

Jurgen G. Schwarz

Chair, Department of Agriculture, Food and Resource Sciences
University of Maryland Eastern Shore
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EDUCATION: Ph.D., Food Science and Technology, Cornell University, 1993
Diploma Food Engineer, University of Hohenheim, Stuttgart, Germany, 1987

POSITION: Chair, Department of Agriculture, Food and Resource Sciences, since 8/2013

EXPERIENCE: Professor, Food Science and Technology, since 07/2013
Director, Food Science & Technology Ph.D. Program, 2002-2013
Acting Dean and Acting 1890 Research Director,
School of Agricultural and Natural Sciences, UMES, 2011-12
Associate Professor, Department of Cereal and Food Sciences, North Dakota
State University, 7/1999 to 8/2002
Assistant Professor, Department of Cereal and Food Sciences, North Dakota
State University, 8/1993 to 6/1999

RESEARCH INTEREST:

Value-added processing and bio-conversion of agricultural products and food processing wastes for food and other industrial purposes through combination of food biochemistry and food biotechnology fundamentals with engineering principles; Food safety.

TEACHING EXPERIENCE:

210 Introduction to Food Science & Technology, 2 credits
460/660 Food Chemistry, 3 credits
461/661 Food Chemistry Laboratory, 1 credit
470/670 Food Processing, 3 credits
471/671 Food Processing Laboratory, 1 credit
FDST 493 Food Chemistry, 3 credits
FDST 805 Food Processing and Technology, 3 credits
767 Cereal Enzymes and Bioprocessing, 3 credits (team of 2 instructors)
499 Waste Management and Bioprocessing, 2 credits (team of 2)
450/650 Food Safety for Industry and Consumers, 3 credits (team of 6)

Master's Thesis: directed 4 students

Ph.D. Dissertation: directed 8 students

Served on numerous advisory committees for other M.S. and Ph.D students

PUBLICATIONS: Refereed Journals:

Madden, M.; Mitra, M.; Ruby, D. and Schwarz, J. (2012) Seasonality of Selected Nutritional Constituents of Edible Delmarva Seaweeds. *J. Phycol.* 48, 1289–1298.

Straetkvern, K.O. and Schwarz, J.G. (2012) Recovery of Native Potato Protein Comparing Expanded Bed Adsorption and Ultrafiltration. *Food Bioprocess Technol.* 5(5):1939-1949. DOI: 10.1007/s11947-010-0494-2.

Pagadala,S.; Parveen, S.; Schwarz, J.G.; Rippen, T. and Luchansky, J.B. (2011) Comparison of Automated BAX PCR and Standard Culture Methods for Detection of *Listeria monocytogenes* in Blue Crabmeat (*Callinectes sapidus*) and Blue Crab Processing Plants. J. Food Prot. 74(11):1930–1933.

Tkachenko, A., Mitra, M., Schwarz, J.G., Waguespack, Y and Brooks, C. (2011) The content of Carotenes, Ascorbic Acid, and Tocopherol in Selected Seaweeds. Intl. J. Algae 13(1):63-73.

Chaudhuri, A., Mitra , M., Schwarz, J.G. and Schiewer, S. (2009) Copper, Zinc, Nickel, and Cobalt biosorption potential of *Fucus vesiculosus* (Phaeophyceae) and *Gracilaria tikvahiae* (Rhodophyta). Water Practice & Technology 4(2) [http://www.iwaponline.com; doi 10.2166/wpt.2009.039]

Parveen, S., Taabodi, M., Schwarz, J.G., Oscar, T.P., Harter-Dennis, J. and White D. (2007) Prevalence and antimicrobial resistance of *Salmonella* spp. in processed poultry. J. Food Prot. 70(11):2466-2472.

Abou-zeid, K. A., Yoon, K. S., Oscar, T. P., Schwarz, J. G., Hashem, F. M. and Whiting, R. C. (2007) Survival and growth of *Listeria monocytogenes* in broth as a function of temperature, pH, and potassium lactate and sodium diacetate concentrations. J. Food. Prot. 70(11):2620-2625.

