeneticist;

Athena Starlard-Davenport, Ph.D., a cancer pharmacogeneticist; and Claire Simpson, Ph.D., a statistical geneticist with expertise in developmental and eye diseases. GGI's mission is to carry out high impact research in genetics and related fields and to provide training in precision medicine and systems genetics. Furthermore, its goal is for research to have a positive impact on health, disease prevention, and best options for treatment, in the context of unique genetics and family histories. Williams notes that GGI hopes to grow rapidly over the next five years with addition of primary and collaborative joint appointments with other departments and colleges at the University.

"Despite our small size, we already have terrific interactions with faculty in Pediatrics, Preventive Medicine, Anatomy and Neurobiology, Ophthalmology, and the College of Nursing. Our goal is to reach out to all faculty keen to add genetics into their research programs. Thanks to many new recruits across campus with expertise in genetics, we are now able to collaborate much more effectively with clinicians at regional hospitals, in particular, with teams at Le Bonheur Children's Hospital, Methodist University Hospital System, Region One Health, and the West Cancer Clinic," says Williams.

Members of the GGI department are actively involved in large-scale national and international collaborations and training programs in genetics, bioinformatics and precision medicine according to Williams. The depart-



ment is also aiming to build its biotechnology resources.

"The key is to get patient consents and to biobank invaluable human tissues linked to great medical record data for advanced genetic and genomic analysis. We are looking to lead, especially in the area disparity health care."

Acting as a catalyst for both research and teaching initiatives, the GGI department has excelled in

mouse genetics and genomics since its formation. The department is now looking to grow its strength in human genetics. GGI will be working with the College of Graduate Health Sciences to fire up a new graduate training program in the fields of precision medicine and systems genetics to help develop more effective ways to treat patients based on genetics. Furthermore, Williams notes that adding human geneticists gives GGI a jumpstart for providing UTHSC a foundation for the next phase of medical research.

"Genomics is now big business and given the State's support for biomedical research and commercialization, there is significant potential economic impact. We are looking to explore ways in which we can in-source these advanced technologies—genomics, proteomics, metabolomics—to Tennessee and the Memphis area instead of outsourcing the core biotechnologies to the coasts. That means a lot of collaboration and negotiation with our partners in Tennessee."

The formation of the Genetics, Genomics and Informatics department will improve research prospects in the next wave of human and clinical genetics, all while building on UTHSC's current strengths in experimental, molecular and quantitative genetics. With the expansion of resources at UTHSC, GGI and the whole UT genetics community has the ability to be at the forefront of next phases of experimental and clinical genetics.

In Review: Quarterly Scientific Meetings Spotlight Student Research

The mission of the College of Graduate Health Sciences (CGHS) is to "improve the knowledge about human health through education, research, and public service, with an emphasis on improving the health of Tennesseans." One way the College seeks to fulfill this mission is by hosting Quarterly Scientific Meetings (QSM). CGHS began the meetings in 2012 as one of several opportunities for graduate students to hone their podium presentation skills, publicize their research, as well as educate College constituents about the different types of research happening in the various programs of the College. At each session, three students are selected from different programs or tracks to present their work. The forum even provides interactive streaming of the sessions so that students and faculty located on all of our campuses can participate. In our inaugural session, the QSM featured a presentation from a student on our Knoxville campus.

This quarter's presentation was held on May 4th and featured three students from UTHSC's main campus. The presenters and a brief synopsis of their topics are as follows:

Dr. Amir El-Hassan (Dental Sciences - Prosthodontics) presented his work titled "Effect of trimethylsilane plasma coatings on the hydrophobicity of four denture base liners and on Candida albicans adhesion." C. albicans is a ubiquitous fungus that is normally not a problem unless it overgrows. For 50% of denture wearers, C. albicans overgrowth can cause denture stomatitis and inflammation of the gums. Treatment involves antifungal agents and thorough cleaning of the dentures. Dr. El Hassan's research investigated whether coating the base liner with trimethylsilane would increase their hydrophobicity and decrease C. albicans adherence, and thus decrease the possibility of (re)infection or re-infection. Dr. El Hassan found that the coating increased hydrophobicity and decreased C. albicans adherence.

