

## Giuliana D. Noratto, Ph.D.

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### I. DEGREES EARNED

Institution & Location	Degree	Date	Field of Study
Texas A&M University, TX	Ph.D.	08/2008	Nutrition and Food Science Dissertation: Anticancer Activity of Peach and Plum Extracts Against Human Breast Cancer <i>in Vitro</i> and <i>in Vivo</i>
Universidad Agraria La Molina, Lima Perú	Nacional M.S.	06/1998	Food Technology-Biotechnology. Dissertation: Production of inulinase by <i>Kluyveromyces marxianus</i> using fructooligosaccharides from yacon ( <i>Smallanthus sonchifolius</i> )
Universidad Agraria La Molina, Lima Perú	Nacional B.S.	07/1988	Food Science. Thesis: Thermal stabilization of cherimoya pulp ( <i>Annona cherimola</i> )

### II. PROFESSIONAL EXPERIENCE

<b>2016-Date</b>	<b>Research Assistant Professor, Research Associate Scientist</b> , Department of Food Science and Technology, Texas A&M University, College Station, Texas. Research on health benefits of food derived bioactive compounds. Assessment of compounds that can help human health at two levels of absorption: The upper gastrointestinal tract where they modulate cell signaling pathways to prevent or reverse disease; and the lower intestinal tract where they can change fecal bacteria populations and their metabolites to improve obesity-related and chronic diseases including diabetes, cardiovascular disease, and cancer.
<b>2012-2016</b>	<b>Assistant Professor</b> , School of Food Science, Washington State University, Pullman, WA, USA. Research focused on nutritional bioactive compounds and their effects on obesity-related chronic diseases. Research on locally produced crops and dairy products and their effects on modulation of intestinal bacteria populations and host responses.
<b>2010-2012</b>	<b>Assistant Research Scientist</b> , Department of Nutrition and Food Science, Dep. of Vet. Physiology & Pharmacology, Institute for Obesity Research and Program Evaluation. Texas A&M University, TX, USA. Research on molecular mechanisms by which food plant extracts prevent or delay the progress of cancer, diabetes, and cardiovascular complications (Dr. Susanne Mertens-Talcott, PI).
<b>2008-2009</b>	<b>Postdoctoral Researcher</b> , Department of Nutrition and Food Science, Dep. of Vet. Physiology & Pharmacology, Texas A&M University, TX, USA Research on interactions between plant phytochemicals, inflammation and cancer (Dr. Susanne Mertens-Talcott, PI).
<b>2004 –2008</b>	<b>Graduate Student Researcher</b> , Department of Nutrition and Food Science, Texas A&M University, College Station, TX, USA.

- Ph.D. research on activity of peach and plum extracts against human breast cancer *in vitro* and *in vivo* (Drs. W. Porter, L. Cisneros-Zevallos, and D. Byrne, PIs).
- 2003-2004** **Visiting Research Professor**, Department of Nutrition and Food Science. Texas Woman's University, Denton, TX, USA  
Research on cancer cell growth suppressive activity of plant food extracts, optimizing extraction of phytochemical-rich fractions and chemical identification (Dr. H. Mo, PI).
- 1994-2003** **Assistant Professor**  
**1997-2003: Universidad Nacional Agraria La Molina, Lima, Perú**  
*Research:* Andean crops as a source of prebiotics, antioxidants and secondary metabolites to identify native crops with potential for medicinal use.  
*Food Industries Program:* Graduate and undergraduate courses (lecture and laboratory)  
**1994-1997: Universidad Nacional del Callao, Lima, Perú**  
*Food Engineering Program:* Undergraduate courses (lecture and laboratory).
- 1989-1994** **Program Administrator, Oficina Nacional de Apoyo Alimentario** (Peruvian non-profit organization). Manager of the branch of Food & Entrepreneurship teaching single mothers from areas of penury how to start a new business in food processing to aid in their economy.