Chaudhuri, A.; Mitra, M.; Havrilla, C.; Waguespack, Y. and Schwarz, J. 2007. Heavy metal biomonitoring by seaweeds on the Delmarv Peninsula, east cost of the USA. Botanica Marina 50:151-158.

Havrilla, C., Mitra, M., Chaudhuri, A., Mandouma, G., Waguespack, Y., Schwarz, J., and Wu, S. (2006) Solid-state CP-MAS ¹³C NMR analysis of seaweeds from the Chincoteague Bay, Virginia. Journal of Undergraduate Chemistry Research 4:175-179.

Wiesenborn, D.P.; Tostenson, K.; Kangas, N.; Zheng, Y-L.; Hall III, C.; Niehaus, M.; Jarvis, P.; Schwarz, J.G. and Twombly, W. (2005) Processing of flaxseed for food and feed uses. Food Science and Biotechnology 14(3):305:310.

Kottapalli, B.; Wolf-Hall, C.E.; Schwarz, P.; Schwarz, J. and Gillespie, J. (2003) Evaluation of hot water and electron beam irradiation for reducing *Fusarium* infection in malting barley J. Food Protection 66(7): 1241-1246.

Schwarz, P.B., Schwarz, J.G., Zhou, A., Prom, L.K. and Steffenson, B.J. (2001) Effect of *Fusarium graminearum* and *F. poae* infection on Barley and malt quality. Montasschrift Brauwissenschaft 54(3/4): 55-63.

Madhusudhan, B.;Wiesenborn, D.P.; Schwarz, J.G.;Tostenson, K. and Gillespie, J. (2000) A Dry Mechanical Method for Concentrating the Lignan Secoisolariciresinol Diglucoside in Flaxseed. Lebensm.-Wissens.-Technol. 33(4):268-275.

Straetkvern, K.O.; Schwarz, J.G.; Wiesenborn, D; Zafirakos, E.; Lihme, A. (1999) Expanded bed adsorption for recovery of patatin from crude potato juice. Bioseparation 7(6):335-347.

Wiesenborn, D.P.; Wang, J.; Chang, K.C.; Schwarz, J.G. and Tostenson, K. (1998) Comparison of continuous and batch processes which extract pectin from sunflower heads. *Indust. Crops and Products* 19:171-181.

Wang, J.; Wiesenborn, D.P.; Schwarz, J.G. and Chang, K.C. (1997) Continuous, countercurrent extraction of pectin from sunflower heads. *Trans. ASAE* 40(6):1649-1654.

Shi, X.Q.; Chang, K.C.; Schwarz, J.G.; Wiesenborn, D. and Shih, M.C. (1996) Optimizing pectin extraction from sunflower heads by alkaline washing. *Biores. Technol.* 58(3):291-297.

Wiesenborn, D.P.; Xu, M.; Chang, K.C. and Schwarz, J.G. (1996) Pigment removal and pectin loss during the continuous, countercurrent washing of sunflower heads. *Trans. ASAE* 39(5):1781-1787.

Shi, X.Q.; Chang, K.C.; Schwarz, J.G. and Wiesenborn, D. (1996) Optimizing water-washing process for sunflower heads before pectin extraction. *J. Food Sci.* 61(3):608-612.

Shi, X.Q.; Chang, K.C.; Schwarz, J.G. and Wiesenborn, D. (1996) Acid removal from sunflower pectin gel through ethanol washing. *J. Food Sci.* 61(1):192-194.

Shi, X.Q.; Schwarz, J.G.; Chang, K.C. and Wiesenborn, D. (1995) Effect of countercurrent ethanol washing on sunflower pectin quality. *Carboh. Polymers* 27:171-175.

Schwarz, J.G. and Hang, Y.D. (1994) Purification and characterization of diacetyl reductase from *Kluyveromyces marxianus*. *Lett. Appl. Microbiol.* 18(5):272-276.

Schwarz, J.G. and Hang, Y.D. (1994) *Kluyveromyces marxianus*: A potential source of diacetyl reductase. *World J. Microbiol. Biotechnol.* 10:385-387.

