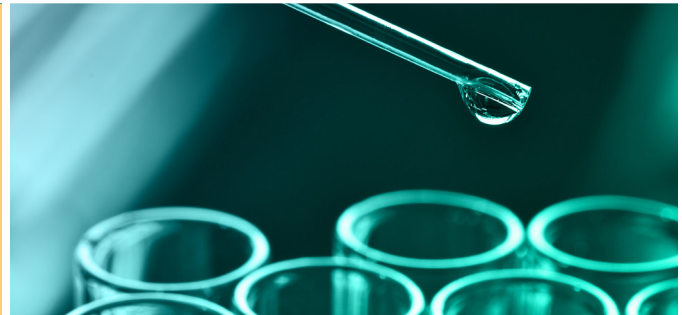


Fall 2015

UT THE UNIVERSITY OF
TENNESSEE
HEALTH SCIENCE CENTER

the research rainmaker

A Publication of the UTHSC Office of Research



The **V**eteran **A**mputees **L**eading **P**rosthesis **R**esearch (VALOR) study, to be funded by the Department of Defense, is a \$1.5 Million grant to help the “typical” veteran with a trans-tibial amputation reduce their risk of falling and improve their functional performance and quality of life by exchanging their prescribed prosthetic foot with a microprocessor controlled prosthetic foot.

The typical veteran with an amputated leg is not the young, fit athlete seen on television running a marathon or “Dancing with the Stars”, but an older

The Effect of a Microprocessor Prosthetic Foot on Function and Quality of Life of Veterans

person whose amputation was due to complications of vascular disease often associated with diabetes and poor health. This typical amputee is limited to walking indoors and/or outdoors with an artificial leg (prosthesis).

Recent prosthetic innovation has focused on the needs of the very active amputee, not the needs of the typical amputee. In fact, the basic design of the most widely prescribed foot for the typical amputee dates back more than 40 years. This foot does not function like a normal foot when taking a step, thus walking is more difficult and the risk of falling increases.

Technologically advanced feet, such as those controlled by microprocessors, are commercially available, but not currently prescribed for the typical amputee because of guidelines that limit its prescription to higher functioning individuals. This successful DOD grant is the result of an intra-college collaboration between Phyllis Richey, Ph.D., (left) in the Department of Preventive Medicine within the College of Medicine and Audrey Zucker-Levin, Ph.D., PT, MBA, GCS Emeritus (right) from the Department of Physical Therapy within the College of Health Professions.

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The Start of Our Journey: Seeding the Clouds

I feel privileged to have become the Vice Chancellor for Research at The University of Tennessee Health Science Center on July 27, 2015. After all, I have been given the opportunity to work with an outstanding UTHSC upper administration, led by Chancellor Steve Schwab, and a world-class group of faculty investigators on a big goal of doubling research at our Institution over the next ten years.

To accomplish this sizeable transformative audacious research target (START)* we need a plan or roadmap which we can all support. Towards this end, with the support of the Research Council, I have appointed a Committee to prepare a detailed UTHSC Operational Strategic Plan for Research. This Committee has membership from all Colleges at UTHSC and will be co-chaired by Rob Williams and Wendy Likes. To START we will need a plan that is big on vision, exceedingly creative, and non-parochial because we will need to raise all ships. I believe that we have assembled a committee that can do just that, with your input and help.

We have been working on many things during my first month of service to this institution. I have appointed a Research Space Committee, chaired by Matt Ennis, to create a set of guidelines and metrics for making the best use of the important resource of space. Executive Vice Chancellor Ken Brown and I had an external review of the Regional Biocontainment Laboratory (RBL) performed by an External Advisory Committee composed of three Directors of national RBL facilities. This report will help us define the future direction for the UTHSC RBL and advise us on the characteristics that we should be looking for in our next RBL Director. The next RBL Director will be filling the large shoes of Gerry Byrne who will be retiring in the near future. We have created a



new Proteomics and Metabolomics Core and are in the process of evaluating the operation and oversight of all of our UTHSC Research Cores.

We have hired Steve Youngentob as the Senior Associate Vice Chancellor for Research and he has joined us on September 1st. Steve's major charge will be to oversee the operations of the Office of Research, with his goal being to optimize the services that we provide to all investigators on campus. As Steve served as my Associate Dean for Basic Research and Graduate Studies in Syracuse, I know that he is up to the task.

