

FACULTY newsletter

CPMS Physical and Mathematical Sciences



ABOVE Dennis Tolley (top) and Barry Willardson (bottom) were both published in the most recent edition of PNAS.

College Professors Published in Top Journal

Dennis Tolley, a professor in the Department of Statistics, was recently published in Proceedings of the National Academy of Sciences (PNAS), one of the three most highly acclaimed scientific journals in the world.

Tolley and his colleagues crunched the numbers on proposed changes to the federal health care system and noticed that government forecasts overlooked one large benefit: With expanded access to health care, more people will stay in the workforce longer, producing more revenue for the government and thus lessening the financial impact of reform legislation.

Tolley is a co-author on the study with researchers from Duke University, North

Carolina State University and the National Council of Spinal Cord Injury Association. The paper will appear in the December 15, 2009 edition of PNAS, which is available in print and online. This is not the first time Tolley has published on how to extend the life of a shrinking American workforce. Two years ago, PNAS also published his research showing that investments in biotechnology could meet the needs of aging baby boomers.

Dr. Barry Willardson, a professor in the Department of Chemistry and Biochemistry, was also published in the most recent edition of Proceedings of the National Academy of Sciences

Willardson and graduate student Nathan Itoga contributed to a new study detailing the surprising flexibility that G-proteins, which help relay information throughout the body, have when paired with certain binding partners. The findings promise to aid the development of drugs to counter diseases that disrupt G-protein signaling.

Willardson and Itoga are co-authors on the study and participated at the request of researchers from the University of Rochester School of Medicine and the Institute of Research in Biomedicine in Barcelona, Spain.

by: Steve Pierce

COLLEGE PUBLICATIONS

Chemistry and Biochemistry

[Hansen, L.D.](#); Thomas, N.R.; Arnholdt-Schmitt, B. *Physiologia Plantarum*, 2009, 137: 446-458.

Temperature responses of substrate carbon conversion efficiencies and growth rates of plant tissues.

Malasics, A.; Gillespie, D.; Nonner, W.; [Henderson, D.](#); Eisenberg, B.; Boda, D. *Biochimica et Biophysica Acta - Biomembranes*. 2009, 1788, 2471-2480. Protein Structure and Ionic Selectivity in Calcium Channels: Selectivity Filter Size, not Shape, Matters.

Li, Y.; [Tolley, H.D.](#); [Lee, M.L.](#); *Analytical Chemistry*, 2009, 81 (22), 9416-9424. Poly[hydroxyethyl acrylate-co-poly(ethylene glycol) diacrylate] Monolithic Column for Efficient Hydrophobic Interaction Chromatography of Proteins.

Lunt, B.M.; [Linford, M.R.](#) U.S. Patent No. 7,613,869. 2009. Long-Term Digital Data Storage.

Sun, X.; Li, D.; [Lee, M.L.](#); *Analytical Chemistry*, 2009, 81, 6278-6284. Poly(ethylene glycol)-

Functionalized Polymeric Microchips for Capillary Electrophoresis.

Mathematics

[Glasgow, S.](#) and [Ware, M.](#), (2009) Real-time dissipation of optical pulses in passive dielectrics. *Physical Review A* 80, 043817-1 - 043817-10.

[Platt, K.J.](#), (2009) Representation type of the blocks of category OS in types F4 and G2. *Journal of Algebra* 332, 3832-3838.

Statistics

[Lawson, J.S.](#), [Schaalje, G.B.](#), [Collings, B.J.](#), (2009) "Blocking Mixed-Level Factorials with SAS," *Journal of Statistical Software*, Vol. 32, Code Snippet 1, <http://www.jstatsoft.org>.

IMPORTANT DATES TO REMEMBER

- Winter Break (No Class)
December 19-January 4

- Fall Semester Grades DUE
December 30

- Graduate Award Mentoring
Applications DUE
January 8

- Spring Research Conference
Web Site Open for Abstract
Submission
January 15

- College Award Nominations DUE
January 21

- College Annual Awards Banquet
January 28, 6pm
WSC Ballroom

- University Award Nominations DUE
February 1