Schwarz, J.G. and Hang, Y.D. (1993) Study of acetoin reductase from *Kluyveromyces marxianus*. *Lett. Appl. Microbiol.* 16:14-16.

Not peer-reviewed:

Yoe, C. and Schwarz, J.G. (2010) Incorporating Defense into HACCP. *Food Safety Magazine* 16(4):24-29.

Yoe, C.; Parish, M.; Eddy, D.; Lei, D.K.Y.; Paleg, B. and Schwarz, J.G. (2008) The Value of the Food Defense Plan. *Food Safety Magazine* 14(2):16-21,62.

Review Article:

Chang, S.K.C.; Holm, E.; Schwarz, J.G. and Rayas-Duarte, P. (1995) *Food. Anal. Chem.* 67(12):127R-153R.

Book Chapter:

Hall III, C. and Schwarz, J.G. (2002) Phytochemicals from *Echinacea*. In: Shi, J.; Mazza, G.; LeMaguer, M. (editors). Functional Foods: Biochemical and Processing Aspects. New York: CRC Press. p 239-262.

Abstracts/Presentations:

Nagchaudhuri, A.; Mitra, M.; Marsh, L.; Schwarz, J.; Daughtry, C. and Teays, T. (2012) Multidisciplinary Student Experiential Learning Project Provide a Platform to Address Contemporary Issues Related to Energy, Environment and Sustainable Agriculture at a Land-Grant University, Abstract No: 437, World Engineering Forum (WEEF) Oct. 15-18, 2012; Buenos Aires, Argentina.

Schwarz, J.G. (2011) The Value Added of Higher Education in International Development and the Role of U.S. Institutions. Presentation as panel member during the International Food Aid and Development conference, June 27-29, 2011, Kansas City, MO.

Nagchaudhuri, A.; Mitra, M.; Marsh, L.; Schwarz, J. and Daughtry, C. (2011) Experiential Learning Project Address Contemporary Issues Related to Energy, Environment and Sustainable Agriculture, Abstract No: 098, NACTA Journal Vol. 55 Supplement 1; 2011 NACTA/DOCE Conference, June 14-17, Edmonton, Canada.

M. L. Madden; Mitra, M.; Schwarz, J. G. and D. E. Ruby (2011) Seasonality of Selected Nutritional Constituents of Edible Delmarva Seaweeds. Presented at the Annual Meeting of the Phycological Society of America (PSA), 13-16 July 2011, Seattle, WA

M.C. Gooden, M.C.; Schwarz, J.G.; Whitley, N.C. and D. Jackson O'Brien (2011) Effect of Garlic and Papaya Seed on Fecal Egg Counts in Sheep and Goats. Presented at the ARD 15th Biennial Research Symposium, Atlanta, GA, April 09-13, 2011.

B. Hagens, Schwarz, J.G.; Whitley, N.C.; Wilson, M.; Luchansky, J.; Wildeus, S.; Kim, C.; Ettinger, M. and S. Pao (2011) The Impact of Wild Birds and Farm Management on *Campylobacter* and *Salmonella* in Small Ruminants. Presented at the 16th Biennial Research Symposium, Atlanta, GA, April 09-13, 2011.

Schwarz, J.G.; Orech, F.O.; Friis, H. and J. Aagaard-Hansen (2009) Traditional Green Leafy Vegetables as Sources of Micronutrients and Remedy to Food Insecurity among the Luo People from Western Kenya. Presented at the 15th Biennial Research Symposium, Atlanta, GA, March 28 – April 1, 2009.

Madden, M. L., M. Mitra¹ and J. G. Schwarz (2009) Seasonality of Proteins in the Seavegetable *Fucus vesiculosus* from the Delmarva Peninsula. Presented at the 15th Biennial Research Symposium, Atlanta, GA, March 28 – April 1, 2009.

Hettiarachchi, K. A. and J. G.Schwarz (2009) A Comparison of Different Collagen Extraction Methods for Chicken Collagen. Presented at the 15th Biennial Research Symposium, Atlanta, GA, March 28 – April 1, 2009.