In a UTHSC Town Hall meeting, prior to the selection process, Chancellor Schwab referred to your next Vice Chancellor for Research as a "Rainmaker". I see my role as providing vision and seeding the clouds, so that we can all create the rain together. It is in that spirit that we name our new newsletter "Research Rainmaker". I hope that you enjoy this and forthcoming issues.

*My version of "big hairy audacious goal" from "Built to Last: Successful Habits of Visionary Companies" by James Collins and Jerry Porras.

– **Steven R. Goodman, Ph.D.**
Vice Chancellor for Research

The Start of Our Journey (Partie Deux): Facilitating the Rain

From 2008 to 2013, I served as Steve Goodman's Associate Dean for Basic Research and Graduate Studies at SUNY Upstate Medical University. Together, over a five-year period, we made significant advances in both research and graduate education through the development of creative relationships, as well as increased efficiencies in the administrative offices that provided services to both enterprises.

I am very excited about coming to UTHSC, the opportunity to directly interact with several colleagues I have known for years, building new relationships with the many individuals I have already met and will soon meet; and as the saying goes "put the band back together".

To accomplish the **s**izeable **t**ransformative **a**udacious **r**esearch **t**arget (START) will take, among other things outlined in Steve's "The Start of the Journey" piece, a well-oiled Office of Research. As Senior Associate Vice Chancellor for Research, it is my overarching goal to foster an outstanding environment of support for UTHSC researchers, widely facilitating the current and future research activities of the campus. This principal objective includes, but is not limited to:

- Promoting open and clear communication both within the Office of Research as well as with internal and external stakeholders
- Providing outstanding administrative services while effectively managing compliance and research opportunities in a balanced beneficial approach
- Improving access to the basic information needed by stakeholders

- Improving researcher productivity and satisfaction by reducing administrative burden
- Promoting a culture of ongoing improvement; "Excellence is not our goal, it is where we begin"*

Moving forward, I see my role as a catalyst of change within the Office of Research. I hope that each of you will work with us in order to optimize the services that we provide to all investigators on and off campus.



– **Steven L. Youngentob, Ph.D.**
Senior Associate Vice Chancellor for Research

*Chef Andrew Weissman

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We Thank Gerry Byrne For His Many Contributions to UTHSC

On September 30th, Dr. Gerry Byrne, Professor in the Department of Microbiology, Immunology, and Biochemistry (MIB) and Director of the Regional Biocontainment Lab (RBL) will retire from UTHSC after 13 years of exemplary service. Dr. Byrne was recruited to UTHSC from the University of Wisconsin-Madison in 2002 to serve as Chair of the Department of Molecular Sciences (now Microbiology, Immunology and Biochemistry) and in 2006 was named the Director of the RBL.

Dr. Byrne is a world renowned expert on Chlamydia infections and pathogenesis. He has been awarded over \$18 million in extramural funding during his career for his research on Chlamydia-host interactions and has just completed year 29 of continuous funding for his long-standing NIH R01 entitled "Immunity and Latency to Chlamydial Infection."

Dr. Byrne has published over 170 peer-reviewed journal articles, book chapters and invited papers from conference proceedings. He is a Fellow of the American Academy of Microbiology and a founding member and President of the Chlamydia Basic Research Society. Dr. Byrne has also served on numerous NIH Study Sections, both as a member and as Chair, and is currently on the editorial boards for Infection and Immunity and for Cellular Microbiology. Since 2009, Dr. Byrne has also served as UTHSC Responsible Official, which is a position required for any institution that has a Select Agent Program.

In his role as RBL Director, Dr. Byrne was one of the lead researchers responsible for obtaining



two NIH UC6 grants totaling greater than \$18 million to support the building and equipping of the RBL. In addition, he was the PI for one of the few NIH T32 graduate training grants at UTHSC in which under-represented minorities were provided support to pursue a Ph.D. in bacterial pathogenesis. Throughout his career, Dr. Byrne has been a strong advocate for student education and has been instrumental in training the next generation of scientists. His leadership in this area will be greatly missed.

We wish him the very best and thank him for his many contributions to UTHSC.

New Faculty Spotlight: Dr. Charisse Madlock-Brown

Charisse Madlock-Brown, Ph.D., MLS, assistant professor in the department of Health Informatics and Information Management within the College of Health Professions, joined the faculty in 2015.



