

Curriculum Vitae
Paul A. S. Breslin

Department of Nutritional Sciences
School of Environmental and Biological Sciences
Rutgers University
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Philadelphia, PA 19104
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EDUCATION

Jackson Laboratory Short Course on Medical and Experimental Mammalian Genetics, Bar Harbor, ME 2003.

Postdoctoral training at the Monell Chemical Senses Center 1991 - 1994.

Mentor: Gary Beauchamp

Doctor of Philosophy in Psychology Received 1991 from the University of Penn.

Thesis advisor: Harvey Grill.

Thesis Committee: Ed Pugh; Paul Rozin; Norm Adler; Randy Gallistel.

Master of Arts degree in Psychology. Received 1988 from the University of Pennsylvania.

Bachelor of Arts degree in the Biological Basis of Behavior. Received 1987 from the University of Pennsylvania.

RESEARCH INTERESTS

Sensation and perception; chemical senses, flavor, taste, irritation and oral somatosensory psychophysics; palatability. Human genetics of chemical senses. *Drosophila melanogaster* behavioral genetics of chemical senses and nutrition. Behavioral Neuroscience. Regulatory physiology, motivation, ingestive behavior, nutrition, salt appetite. Animal learning. Molecular and Evolutionary Biology of Taste & Smell.

AWARDS & HONORS

1992-1994 **NIH - NRS Award, PI**
1995-1997 **Morley R. Kare Fellow**
1995 **Moskowitz Jacobs Inc Award for Research Excellence in the Psychophysics of Taste and Smell**
1996-2001 **NIH - FIRST Award (R29), PI.**
2000-2002 **Conditioned Metabolic Responses to Visual and Gustatory Cues Paired Caloric Loads, Kellogg's Corporate Citizenship Award, PI.**
2000 **Firmenich International Flavour and Fragrance Award (First Awardee)**
2000 **New Jersey Pharmaceutical Association, Recognition Award for Science and Technology**
2001 **American Psychological Association (APA) Distinguished Scientific Award for Early Career Contribution to Psychology in the area of perception and motor performance.**
2006 **Outstanding Speaker of the Year Award, Society of Cosmetic Chemists**
2007 **Twinsdays Medical Research Grant**
2009 **Bill and Melinda Gates Grand Challenges Explorations Award for Malaria Research**
2011 **Bill and Melinda Gates Grand Challenges Explorations Award for Childhood Nutrition Research**

- 2014 **International Life Sciences Institute, North America service award from the Food, Nutrition, and Safety Program.**
- 2014 **EVONIK ECRP Innovation Prize for developing a “Novel Technology for Taste Masking.”**
- 2016 **Distinguished Fellow and Scholar of the National Academies of Practice and recipient of the N.A.P. Medal. (The NAP is The National Academies of Nursing, Dentistry, Pharmacy, Optometry, Veterinary Medicine, ...).**
- 2016 **Bill and Melinda Gates Award for Ameliorating Bitterness of Pharmaceuticals.**
- 2018 **Achieved Status of Associate of the Register of Extra Virgin Olive Oil Savantes.**
- 2021 **Bill and Melinda Gates Award for Identifying a Universal Bitterness Blocker.**
- 2022 **Elected President of AChemS.**
- 2024 **Promoted to Distinguished Professor**

CURRENT FUNDING

FEDERAL

- 2022-2024** NIH/NIDCD R21, Behavioral and neural measures of oral carbohydrate and sweetener reward signals, Grant # DC 020365, **PI.**
- 2022-2024** NIH/NIDCD R21, Regulation of Fat Taste by Adiposity and Endocannabinoids: Implications for Obesity, Grant # DC 020366, **PI.**

FOUNDATION

- 2021-2024** Brain Reward from Oral Metabolic Signaling of Carbohydrates: Implications for Sugar Reduction, Busch Biomedical Grant, **PI.**
- 2021-2024** Reduction of Severity and Duration of Pediatric Gastroenteritis Through Amino Acid-Fortified Oral Rehydration Therapy, Gerber Foundation, **PI**
- 2022-2024** Modern Human Dietary Environments Induce Increased Preferences for Fatty Food, Eppley Foundation for Research.

PRIOR FUNDING

FEDERAL

- 1991-1992 Interdisciplinary Training in the Chemical Senses, NIH/NIDCD.
- 1992-1994 Taste Matching: Evaluation of Simple and Complex Tastes, NIH/NIDCD, Postdoctoral Grant, **PI**
- 1996-2001 Taste Matching: Gustatory Equivalence Classes, NIH/NIDCD R-01/R-29, **PI.**
- 2002-2006 Bitter Taste Transduction: Cellular Pathways, Inhibition, and Implications for Human Acceptance of Agricultural Food Products, BARD, Grant # IS-3366-02C, **Investigator.**
- 2002-2007 Human Bitter Taste: Genetics of Psychological Traits, NIH R-01, Grant # DC 02995, **PI.**
- 2007-2009 Genetic Analysis of Sweetener Preference in *Drosophila melanogaster*, R-21, NIH, **Investigator.**
- 2009 Umami Taste: Genetics of Psychological Traits R-01 DC002995-12S1, **PI.**
Research Supplements to Promote Diversity in Health-Related Research for three Summer Students.