Nagchaudhuri, A., Mitra, M., Daughtry, C., Marsh, L., Earl, T.J, and J. Schwarz (2011) Site- Specific Farming, Environmental Concerns, and Associated Advanced Technologies Provide a Platform for Active Learning and Research at a Land Grant University, Proceedings of 2008 Annual Conference of American Society for Engineering Education, Piitsburgh, PA, June22-25, 2008.

Madden, M.; Mitra, M. and Schwarz, J.G. (2008) Seasonality of proteins in *Fucus vesiculosus* from the Delmarva peninsula. Presented at the 16th Annual HBCU Research Day, UMES, April 8, 2008.

Pagadala, S.; Parveen, S.; Rippen, T.; Wiedmann, M.; Schwarz, J. and Harter-Dennis, J. (2008) Comparative evaluation of BAX Polymerase Chain Reaction and standard culture method for the detection of *Listeria monocytogenes* in blue crab meat and crab processing plants. Presented at the First Aquatic and Fisheries Science Symposium. March 28, 2008, UMES Coastal Ecology Research and Teaching Center, Assateague Island, MD.

Katsriku, L., Rippen,T., Schwarz, J. and Parveen, S. (2008) Development of a restructured crabmeat product: examining the physical, chemical and microbiological attributes. Presented at the 59th Annual Pacific Fisheries Technologist Conference, February 3-6, 2008, San Francisco, CA.

Schwarz, J.G. (2007) Anatomy of a foodborne illness outbreak. Presented at the National Meeting on Poultry Health and Processing, Ocean City , MD, October 8-10, 2007.

Madden, M.; Mitra, M. and Schwarz, J. (2007) Seasonality of nutritional constituents of Delmarva seaweeds. Presented at the Botany and Plant Biology 2007 Joint Congress in Chicago, IL, July 7-11, 2007.

Parveen, S.; Taabodi, M.; Oscar, T. P. and Schwarz , J. (2007) Effect of Chilling Process on the Prevalence and Serotypes of *Salmonella* on Processed Poultry. Presented at the 107th ASM General Meeting in Toronto, Candada May 21-25, 2007.

Madden,M.; Mitra,M. and Schwarz,J. (2007) Seasonality of nutritional constituents of Delmarva seaweeds. Presented at the 15th Annual Mid-Atlantic HBCU Science Conference, UMES April 10, 2007.

Jackson, D.J.; Whitley, N.C.; Suvanich, V. and J.G. Schwarz (2007) Feeding regime and breed effects on nutritional and sensory characteristics of meat from Katahdin crossbred lambs. Presented at the 104th Annual Meeting of the Southern Association of Agricultural Scientists meetings in Mobile, AL, February 3-6, 2007.

Madden, M.; Mitra, M. and Schwarz, J. (2007) Seasonal Water Quality and Nutritional Parameters of *Fucus vesiculosus* and *Gracilaria tikvahiae* in Chincoteague Memorial Park, VA. Presented at the Annual Meeting of the Southern Association of Agricultural Scientists meetings in Mobile, AL, February 3-6, 2007.

Pagadala, S.; Rippen, T.; Wiedmann, M.; Schwarz, J.; Harter-Dennis, J. and Parveen, S. (2007) Detection of *Listeria monocytogenes* in Blue Crab Meat (*Callinectes sapidus*) and Blue Crab Processing Plants by Standard Culture and Automated BAX Polymerase Chain Reaction Methods. Presented at the 15th Annual Mid-Atlantic HBCU Science Conference, UMES April 10, 2007.

Mohammed, T.; Taabodi, M.; Schwarz, J.; Hubert, S.; White, D.; Oscar, T. and Parveen, S. (2006) Identification of antimicrobial resistance and antibiotic resistance genes in *Salmonella* spp isolated from processed poultry. Presented at the 14th Annual Mid-Atlantic HBCU Science Conference, UMES April 12, 2006.

