

## **Mary Ann Lila, PhD**

David H. Murdock Distinguished Professor  
Professor, Food Bioprocessing and Nutrition Sciences &  
Director, Plants for Human Health Institute  
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### **EDUCATION**

University of Illinois at Urbana-Champaign	Horticultural Sciences	B.Sc.	1978
University of Illinois at Urbana-Champaign	Plant Pathology	M.Sc.	1980
University of Wisconsin at Madison	Plant Biology	Ph.D	1984

### **PROFESSIONAL EXPERIENCE**

1984–1995	Assistant & Associate Professor, Department of Natural Resources & Environmental Sciences, University of Illinois
1991–1992	Visiting Professor, Laboratoire de Phytogenetique Cellulaire, Université de Lausanne, Switzerland
1995–2008	Professor, Department of Natural Resources and Environmental Sciences, Joint appointment, Division of Nutritional Sciences, University of Illinois
1997– 2000	Associate Director, Functional Foods for Health Program, University of Illinois
1999	Visiting Senior Scientist, Plant & Food Research Ltd. (a Crown Research Institute). Palmerston North, New Zealand
2003–2005	Assistant Dean for Research (50% time), College of ACES, University of Illinois
2006–2007	Interim Associate Dean for Research, College of ACES, University of Illinois
2007–2008	Director, ACES Global Connect (the international arm of the College of ACES), University of Illinois
2008–present	Director, Plants for Human Health Institute, and David H. Murdock Distinguished Professor, North Carolina State University

### **AWARDS AND HONORS**

1987–1988	Lilly Endowment Teaching Fellowship
1995	Young Faculty Research Excellence Award, College of ACES
1997	AMOCO Award for Innovation in Undergraduate Instruction
1998–1999	Fulbright Senior Scholar Fellowship
2001	Paul A. Funk Recognition Scholarship Award, College of ACES
2003	Elected Fellow, Society for In Vitro Biology
2007	Spitze Land Grant Professorial Career Award
2010–present	David H. Murdock Distinguished Professorship
2020	Babcock-Hart Award, presented through the Institute for Food Technologists
2023	Outstanding Global Engagement Award, NC State Office of Global Engagement
2024	Elected Fellow, Institute for Food Technologists

*Scientific Affiliations:* American Society for Nutrition, Fulbright Association (Lifetime Member & Senior Scholar Fellow), Gamma Sigma Delta, Groupe Polyphenols, INAF (Institut sur la nutrition et les aliments fonctionnels)/International Scientific Advisory Committee, Institute of Food Technologists, International Association of Plant Biotechnology, International Workshop on Anthocyanins (Scientific Advisory Board)

## **RESEARCH AREA**

Over the past two decades, my research has centered on food components, particularly polyphenolic/flavonoid phytoactives, with demonstrated efficacy against chronic human diseases and with the capacity to mitigate immunosuppression coincident with strenuous exertion. The primary emphases in my team are (1) rigorous phytochemical structural characterization (2) elucidation of phytochemical interactions in a diet that potentiate benefits for human health maintenance, (3) development of functional food ingredients which stabilize the bioactive properties of these otherwise ephemeral constituents, (4) interpretation of bioefficacy, and (5) interpretation of bioavailability and bioaccessibility of plant-derived metabolites.

## **ADVISING & CONSULTING**

Annual Reviews Food Science & Technology Editorial Board (2016-present), IWA SAC (2005-present), Institute of Nutrition & Functional Foods Science Advisory (INAF) (2014-present), Naked Juice Science Advisory (2005-2009), GSK Science Advisory (2021-2022), Access Business Group (Amway) SAB (2020-present), Cranberry Institute SAB (2022-present)

## **MENTORING**

23 MSc. Students, 18 PhD students, 18 Postdoctoral Research Associates, 28 Visiting Scholars

## **PUBLICATIONS (Past 2 years; total 318 refereed journal articles, 38 book chapters)**

320. Ivarsson, John, Abby Bennett, Francesca Ferrara, Renee Strauch, Andrea Vallese, Massimo Iorizzo, Alessandra Pecorelli, Mary Ann Lila and Giuseppe Valacchi. 2024. Gut-derived wild blueberry phenolic acid metabolites modulate extrinsic cutaneous damage. *Food & Function* 15:7849-7864. DOI: 10.1039/D4FO01874E
319. Esposito, E., A. Pecorelli, F. Ferrara, Mary Ann Lila, Giuseppe Valacchi. 2024. Feeding the body through the skin: Ethosomes and transethosomes as a new topical delivery system for bioactive compounds. *Annual Reviews of Food Science & Technology* Volume 15: 53-78. <https://doi.org/10.1146/annurev-food-072023-034528>
318. Raucher, Drazen, Mandy Rowsey, James Hinson, Ina Corkovic, Mary Ann Lila, Josip Simunovic, Mirela Kopjar. 2024. Bioactive compounds, antioxidant activity and antiproliferative potential on glioblastoma cells of selected stone fruit juices. *Processes* 12: 1310. <https://doi.org/10.3390/pr12071310>
317. Lin, Yufeng, Nicholas Cheng, Mary Grace, Mary Ann Lila, Roberta Targino Hoskin, Haotian Zheng. 2024. Colloidal and interfacial properties of spray dried pulse protein-blueberry polyphenol particles in model dispersion. *Food Chemistry* 457:140073
316. Mengist, Molla F., Marti Pottorff, Ted Mackey, Felipe Ferrao, Gonzalo Casorzo, Mary Ann Lila, Claire Luby, Lara Giongo, Penelope Perkins-Veazie, Nahla Bassil, Patricio Munoz and Massimo Iorizzo. Assessing predictability of post-storage texture and appearance characteristics in blueberry at breeding population level. *Postharvest Biotechnology Technology* 214:112964.