She recently graduated, with a PhD in health informatics, from the University of Iowa, and has a background in library and information science. Her research area is scientometrics with a focus on bio-medicine. Scientometrics is the study of scientific communication and communities. It has been used by funding agencies and institutions to evaluate research activities, and monitor changes. Her research goals are to ground research policy and planning into a concrete framework for evaluation and assessment.

Her dissertation project offers a framework for emerging topic detection in medical literature. Policy makers, funding agencies, and researchers could all benefit from a robust emerging topic detection application. She is currently working on developing an online system that can be used in real-time.

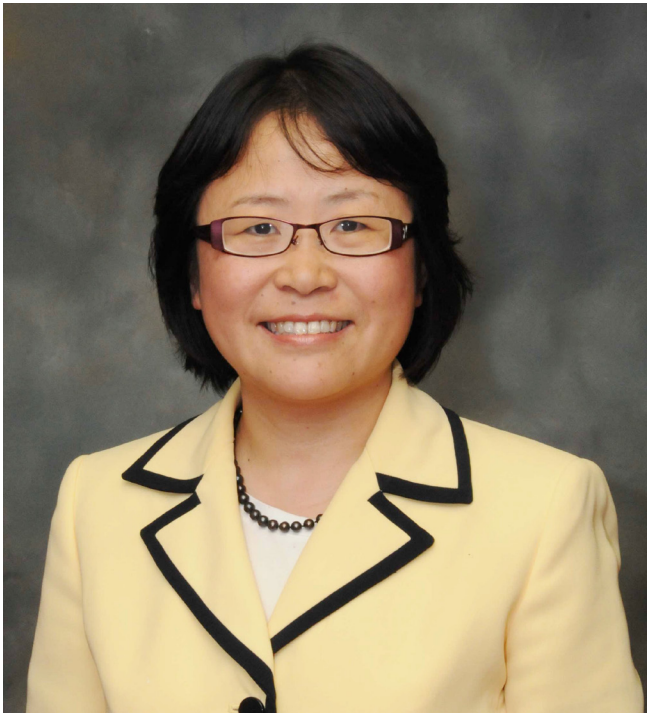
She has also conducted “team science” research and has presented several times at the national Science of Team Science conference. Her research within that community includes the assessment of the impact of publication subject diversity on research performance for individuals, understanding the relationship between gender disparities and collaborative behavior, and assessing the impact of the Clinical and Translational

Science Awards (CTSA) on collaborative research patterns. Her work will soon become part of the CTSA Search system (<http://research.icts.uiowa.edu/polyglot/>), a federated search engine published by members of the CTSA Consortium. This summer, she presented her work on CTSA institutions at the international Advances in Social Network Analysis and Mining conference.

Other current/recent projects include large scale analysis of biomedical literature for purposes of article retraction trend analysis, using data mining algorithms to find interesting groupings of gene-related data, and developing personal information management tools.

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UTHSC Researchers Funded to Study Medicare Policy



Junling Wang

A UT research team headed by Junling Wang, PhD, a Professor in Health Outcomes and Policy Research at the College of Pharmacy, Department of Clinical Pharmacy, has been funded by NIH/NIA to study a Medicare policy. Dr. Wang received a UTHSC Bridge Support Award while working on the proposal.

Dr. Wang's group was the first in the U.S. to find Medicare eligibility criteria for medication therapy management (MTM) services as a cause for racial/ethnic disparities. The U.S. Department of Health and Human Services Centers for Medicare & Medicaid Services, recently cited Dr. Wang's findings as a main reason for planning MTM reform.

For this new project, Dr. Wang's group aims to find equitable and effective MTM eligibility criteria. Dr. Wang's co-investigators include Marie A. Chisholm-Burns, PharmD, MPH, MBA, FCCP, FASHP, from College of Pharmacy; Jim Y. Wan, PhD, Samuel Dagogo-Jack, MD, FRCP, and William C. Cushman, MD, from College of Medicine (Cushman also from Veteran Affairs Medical Center); Julie Kuhle, PharmD, from Pharmacy Quality Alliance; and Ya-Chen Tina Shih, PhD, from MD Anderson Cancer Center. Ms. Yanru Qiao, MS, is the Data Analyst on the team. Israel A. Goldberg, PhD, a grant consultant for UTHSC, guided Dr. Wang closely in the grant application process.

Have a story we should include?
Submissions and ideas
can be sent to:
Lisa Bronte at lbronte@uthsc.edu.