Hager, H.; Mitra, M. and Schwarz, J. (2006) Edible seaweed succession and the impact of macroalgal blooms on the local eelgrass (*Zostera marina*) populations in the Chincoteague Bay. Presented at the 14th Annual Mid-Atlantic HBCU Science Conference, UMES April 12, 2006.

Parveen, S., Taabodi, M., Mohamed, T., Schwarz, J., Hubert, S., White, D., and Oscar, T. (2006) Characterization of *Salmonella* spp. isolated from pre- and post-chill whole broiler carcasses. Presented at the IAFP meeting in Calgary, Canada, August 13-16, 2006.

Abou-Zeid, K.A.; Yoon, K.S.; Schwarz, J.G.; Oscar, T.; Hashem, F.M. and Whiting, R. (2006) Development and Validation of Primary and Secondary Models for Lag Time and Specific Growth Rate of *Listeria monocytogenes* Scott A in Broth. Presented at the 106th General Meeting for American Society for Microbiology. May 21-25, 2006. Orlando, Florida.

Abou-Zeid, K.; Yoon, K.S.; Schwarz, J.G.; Oscar, T.P. and Whiting, R.C. (2005). Response surface model for effects of temperature, pH, and combined potassium lactate and sodium diacetate on growth kinetics of *Listeria monocytogenes* Scott A in broth. Presented at the IAFP meeting in Baltimore, MD, August 14-17, 2005.

Taabodi, M.; Oscar, T.; Schwarz, J.G. and Parveen, S. (2005) Incidence of *Salmonella* spp. on processed poultry. Presented at the IAFP meeting in Baltimore, MD, August 14-17, 2005.

Mitra, M.; Schwarz, J.G.; Khan, I. and Hager H. (2005) Seasonal variations in moisture, ash, and lipid content of three edible seaweeds from the Chincoteague Bay, VA, USA. Presented at the International Botanical Congress, Vienna, Austria, July 17-23, 2005.

Tulbek, M.C.; Hall III, C.A. and Schwarz, J.G. (2004) Effects of fermented chickpea and transglutaminase enzyme on hearth bread quality. Presented at the Annual IFT Meeting, Las Vegas, NV, July 12-16, 2004.

Schwarz, J.G. *Listeria* as a Food Pathogen (2003) Presented at the 38th National Meeting on Poultry Health and Processing, Ocen City, MD, October 22-24, 2003.

Wiesenborn, D.P.; Jarvis, P.; Schwarz, J.G.; Twombly, W. and Hall III, C. (2003) Use of dehulled flaxseed to increase omega-3 fatty acids in farm-raised fish. Presented at the IUFoST 12th World Food Congress, Chicago, IL, July 16-20, 2003.

Tulbek, M.C.; Hall III, C.A. and Schwarz, J.G. (2003) The use of fermented chickpea on dough rheology and white pan bread quality. Presented at the Annual IFT Meeting, Chicago, IL, July 12-16, 2003.

Schwarz, J.G. and Tulbek, M.C. (2003) The effects of whey proteins and transglutaminase on the fundamental rheological properties of wheat flour dough. Presented at the 13th Biennial ARD Research Symposium, Atlanta, GA, March 29-April 2, 2003.

Tulbek, M.C. and Schwarz, J.G. (2002) The effects of whey proteins and transglutaminase enzyme on dough properties and white pan bread quality. Presented at the Annual AACC meeting, Montreal, QC, Canada, October 13 – 17, 2002.

Tulbek, M.C.; Schwarz, J.G. and Boyacioglu, M.H. (2002) Prediction of wheat flour and noodle quality parameters with farinograph band width. Presented at the Annual AACC meeting, Montreal, QC, Canada, October 13 – 17, 2002.

Tulbek, M.C. and Schwarz, J.G. (2002) The effects of whey proteins on fundamental dough rheology and white pan bread quality. Presented at the Annual IFT Meeting, Anaheim, CA, June 15-19, 2002.

Tulbek, M.C. and Schwarz, J.G. (2002) The effects of whey proteins and transglutaminase (TG) on the fundamental rheological properties of wheat flour dough. Presented at the Annual IFT Meeting, Anaheim, CA, June 15-19, 2002.