Ms. Shajila Siricilla (Pharmaceutical Sciences – Pharmaceutics) is working on the development of a rapid, convenient, and cost-effective assay method to aid the discovery of novel drugs that are effective against dor-





mant Mycobacterium tuberculosis (TB). Although individuals with dormant (latent) TB infections do not feel ill and are not infectious, some will eventually develop full-blown TB. Of particular concern are those individuals infected with extensively drug resistant TB. So, it is expected that this assay would facilitate the discovery of novel anti-TB drugs. Using the new assay procedure, the investigators have identified a compound that is effective against dormant TB.

Dr. Nathaniel Denson (Dental Sciences - Pediatric Dentistry) presented his work on biofilm formation on different types of restorative materials. He is investigating the adherence of Streptococcus mutans, a bacterium that is a contributor to tooth decay, to disks of various restorative materials, including a material that is relatively new on the market. The choice of restorative material takes into consideration many factors, including mechanical, chemical, and thermal properties. With his work, biofilm formation is now another consideration. Dr. Denson's conclusion is that the new material that was tested has less adherence of the bacterium, and therefore may be a better choice for tooth restoration.

-Isaac O. Donkor, Ph.D., Associate Dean for Students and Recruitment (pictured left) & Donald B. Thomason, Ph.D., Dean (pictured right) College of Graduate Health Sciences

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"I'm Singing in the Rain" A Message from Dr. Steven R. Goodman



With credit to the timeless film directed by Gene Kelly and Stanley Donen, and full knowledge that I am dating myself, I am "Singing in the Rain". We have done so much together in such a short time to stimulate research at the University of Tennessee Health Science Center, that you can't help enjoying the current and impending rain. Here are only a few items

that make the point.

With the masterful work of Dr. Matt Ennis and the rest of the Research Space Committee, we now have the UTHSC Allocation of Research Space Plan. This plan contains not only metrics, but how, when, and by whom they should be applied to fairly and thoughtfully best utilize the resource of laboratory space. The plan was vetted by the Faculty Senate and Research Counsel; and Chancellor Schwab accepted the plan and asked me to implement it as our new space policy on April 21, 2016.

To improve the functional and financial oversight of the UTHSC Research Cores, I appointed Dr. Tiffany Seagroves as Associate Vice Chancellor for Research Cores. I held a meeting of my VCRs Research Cabinet to discuss which of our current cores should be considered Institutional Cores. The Institutional Research Cores are defined as widely used by researchers that cross UTHSC Colleges (or will be for new cores), and in the future, Campuses, and are financially supported by the Institution. It was decided that seven cores met this definition: Lab Animal Care Unit (LACU); the Regional Biocontainment Laboratory (RBL); the Molecular Resource Center (MRC); the Flow Cytometry and Flow Sorting core (FCCS); the Molecular Bioinformatics Core (MBC); the Proteomics and Metabolomics Core (PMC); and the Research Histology Core (RHC). Dr. Seagroves then led a group in the Office of Research that prepared business plans and FY17-FY19 budgets for each core. We are putting the UTHSC research cores on firm ground.

With wonderful leadership by Dr. Rob Williams and Dean Wendy Likes, the Operational Strategic Plan for Research Committee is busy writing a plan which will serve as a roadmap for UTHSC Research for the next five years. The six Areas of Excellence within the plan, in no particular order, are: Cancer; Obesity, Diabetes

and Vascular Disease; Disorders of the Nervous System; Respiratory Disorders; Precision Medicine; and Health Outcomes. The underlying theme of this Operational Strategic Plan for Research is that we will be stronger as a Health Science Center if we build teams of interdisciplinary researchers, who cross Colleges and Campuses, and work together on research programs within these Areas of Excellence and their specified Focus Areas.



Photosource: Gene Kelly © 1952, Singing in the Rain Courtsey of trihartenterprises.com

A step in the direction of promoting these interdisciplinary teams, that cross College and Campus, was my creation of the UTHSC Collaborative Research Network with the accompanying CORNET Awards that are described on page 1 of this "Research Rainmaker". I was truly overwhelmed by the response to our first Phase 1 Request for Applications. We received 48 applications. Wow! Clearly our UTHSC faculty are all in on this concept and I could not be happier. We all need to thank Chancellor Steve Schwab for supplying the support needed to make this a reality.

So, to all of my friends and colleagues at UTHSC; get out your umbrellas and join me in "Singing in the Rain".

-Steven R. Goodman, Ph.D. Vice Chancellor for Research