315. Munoz, Bryan, Micaela Hayes, Penelope Perkins-Veazie, Nicholas Gillitt, Miguel Munoz, Colin Kay, Mary Ann Lila, Mario Ferruzzi and Massimo Iorizzo. 2024. Genotype and ripening method affect carotenoid content and bioaccessibility in banana. *Food & Function* 15:3433-3445. doi: 10.1039/d3fo04632j1
314. Striker, Kali Ann, Scott Painter Jerome, Mary Ann Lila, Mari Høe-Raitto, Laura Kay Falkenstein, Lawrence Kevin Duffy, Kriya Lee Dunlap. 2024. Wild Alaskan salmon supplementation increases 25-OHD levels in sled dogs. *GSC Advanced Research and Reviews* 18:395-401. <https://doi.org/10.30574/gscarr.2024.18.2.0036>
313. da Silva, Edilene Souza, Jia Xiong, Fabio Medeiros, Mary H. Grace, Marvin Moncada, Mary Ann Lila, Roberta Targino Hoskin. 2024. Spray dried insect protein-polyphenol particles deliver health-relevant value-added food ingredients. *Future Foods* 9:100315
312. Kopjar, Mirela, Drazen Raucher, Mary Ann Lila and Josip Simunovic. 2024. Anti-glioblastoma potential and phenolic profile of berry juices. *Processes* 12:242. <https://doi.org/10.3390/pr12020242>
311. Sakaguchi, C., David C. Nieman, Ashraf M. Omar, Renee C. Strauch, James C. Williams, Mary Ann Lila and Qibin Zhang. 2024. Influence of 2-weeks mango ingestion on inflammation resolution after vigorous exercise. *Nutrients* 16:36. <https://doi.org/10.3390/nu16010036>
310. Damsud, Thanakorn, Pennapa Ratmanee, Suntaree Aekkalakburut, Chalermpong Saenjum and Mary Ann Lila. 2023. Effects of simulated gastrointestinal digestion on the  $\alpha$ -glucosidase inhibitory activities of Thai folk remedies: Synergistic effects with acarbose. *Tropical Journal of Natural Product Research* 7(12):5548-5557. <https://www.tjnpr.org/>
309. Lila, M.A., M.H. Grace & Roberta Targino Hoskin. 2023. Polyphenols and food-grade protein-polyphenol complexes for attenuation of food allergy. In: Reference Collection in Food Science. Elsevier Publishers. doi: [10.1016/B978-0-323-96018-2.00112-7](https://doi.org/10.1016/B978-0-323-96018-2.00112-7)
308. Ravichandran, K.S., E.S. Silva, M. Moncada, P. Perkins-Veazie, M.A. Lila, C.M. Greenlief, A.L. Thomas, R.T. Hoskin and K. Krishnaswamy. 2023. Spray drying to produce novel phytochemical-rich ingredients from juice and pomace of American elderberry. *Food Bioscience* 55:102981. <https://doi.org/10.1016/j.fbio.2023.102981>
307. Nieman, David C., Camila A. Sakaguchi, Ashraf M. Omar, Ankhbayar Lkhagva, Mehari Muuz Weldemariam, Kierstin L. David, Cameron E. Shaffner, Renee C. Strauch, Mary Ann Lila and Qibin Zhang. 2023. Blueberry intake elevates post-exercise anti-inflammatory oxylipins. *Scientific Reports* 13.11976 <https://doi.org/10.1038/s41598-023-39269-1>
306. Hoskin, Roberta, Mary H. Grace, Giuseppe Valacchi \*, Anna Guiotto, Alessandra Pecorelli, Mary Ann Lila. 2023. Development of spray dried Spirulina protein-berry pomace polyphenol particles to attenuate pollution-induced skin damage: A convergent food-beauty approach. *Antioxidants* special issue 'Berries in Human Health: Antioxidation, antiinflammation and other modes of action'. Christina Khoo & Mary Ann Lila, editors. *Antioxidants* 12: 1431.
305. Ivarsson, J., Alessandra Pecorelli, Mary Ann Lila, Giuseppe Valacchi. 2023. Blueberry supplementation and skin health. *Antioxidants* special issue 'Berries in Human Health: Antioxidation, antiinflammation and other modes of action'. *Antioxidants* 12(6):1261.
304. Hodges, Joanna, Maria Maiz, Sisi Cao, Pamela Lachcik et al. 2023. Moderate consumption of freeze-dried blueberry powder increased net bone calcium retention compared with no treatment in healthy postmenopausal women: A randomized crossover trial. *The American Journal of Clinical Nutrition* 118:382-390.

302. Weaver, Connie, M. Ferruzzi, Maria Maiz, Dennis Cladis, Cindy Nakatsu, George P. McCabe & Mary Ann Lila. 2023. Crop, host and gut microbiome variation influence precision nutrition: An example of blueberries. Special issue "Berries in Human Health: Antioxidation, Anti-inflammation and Other Modes of Action" *Antioxidants* 12(6):1136.
301. Xiong, Jia, Mary H. Grace, Hideka Kobayashi and Mary Ann Lila. 2023. Evaluation of saffron extract bioactivities relevant to skin resilience. *Journal of Herbal Medicine* 37(2023) 100629. <https://doi.org/10.1016/j.hermed.2023.100629>