

Slavko Komarnytsky
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a. Professional Preparation

Kyiv Shevchenko University	Biology	B.S., 1997
Kyiv Shevchenko University	Cell biology	M.S., 1998
Rutgers University, NJ	Cell mol plant biology	Ph.D., 2004
Rutgers University, NJ (Postdoc)	Nutrition and metabolism	2004-2008
Rutgers University, NJ (Res Assoc)	Nutrition and metabolism	2008-2011

b. Appointments

2013- Associate Graduate Faculty, Department of Plant and Microbial Biology, NCSU
2012- Associate Graduate Faculty, Interdepartmental Nutrition Program, NC State University
2011- Assistant Professor, Pharmacogenomics, FBNS, NC State University

c. Professional Scholarly Activities

Founder and Director, Life Habit@ Center for Biodiscovery research network 2013-
Co-founder, Cell Culture Core Facility, Plants for Human Health Institute, NCSU 2013-
NCSU representative, IACUC committee, North Carolina Research Campus 2013-
Member, Preliminary Exam Committee, FBNS, NCSU 2013-
Faculty Advisor, Plant Pathway Elucidation Project, CALS, NCSU 2012-
Editorial Board, ISRN Obesity 2012-2014
NCSU representative, Leadership Cabarrus Education & Workforce Development, 2012
Member, Space Allocation Committee, Plants for Human Health Institute, NCSU 2011-

d. Honors and awards (*In reverse chronological order*)

Finalist, ASN Emerging Leaders in Nutrition Science Poster Competition 2015 (ongoing)
ΦΤΣ, Food Science Honorary Society 2014-
International Research & Exchanges Board Fellow, US Department of State 2013
Best poster (3d place), NYSCC Cosmetic Technology Transfer Conference 2012
Best oral presentation (3d place), Society for In Vitro Biology Meeting 2012
Employee of the month, Plants for Human Health Institute, Kannapolis, NC 2012
ASN, American Society for Nutrition 2012-
NIH Center for Study of Botanicals and Metabolic Syndrome 2010-2014

e. Collaborators & Grants (*In reverse chronological order*)

2014-2016 PI, NCSU CALS Dean Enrichment grant Epigenetic engineering platform for discovery of novel anti-infective drugs and its application to STEM education. \$150,000

2013-2017 Co-Investigator (PI: Lila MA), Plant Pathways Elucidation Project funded jointly by UNC General Administration and Duke Energy Foundation through NC Agricultural Foundation (PINS 51403). \$1,020,000

2013-2014 PI, IREX International Research & Exchanges Board, Title VIII program, Bureau of Intelligence and Research, U.S. Department of State grant Water safety across borders in Central Asia (PINS 51175). \$6,375

2013-2016 Co-PI (PI: Rathinasabapathy T), Malaysia Borang Exploratory Research grant Design and synthesis of tetrahydrothiazolopyridine derivatives as a novel and selective 11b-HSD1 inhibitors. MYR190K (\$63,000)

2013-2015 PI, Industry-sponsored (Metagenics Inc) research project Botanicals and women health for (PINS 53485, RADAR 2014-0284). \$266,700

2013-2014 PI, NCSU Office of International Affairs grant Unlocking chemical biodiversity of Malaysia and its potential to improve human health (PINS 51323, RADAR 2013-1705). \$28,000

2012-2013 PI, NCSU Research and Innovation grant Effects of gut microbiome metabolism of polyphenols on metabolic syndrome (PINS 47833, RADAR 2012-2246). \$25,000

2012-2013 PI, NCSU Office of International Affairs grant Integrated assessment of South African watershed bacterial communities critical to human health and welfare (PINS 52845, RADAR 2013-3049). \$10,000

2010-2014 Co-Investigator (PI: Cefalu WT, Pennington Biomedical Research Center), NIH/NCCAM Botanical Center grant Botanicals and metabolic syndrome (NIH 5P50AT002776). \$7,500,000

2009-2010 Co-PI (PI: Simon JE), Pennington Botanical Research Center Exploratory grant Phytochemical investigation on the African herbal tea kinkéliba (*Combretum micranthum*) with focus on its impact on metabolic disorders. \$20,000

f. Publications (no page limit, 2007 – current)

Wagoner T, Bussler W, Mixon C, Hildebrand J, Komarnytsky S, Harris GK (2014) Flavonoid supplementation and cardiovascular disease. In: Dietary supplements in health promotion, CRC Press (accepted)

Ricciardi CJ, Bae J, Esposito D, Komarnytsky S, Hu P, Chen J, Zhao L (2014) 1,25-Dihydroxyvitamin D3/vitamin D receptor suppresses brown adipocyte differentiation and mitochondrial respiration. Eur J Nutr [Epub ahead of print] link

Le V, Esposito D, Grace M, Ha D, Pham A, Bortolazzo A, Kim J, Okuda R, Komarnytsky S, Lila MA, White B (2014) Cytotoxic effects of ellagitannins isolated from walnuts in human cancer cells. *Nutr Cancer* 66: 1304-1314 link

