

JOSEPH M. AWIKA

**Current Title:** Professor

**Appointment:** 40% Teaching, 60% Research

**Physical Address:** 429 Heep Center, Texas A&M University, College Station, TX 77845-2474

**Email Address:** [awika@tamu.edu](mailto:awika@tamu.edu)

**Previous titles:**

Associate professor, Texas A&M University, College Station, TX (2013-2017)

Assistant professor, Texas A&M University, College Station, TX (2008-2013)

Assistant Professor, University of Missouri, Columbia, MO (2006 – 2008)

Assistant Professor, Arkansas State University, AR (2004 – 2005)

Adjunct Assistant Professor, University of Arkansas, Fayetteville, AR (2004-2006)

**Education:**

PhD, Food Science & Technology, Texas A&M University, College Station, TX, 2003

B.S., Dairy Science & Tech, Egerton University, Kenya, 1996

**Teaching Focus:**

*Graduate:* Food Carbohydrates (FSTC 631)

*Undergraduate:* Food Product Development (FSTC 401)

Fundamentals of Baking (FSTC 305)

**Research focus:**

Dr. Awika's research focuses on chemistry and mechanisms by which bioactive secondary plant metabolites interact with macromolecules (carbohydrates and proteins) to affect food quality and biological properties relevant to health. Effect of such interactions on specific markers of chronic disease prevention, and innovative processing techniques that can lead to improved health and nutritional benefits of grains and other plant-derived commodities are of interest. He is also interested in the intersection of plant genetics and end-use traits relevant to human health and quality of life.

Dr. Awika's research involves multidisciplinary and international collaborations with geneticists, nutritional biochemists, agronomists, plant breeders, among others, from around the world.

**Graduate advising/mentoring:**

- ❖ Post-Doctoral: current = 1; cumulative = 6
- ❖ PhD: current = 6; degree recipients = 7 (chair), 16 (committee member)
- ❖ MS: current = 1; degree recipients = 9 (chair), 32 (committee member)
- ❖ Undergraduate independent research mentoring - 17

❖ **National society research awards and fellowships by graduate advisees = 25**

- Four IFT graduate fellowship – IFT (2014, 2015\*2, 2016)
- Eight best graduate research awards – AACCI (2009 - 2017)
- Eight graduate fellowships – AACCI (2011 - 2016)
- Five best graduate research awards – SICNA (2009, 2011, 2013\*2, 2014)

**Professional memberships, selected leadership roles and honors:**

American Association of Cereal Chemists (AACC): 1999 – present

Institute of Food Technologists (IFT): 1999 - present

American Chemical Society (ACS): 2003 – 2012; 2016 - present

*Editor*, Journal of Cereal Science, 2018 - present

*Associate editor*, Journal of the Science of Food and Agriculture, 2011 – present

*Associate editor*, Cereal Chemistry, 2013 – 2016

The 2008 Chair of the University of Missouri section of American Chemical Society.

*Excellence in Teaching Award*, American Association of Cereal Chemists International, 2016.

*Deans Outstanding Award for Interdisciplinary Research*, Texas A&M: 2015

*Tom Slick Senior Graduate Research Fellow*, Texas A&M University, 2002.

*Three American Association of Cereal Chemists Foundation Fellowships* 2000, 2001, 2002.

**Invited presentations**

National meetings – 25; International meetings – 23

**Select recent publications [total 04.2018: peer reviewed 56, books 2, chapters 8; [Google Scholar](#) ]**

1. Amoako, Derrick; **Awika, J.** 2016. Polyphenol interaction with food carbohydrates and consequences on availability of dietary glucose. *Curr. Opin. Food Sci.* 8, 14-18.
2. Amoako, Derrick; **Awika, J.** 2016. Polymeric tannins significantly alter properties and in vitro digestibility of partially gelatinized intact starch granule. *Food Chem.* 204, 10–17.
3. Audrey L. Girard, M.E. Castell-Perez, S.R. Bean, S.L. Adrianos, and **J.M. Awika.** 2016. Effect of Condensed Tannin Profile on Wheat Flour Dough Rheology. *J. Agric. Food Chem.* 64, 7348-7356.
4. Ting Qi, Yanming Chen, Honggui Li, Ya Pei, Shih-Lung Woo, Xin Guo, Jiajia Zhao, Xiaoxian Qian, **Joseph Awika**, Yuqing Huo, and Chaodong Wu. 2017. A Role for PFKFB3/iPFK2 in Metformin Suppression of Adipocyte Inflammatory Responses. *J. Mol. Endocrinol.* 59, 49-59. DOI: 10.1530/JME-17-0066
5. **Joseph Awika** and Kwaku G. Duodu. 2017. Bioactive polyphenols and peptides in cowpea (*Vigna unguiculata*) and their health promoting properties: A review. *J. Funct. Foods* 38, 686-697. 10.1016/j.jff.2016.12.002
6. Shima Agah, Hyemee Kim, Susanne Talcott, **Joseph M. Awika.** 2017. Complementary cereals and legumes for health: Synergistic interaction of sorghum flavones and cowpea flavonols against LPS-induced inflammation in colonic myofibroblasts. *Mol. Nutr. Food Res.* 61, 1600625. DOI: 10.1002/mnfr.201600625
7. Audrey L. Girard, Scott R. Bean, Michael Tilley, Sherry L. Adrianos, and **Joseph M. Awika.** 2018. Interaction mechanisms of condensed tannins (proanthocyanidins) with wheat gluten proteins. *Food Chem.*, 245, 1154-1162. <https://doi.org/10.1016/j.foodchem.2017.11.054>
8. **Awika, J.M.** Devin J. Rose, Senay Simsek. 2018. Complementary effects of cereal and pulse polyphenols and dietary fiber on chronic inflammation and gut health. *Food Funct.* 2018, **9**, 1389 - 1409. DOI: 10.1039/c7fo02011b