Tulbek, M.C.; Boyacioglu, M.H.; Boyacioglu, D. and Schwarz, J. (2002) Relationship between the sensory and technological parameters of Turkish wheat flours for noodle making. Presented at the Annual IFT Meeting, Anaheim, CA, June 15-19, 2002.

Haggart, J.; Nolan, L.K.; Bhattacharya, M.; Bratanich, A.C.; Coleman, W.; Garden-Robinson, J.; Holm, E.; Horne, S.M.; Jensen, P.A.; Lardy, G.; Logue, C.M.; Marchello, M.; Nganje, W.; Panigrahi, S.; Robinson, M.; Schwarz, J.G.; Sellnow, T.; Stoltenow, C.; Tomanek, D. and Wolf-Hall, C. (2000) Implementation of a

Food Safety Minor Using a Multidisciplinary Approach. Poster presented at the ASM Annual Meeting, May 2000.

Gillespie, J.L.; Schwarz, J.G.; Doetkott, C.D. and Desrocher, L.D. (1999) Production of fat-reduced confectionery sunflower kernels using mechanical pressing. Book of Abstracts, Annual IFT Meeting, Chicago, IL, July 24-28, 1999.

Wolf-Hall, C.E.; Schwarz, P.; Schwarz, J. and Gillespie, J. (1999) Evaluation of physical treatments to prevent *Fusarium* growth during barley malting. American Society of Brewing Chemists Society Annual meeting in Phoenix, AZ, June 19-23, 1999.

Zhou, A.; Schwarz, J.G.; Steffenson, B.; Prom, L.L. and Schwarz, P. (1997) Malt quality as affected by *Fusarium* infection of barley. *Brewers Digest* 72(4):24.

Pandey, R.; Wiesenborn, D.P.; Glowacki, A.; Schwarz, J.G. and Chang, K.C. . (1997) Continuous countercurrent washing of pectin gel from sunflower heads. Book of Abstracts, Annual IFT Meeting, Orlando, FL, June 14-18, 1997.

Wang, J.; Wiesenborn, D.P.; Tostenson, K.; Chang, K.C. and Schwarz J.G. (1997) Comparison of continuous, countercurrent extraction with batch extraction of pectin from sunflower heads. Book of Abstracts, Annual IFT Meeting, Orlando, FL, June 14-18, 1997.

Shi, X.Q.; Chang, K.C.; Schwarz, J.G.; Wiesenborn, D.; Tostenson, K.; Wang, J. (1996) Low methoxyl pectin extracted from sunflower heads, an industrial production approach. Book of Abstracts, Annual IFT Meeting in New Orleans, Louisiana, June 22-26, 1996.

Shi, X.Q.; Chang, K.C.; Schwarz, J.G.; Shih, M.C.; Wiesenborn, D. (1996) Alkaline washing of sunflower heads before pectin extraction. Book of Abstracts, Annual IFT Meeting in New Orleans, Louisiana, June 22-26, 1996.

Hong, L.; Schwarz, J.G.; Rosvold, K.E. (1996) Characterization and treatment of wastewater from pectin extraction. Book of Abstracts, Annual IFT Meeting in New Orleans, Louisiana, June 22-26, 1996.

Shi, X.Q.; Schwarz, J.G.; Chang, K.C. (1995) Transfer behavior of pectins and pigments in water-washing treatment of sunflower heads. Book of Abstracts, Annual IFT Meeting in Anaheim, California, June 3-7, 1995.

Shi, X.Q.; Schwarz, J.G.; Chang, K.C. (1995) Kinetics of acid diffusion in pectin gel during ethanol-washing process. Book of Abstracts, Annual IFT Meeting in Anaheim, California, June 3-7, 1995.

Xu, M.; Wiesenborn, D.P.; Chang, K.C.; Schwarz, J.G. (1995) Pigment removal and pectin loss during the continuous, countercurrent washing of sunflower heads. Book of Abstracts, Annual IFT Meeting in Anaheim, California, June 3-7, 1995.