Bae J, Ricciardi CJ, Esposito D, Komarnytsky S, Hu P, Curry B, Brown PL, Gao Z, Biggerstaff JP, Chen J, Zhao L (2014) Activation of pattern recognition receptors in brown adipocytes induce inflammation and suppress uncoupling protein 1 expression and mitochondrial respiration. *Am J Physiol Cell Physiol* [Epub ahead of print] link

Esposito D, Chen A, Grace MH, Komarnytsky S, Lila MA (2014) Inhibitory effects of wild blueberry anthocyanins and other flavonoids on biomarkers of acute and chronic inflammation in vitro. *J Agric Food Chem* 62(29): 7022–7028 link

Esposito D, Rathinasabapathy T, Schmidt B, Shakarjian MP, Komarnytsky S, Raskin I (2013) Acceleration of cutaneous wound healing by brassinosteroids. *Wound Repair Regen* 21(5): 688-696 link pdf

Esposito D, Munafo JP, Lucibello T, Baldeon M, Komarnytsky S, Gianfagna TJ (2013) Steroidal glycosides from the bulbs of Easter lily (*Lilium longiflorum* Thunb.) promote dermal fibroblast migration in vitro. *J Ethnopharmacol* 148: 433-440 link pdf

Komarnytsky S, Esposito D, Rathinasabapathy T, Poulev A, Raskin I (2013) Effects of pregnane glycosides on food intake depend on stimulation of melanocortin pathway and BDNF in animal model. *J Agric Food Chem* 61(8): 1841-1849 link pdf

Komarnytsky S, Esposito D, Poulev A, Raskin I (2013) Pregnane glycosides interfere with steroidogenic enzymes to down-regulate corticosteroid production in human adrenocortical H295R cells. *J Cell Physiol* 228(5): 1120-1126 link pdf

Esposito D, Kizelsztejn P, Komarnytsky S, Raskin I (2012) Hypoglycemic effects of brassinosteroid in diet-induced obese mice. *AJP Endocrinol Metabol* 303(5): E652-658 pdf

Komarnytsky S, Borisjuk N (2012) Plant-derived antibodies for academic, industrial, and therapeutic applications. In: *Antibody mediated drug discovery systems* (Eds: Pathak Y, Benita S), John Wiley & Sons, pp 365-381 pdf

Esposito D, Komarnytsky S, Shapses S, Raskin I (2011) Anabolic effect of plant brassinosteroid. *FASEB J* 25(10): 3708-3719 pdf

Esposito D, Rathinasabapathy T, Poulev A, Komarnytsky S, Raskin I (2011) Akt-dependent anabolic activity of natural and synthetic brassinosteroids in rat skeletal muscle cells. *J Med Chem* 54: 4057-4066 pdf

33. Komarnytsky S, Cook A, Raskin I (2011) Potato protease inhibitors inhibit food intake and increase circulating cholecystokinin levels by a trypsin-dependent mechanism. *Int J Obes* 35(2): 236-243 pdf

Kellogg J, Joseph G, Andrae-Marobela K, Sosome A, Flint C, Komarnytsky S, Fear G, Struwe L, Raskin I, and Lila MA (2010) Simple, predictive field bioassays enable transdisciplinary science education and lead students in the quest for biodiscovery. *NACTA Journal* 54: 41-48 pdf

Kizelsztejn P, Komarnytsky S, Raskin I (2009) Oral administration of triptolide ameliorates clinical symptoms of experimental autoimmune encephalomyelitis by induction of Hsp70 and stabilization of NF-kB /IkBa. *J Neuroimmunol* 217(1-2): 28-37 pdf

Kizelsztejn P, Govorko D, Komarnytsky S, Evans A, Wang Z, Cefalu WT, Raskin I (2009) 20-hydroxyecdysone decreases weight and hyperglycemia in a diet-induced obesity mice model. *Am J Physiol Endocrinol Metab* 296(3): E433-439 pdf

Fear G, Komarnytsky S, Raskin I (2007) Protease inhibitors and their peptidomimetic derivatives as potential drugs. *Pharmacology and Therapeutics* 113(2): 354-368 pdf

Govorko D, Logendra S, Wang Y, Esposito D, Komarnytsky S, Ribnicky D, Poulev A, Wang Z, Cefalu WT, Raskin I (2007) Polyphenolic compounds from *Artemisia dracunculus* inhibit PEPCCK gene expression and gluconeogenesis in an H4IIE hepatoma cell line. *Am J Physiol Endocrinol Metab* 293(6): E1503-1510 pdf

Okunji C, Komarnytsky S, Fear G, Poulev A, Ribnicky DM, Awachie PI, Ito Y, Raskin I (2007) Preparative isolation and identification of tyrosinase inhibitors from seeds of *Garcinia kola* by HSCCC chromatography. *J Chromatogr A* 1151(1-2): 45-50