### III. RESEARCH ACTIVITIES

#### Grants and Extramural Funding<sup>1</sup>

1. "Dark sweet cherry effects on the gut microbiota-liver-brain axis". Funded by the Cherry Northwest Growers, Washington State Fruit Commission. **G. Noratto** (PI), S.U. Mertens-Talcott, S. Talcott, B. Chew, Texas A&M University (2019-2021). (1, 2, 3, 4, 5, \$200,120).
2. "Exploration of cherry polyphenolics as chemopreventive dietary agents to fight breast cancer". Funded by the Cherry Northwest Growers, Washington State Fruit Commission. **G. Noratto** (PI), S.U. Mertens-Talcott, S. Talcott, B. Chew, Texas A&M University (2017-2019). (1, 2, 3, 4, 5, \$109,000).
3. "Positioning cherries among Superfruits for intestinal health. Funded by the Washington State Fruit Commission. **G. Noratto** (PI), B. Chew, Texas A&M University (co-PI) (2016-2018). (1, 2, 3, 4, 5, \$60,000).
4. "Assessing the potential of cheese whey to improve intestinal health". Funded by the Build Dairy Program to support graduate research assistantship for 2 years. **G. Noratto** (PI) (2017-2019). (1, 2, 3, 4, 5, \$64,000).
5. "Protective effects of raspberries against diabetes and associated complications through modulation of gut microbiota". Funded by National Processed Raspberry Council. **G. Noratto** (PI), B. Chew, Texas A&M University (co-PI), I. Ivanov, Texas A&M University, J. Garcia-Mazcorro, Universidad Nuevo Leon, Mexico, R. Pedreschi, Universidad Valparaiso, Chile (cooperators) (2014-2017). (1, 2, 3, 4, 5, \$123,558).
6. "Developing agronomic strategies to optimize production of quinoa and hullless barley on no-till farms in the Palouse region of Northern ID & Eastern WA". Western Sustainable Agriculture Research and Education (SARE) Program. K. Murphy (PI), Dept. Crop and Soil Sciences, WSU, **G. Noratto** (co-PI), K. Schroeder (co-PI), J. Goldberger (co-PI), G. Ganjyal (co-PI), D. Finkelnburg (co-PI) (2015-2018). (2, 5, \$245,431).

#### Professional Articles (refereed)<sup>2</sup>

<sup>1</sup> Awarded within the last 5 years. *Following indicators are used to describe contributions: 1) Provided initial idea, 2) Developed research design and hypothesis, 3) Authorship of grant application, 4) Developed and/or managed budget, 5) Managed personnel and project activities*

<sup>2</sup>Published in 2020.

Co-authored 51 peer-reviewed scientific publications, 30 as first/corresponding author (h-index = 23).

1. Layosa MAA, Lage NN, Chew BP, Atienza L, Mertens-Talcott S, Talcott S, **Noratto GD**. Dark Sweet Cherry (*Prunus avium*) Phenolics Enriched in Anthocyanins Induced Apoptosis in MDA-MB-453 Breast Cancer Cells through MAPK-Dependent Signaling and Reduced Invasion via Akt and PLC $\gamma$ -1 Downregulation. *Nutr Cancer*. 2020 Sep 14;;1-13. doi: 10.1080/01635581.2020.1817514. [Epub ahead of print] PubMed PMID: 32924599.
2. Yin C, **Noratto G**, Fan X, Chen Z, Yao F, Shi D, Gao H. The Impact of Mushroom Polysaccharides on Gut Microbiota and Its Beneficial Effects to Host: A Review. *Carbohydrate Polymers*. 2020/12; 250:116942.
3. **Noratto G**, Layosa MA, Lage NN, Atienza L, Ivanov I, Mertens-Talcott SU, Chew BP. Antitumor potential of dark sweet cherry (*Prunus avium*) phenolics in suppressing xenograft tumor growth of MDA-MB-453 breast cancer cells. *J Nutr Biochem*. 2020 Oct;84:108437. doi: 10.1016/j.jnutbio.2020.108437. Epub 2020 May 28. PubMed PMID: 32615370
4. Arbizu S, Chew B, Mertens-Talcott SU, **Noratto G**. Commercial whey products promote intestinal barrier function with glycomacropptide enhanced activity in downregulating bacterial endotoxin lipopolysaccharides (LPS)-induced inflammation in vitro. *Food Funct*. 2020 Jul 22;11(7):5842-5852. doi: 10.1039/d0fo00487a. PubMed PMID: 32633745.
5. Enes B, Moreira L, Toledo R, Moraes É, Moreira M, Hermsdorff H, **Noratto G**, Mertens-Talcott S, Talcott S, Martino H. Effect of different fractions of chia (*Salvia hispanica* L.) on glucose metabolism, in vivo and in vitro. *Journal of Functional Foods*. 2020/08; 71:104026.
6. Lage NN, Layosa MA, Arbizu S, Chew BP, Pedrosa ML, Mertens-Talcott,S.,U., Talcott S, **Noratto G**. Dark sweet cherry (*Prunus avium*) phenolics enriched in anthocyanins exhibit enhanced activity against the most aggressive breast cancer subtypes without toxicity to normal breast cells. *Journal of Functional Foods*. 2020 January; 64.