Human Research Protection Program Seeks National Accreditation

In his recent State of Campus address, Chancellor Steve Schwab outlined ambitious plans to enhance the research profile of the University, including expansion and diversification of its clinical research activities. Concomitant with these developments, the University has undertaken the challenge of achieving national accreditation of its program for protecting the rights and welfare of human subjects under the auspices of the Association for the Accreditation of Human Research Protection Programs (AAHRPP).

In order to achieve accreditation, the University must demonstrate that its policies and procedures ensure the most rigorous degree of protection for research participants. The focus of accreditation is the Human Research Protection Program (HRPP). The core of the HRPP is the Institutional Review Board, which functions under a federal mandate to assure that investigators adequately protect the welfare of subjects and secure effective informed consent. However, the HRPP includes all entities that contribute to the protection of human subjects. It must be demonstrated that the IRB, grants and contracts, biosafety, budget and finance, radiation safety, affiliated institutions, and research personnel themselves interact in a consistent and cooperative manner to assure that all pertinent issues related to the protection of human subjects are addressed. The accreditation process is complex. It includes a lengthy and rigorous self-evaluation, submission of two applica-

tions, revisions to the HRPP recommended by reviewers, and onsite interviews with compliance committee members and staff, researchers, and University administrators. Completion of the process normally requires 18-24 months of intensive effort.

AAHRPP accreditation has become the gold standard for assuring that research organizations adequately protect human subjects, and its seal of approval carries numerous advantages for the research enterprise at the University. Accreditation provides a competitive edge with private companies, federal agencies and non-profit sponsors of research by assuring that the University's program for protecting human subjects is comprehensive in scope and highly efficient in its implementation. In addition, accreditation decreases the likelihood that the University will be non-compliant with federal regulations, thereby avoiding complex inspections and costly disruptions of its research activities. Perhaps most importantly, accreditation provides a significant measure of assurance to the members of the community that the University is committed to providing the highest measure of protection for those who collaborate with our investigators in expanding the armamentarium of strategies for preventing and treating human disease.

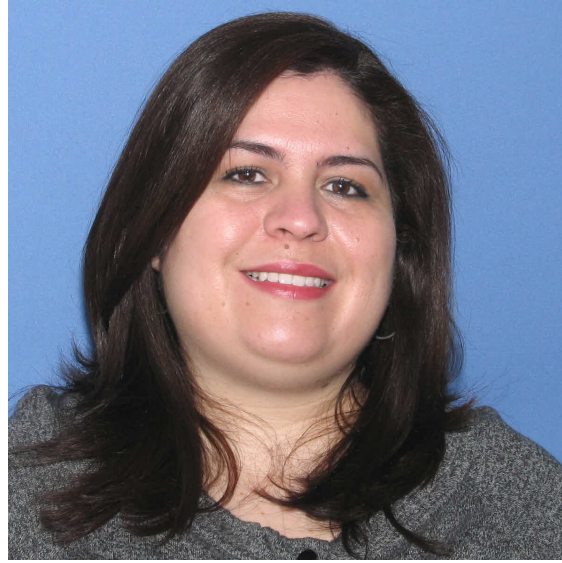
- Terry Ackerman
Chair, Institutional Review Board

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Congratulations to Our AAMC Grant Writer Selectees!



Emma Tilman



Vanessa Morales-Tirado

We are pleased to announce that Emma Tilman, Pharm.D., Clinical Pharmacy, and Vanessa Morales-Tirado, Ph.D., Ophthalmology, were selected by the Association of American Medical Colleges to participate in the Grant Writers Coaching Group for NIH Awards workshop.

Space was limited to 24 applicants. The AAMC received 56 applications nationally, 9 who applied from UTHSC. As one of his first initiatives to elevate the UTHSC research enterprise, Dr. Steve Goodman announced that registration will be paid by the Office of Research.

Participation in this workshop involved:

- Submission of draft application materials prior to the conference;

- A full day preconference seminar (held 9/18 – 9/19/15 in Atlanta, GA);
- Individual meeting with coaches;
- Virtual biweekly group meetings to facilitate ongoing review and discussion for 2-3 months.

During the workshop, sections of each participant's proposal are reviewed in bi-weekly online group meetings with real-time feedback from faculty and peers. This feedback process allows for rapid improvement of not only writing, but often improvement in the scientific underpinnings for the project and study design.

Congratulations, Emma and Vanessa!

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