Schwarz, J.G.; Hang, Y.D. (1994) Purification and properties of diacetyl reductase from *Kluyveromyces marxianus*. Book of Abstracts, Annual IFT Meeting in Atlanta, Georgia, June 25-29, 1994.

Schwarz, J.G.; Hang, Y.D. (1994) A method for rapid determination of diacetyl and acetoin in foods. Book of Abstracts, Annual IFT Meeting in Atlanta, Georgia, June 25-29, 1994.

GRANTS:

J.G. Schwarz and J. Hudson. Heirloom Tomato Micro-Batch Plant Development. Maryland Industrial Partnerships (MIPS); \$99,828 (02/15/2013 – 02/14/2014)

J.G. Schwarz and J. Hudson. Scale-up process for Heirloom tomato juice and nectar. Maryland Industrial Partnerships (MIPS); Phase I \$84,202 (03/01/2011 – 02/28/2012)

J.G. Schwarz and J. Hudson. Scale-up process for Heirloom tomato juice and nectar. Maryland Industrial Partnerships (MIPS); Phase II \$99,915 (03/01/2012 – 02/28/2013)

M. Mitra, A. Nagchaudhuri, L. Marsh and J.G. Schwarz. Bio-fuel, Sustainability, and Geospatial Information Technologies to Enhance the Experiential Learning Paradigm for the Precision Agriculture Project. USDA-CSREES 1890 Institution Capacity Building Grant (Research); \$150,000.

R.B. Dadson, F.M. Hashem, J. Ehlers, B. Coffman, J. Schwarz, P. vanBerkum and S. Tubene. Enhancing cowpea production in Delmarva region to increase bio-diversity and food security. USDA-NIFA 1890 Institution Capacity Building Grant (Research) (9/01/2010 -8/31/2013).

D.K. Lei; B. Paleg; J.G. Schwarz. Risk analysis-based food defense certification program for professional and academic audiences. USDA-CSREES National Integrated Food Safety; \$540,000 (09/01/06-08/31/10) (UMES part was \$114,233).

V. Suvanich; J.G. Schwarz; K.R. Cadwallader; W. Prinyawiwatkul. Enhancing utilization of watermelon as juice and agricultural wine. USDA-CSREES 1890 Institution Capacity Building Grant (Research); \$390,134 (09/15/06-09-14-09).

S. Parveen; M. Tamplin; A. DePaola; J. G. Schwarz; K. Yoon; T. Rippen. Microbial models of the effect of storage temperature on the growth and survival of virulent and avirulent *Vibrio* species. USDA, NRI 32.0 Food Safety; \$410,000.

S. Parveen; T. Rippen; J. G. Schwarz; M. Jahncke. Prevalence, growth, survival and control of *Listeria monocytogenes* in blue crab meat. USDA-CSREES 1890 Institution Capacity Building Grant (Research); \$299,430.

M. Mitra (PD) J.G. Schwarz (Co-PD). Nutritional assays of seaweeds from the Coastal Bays of Maryland. USDA-CSREES 1890 Institution Capacity Building Grant (Research) \$297,087; 10/01/04 - 09/30/07

J.G. Schwarz, K. Yoon, S. Parveen, T. Rippen, G. Heath, Y. M. Lo. Education program for food safety on the Delmarva peninsula. USDA-CSREES Capacity Building Grant (Teaching) \$198,891; 10/01/03-09/30/06

D.P. Wiesenborn, P. Jarvis, J. Schwarz. Use of dehulled flaxseed to increase omega-3 fatty acids in farm-raised fish. Alternative Crops Program. \$30,000 (3/01-2/02).

C. A. Hall III, J. Schwarz, F. Manthey, D. Wiesenborn. Development of a Functional Food Using Durum Wheat and Flaxseed. Ag. Product Utilization Commission. \$21,200 (6/00 – 5/01).

C. A. Hall III, J. Schwarz, F. Manthey, D. Wiesenborn. Development of a Functional Food Using Durum Wheat and Flaxseed. North Dakota Oilseed Council. \$10,000 (3/00 – 2/01).