### **Book Chapter**

“Health benefits of phytochemicals for older adults” in the “Handbook of Nutrition in the Age”. **G. Noratto**, R. Walzem, L. Pacheco, and S. Mertens-Talcott. Taylor and Francis CRC Press, Boca Raton, Florida US. - 4th Edition, 2008.

### **International Symposium/Conferences (Poster/Oral Presentations)**

- Invited talks in 8 international symposium/conferences
- Presented 40 relevant oral/poster presentations in international symposium/conferences

### **Honors and Awards**

1. **2017 “Big Data Training for Translational Omics Research”**. Awarded by the NIH BD2K grant. Program at Purdue University. June 2-11, 2017.
2. **2015 Mary Swartz Rose Young Investigator Award, American Society of Nutrition (ASN)**. For meritorious research in nutrition accomplished by within 10 years of postgraduate training.
3. **2015 Team Interdisciplinary CAHNRS Award**. For significant contributions through an application of interdisciplinary scholarship in research, teaching, and/or extension.
4. **2015 Martin Luther King Distinguished Service Award**, for increasing participation, persistence, achievement, and graduation of underrepresented minority students and women in the sciences, technology, engineering, math and pre-health disciplines.
5. **PepsiCo Research Award** (2011). For merits in the area of fruit and vegetable nutrition and health.
6. **Postdoctoral Research Award, supported by Solae, LLC, ASN** (2011).
7. **Hispanic Organization of Toxicologists Research Award** (2010).
8. **Graduate Student Council Travel Scholarship**. Texas A&M University (2006-2008).

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Complete List: <https://www.ncbi.nlm.nih.gov/myncbi/1nY9tvYVX0Zkx/bibliography/public/>

9. *Symposium on Human Health Effects of Fruits and Vegetables*. 2<sup>nd</sup> place poster competition, Houston, TX (2007).
10. *Graduate Academic Excellence Award*. Texas A&M University (2007).
11. *Student Research Week*. 3<sup>rd</sup> place oral competition Winner. Texas A&M University (2007).
12. *Good Neighbor Scholarship*. Texas Education Board (2005-2007).
13. *Regents Graduate Fellowship*. Texas A&M University (2004).
14. *Fellowship for Specialization in “Technologies for water treatment and processes for re-use in agriculture”*. CINADCO, Israel (2001).
15. *Fellowship for research in anaerobic biological wastewater treatments*. Awarded by CIUF Belgium to perform research in Universidad Nacional Autonoma de Mexico (1999).

#### IV. TEACHING

- 2018**                    **Texas A&M University:** *Directed Studies in Dairy Science and Technology (FSTC 485/685).*
- 2012-2016**            **Washington State University:** *Dairy Products (FS429/FS529, 3 credits), Functional Foods and Health (FS510, 3 credits), Dairy Products Laboratory (FS430/FS530, 1 credit)*
- 1997-2003**            **Universidad Nacional Agraria La Molina, Lima Peru:** *Advanced Methods for Environmental Control, Milk Technology, Food Microbiology, Water Treatment.*
- 1994-1997**            **Universidad Nacional del Callao:** *Food Biochemistry, Quality Assurance and Quality Control.*

#### V. PROFESSIONAL AFFILIATIONS

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| 2008-Date          | American Society for Nutrition (ASN)         |
| 2010-13, 2017-Date | Society of Toxicology (SOT)                  |
| 2012-2016          | American Heart Association                   |
| 2010-13, 2017-Date | Hispanic Organization of Toxicologists (HOT) |
| 2006-2008          | Institute of Food Technologists              |