C. A. Hall III, J. Schwarz, F. Manthey, D. Wiesenborn. Development of a Functional Food Using Durum Wheat and Flaxseed. State Board of Agriculture Research and Education- New and Emerging Committee. \$10,000 (3/00 – 2/01).

C. A. Hall III, J. Schwarz, F. Manthey, D. Wiesenborn. Development of a Functional Food Using Durum Wheat and Flaxseed. Kraft General Foods. \$20,000 (3/00 – 2/01).

C.Wolf-Hall, M. Hadley, C.A. Hall III, E.Holm, and J. Schwarz. The Utilization of Agricultural Residues for the Production of Oyster Mushrooms. Alternative Crops Program. \$59,701 (5/00 to 4/02).

M. Hadley, E. Holm, C. Wolf-Hall, C. A. Hall III, and J. Schwarz. Acquisition of a food nitrogen/protein determinator. USDA CSREES- NRICGP. \$27,177 (Dez. 2000).

Nolan, L.; Garden-Robinson, J.; Haggart, J.; Holm, E.; Horne, S.M.; Jensen, P.A.; Marchello, M.; Nganje, W.; Panigrahi, S.; Robinson, M.; Schwarz, J.G.; Stoltenow, C. and Wolf-Hall, C. Filling the food safety expertise gap. USDA-CFDA No. 10.217-Higher Education Challenge Grants Program. \$100,000 (8/99 to 6/00).

D.P. Wiesenborn, J. Schwarz. Fractionation of flaxseed to enhance recovery and use of dietary fiber and oil. Alternative Crops Program. \$ 47,282 (6/98-12/00).

P. B. Schwarz, J. Schwarz, C.E. Wolf-Hall. Control of Fusarium during malting. Anheuser-Bush Co. \$11,500 (1/98 to 12/98).

J. Schwarz, C. A. Hall III, Enzymatic modification of whey to increase functionality in baked goods. American Dairy Association. \$100,000 (6/98 to 5/01).

J. Schwarz, K.O. Straetkvern. Bioprocess technology for recovery of protein products from agricultural biomass. Alternative Crops. \$ 34,884 (2/97 to 12/98).

K.C. Chang, D.P. Wiesenborn, J. Schwarz. Pilot-scale extraction of sunflower head pectin. Alternative Crops Program. \$65,000 (6/96 to 12/98).

J. Schwarz, D.P. Wiesenborn. Process developmt. for production of fat-reduced sunflower kernel. Alternative Crops. \$36,692 (7/96 to 12/98)

S. Beattie, J. Schwarz, D. Killilea. Production of Levan. Alternative Crops Program. \$19,862 (8/95 to 3/98).

SERVICE:

Chair and Member for numerous committees and various time periods at the university, college and department level. Building manager. Advisor to student organizations. Member of regional and national committees in IFT. Support of clientele in various forms.

**RELATED
EXPERIENCE:**

IFT Certified Food Scientist since 03/2013

Consultant for Oregon Tilth Certified Organic 1996-2002

Perform inspections in a broad variety of food processing plants for organic processing certification.

Graduate Research Assistant, Dept. of Food Science & Technology, Cornell University, 1990 – 1993 “Enzyme production by a lactose-fermenting yeast from food processing waste.”

Project Leader, Technical Research, HAG - General Foods, Bremen, Germany. 1987 – 1990 Supervised/conducted product and process development projects.

PATENTS:

EPO-# 90304565.6- (1990) Beverage flavouring cassette (US 351736)

EPO-# 90304500.3- (1990) An improved coffee cassette (US 351735)

MEMBERSHIPS:

Institute of Food Technologists

Association of German Food Technologists

HONORS:

Outstanding Advisor/Mentor - UMES School of Agricultural and Natural Sciences, 2004

Nominated for Excellence in Advising - College of Agriculture 2002

Apple Polisher 2002 -recognition by student organization for service to students

Excellence in Teaching Award (Early Career) - College of Agriculture

1999Gamma Sigma Delta - Honor Society of Agriculture