- 2004-2009 Chemosensory Clinical Research Center, P-50. Project/R01 #3: Psychophysics and Biological Bases of Taste Alterations in Radiotherapy Patients: The Role of Inflammatory Processes, Grant NIH #DC, 06760, **PI**.
- 2009-2011 Clinical Significance of Oral Digestion of Starch. NIH Ruth L. Kirschstein National Research Service Award for Postdoctoral Fellowship. **Sponsor**.
- 2009-2012 Development of Taste Receptor Ligands Using Structure-Activity Studies, SBIR (Phase 1), NIH, **Investigator**.
- 2011-2014 Gustatory loss and recovery in patients with middle ear surgery. NIH R21, Grant# DC 011393, **PI**.
- 2008-2014 Human Umami Taste: Genetics of Psychological Traits, NIH R-01, Grant # DC 02995, **PI**.
- 2008-2014 Gastronomics: Harnessing variation in human odorant receptor genes to develop flavoursome foods and beverages, FRST (New Zealand), **Investigator**.
- 2010-2016 Monell Science Apprenticeship Program. Promoting diversity in biomedical science 8 students, NIH, **PI**.
- 2015-2022 NIH/NIDCD R01, Role of Metabolic Sensing in Human Sweet Taste, Grant # DC 014286, **MPI**.

FOUNDATION

- 2000-2002 Conditioned Metabolic Responses to Visual and Gustatory Cues Paired With Caloric Loads, Kellogg's Corporate Citizenship Award, **PI**.
- 2009-2010 Bill and Melinda Gates Foundation Global Challenges Explorations, Phase 1 Malaria, **PI**.
- 2011-2012 Bill and Melinda Gates Foundation Global Challenges Explorations, Phase 1 Childhood Nutrition, **Co-PI**
- 2015-2017 Transforming Human Gut-Colonizing Lactobacillus to Produce B-Carotene, Busch Biomedical Grant, **Co-PI**
- 2017-2019 Amino Acid Fortification of Oral Rehydration Therapy, AIAP Grant, **PI**.
- 2016-2023 Ameliorating Aversive Taste of Pharmaceuticals, Bill and Melinda Gates Foundation, **MPI**
- 2021-2023 Identifying a Universal Bitter Blocker, Bill and Melinda Gates Foundation, **MPI**.

CORPORATE

- 1993-1994 Dissociation of Sour Taste and Stimulus pH.
- 1993-1994 Suppression of Bitter Tastes.
- 1995-1999 Psychophysical Investigations of Ibuprofen.
- 1996-1997 Perceptual Effects of Physico-Chemical Variations in Cellulose-Gel Fat-Substitutes.
- 1997-2003 Localization and Interactions of Taste, Olfaction, and Chemesthetic Sensations from Menthol and Other Irritants.
- 1997-1999 Masking the Taste of Bitter Components of Oral Health Products.
- 1999-2000 Individual Differences, Masking, and Analysis of Amino Acids and Their Metabolites.
- 2000-2001 Masking the Taste of Bitter Fractions From Complex Foods.
- 2001-2002 Bitterness Description of Pharmaceutical.
- 2001-2002 Inhibiting Bitter Stimuli with Structurally Related Compounds.
- 2001-2003 Natural Bitterness Inhibitors.
- 2002-2003 Bicarbonate Salts and Taste Perception.

2004-2006 fMRI of Taste and Smell Integration in Humans (extension).
2006-2007 Bitterness of Iso- α -acid Stereoisomers.
2007-2009 Genetic Analysis of Individual Variability in Salivary Amylase Activity and Oral Starch Perception
2005-2011 Identification of the Human Salty Taste Receptor
2007-2011 Analysis of Nicotine Avoidance and Amelioration of Aversion in *Drosophila melanogaster*

POSITIONS

2024 – to present, Distinguished Professor, Department of Nutritional Sciences, Rutgers University School of Environmental and Biological Sciences
2016 – to present, Member of the Graduate Faculty, Microbiology and Molecular Genetics Program, Graduate School-New Brunswick Rutgers University.
2015 – to present, Member of the Graduate Faculty, Physiology and Integrative Biology Program, Robert Wood Johnson School of Medicine, Rutgers University.
2011 – to present, Member of the Graduate Faculty, Food Science Program, Graduate School-New Brunswick Rutgers University.
2009 – to present, Member of the Graduate Faculty, Nutritional Sciences, Graduate School-New Brunswick Rutgers University.
2005 - to present, Member, Monell Chemical Senses Center, Philadelphia PA

2009 - 2024, Professor, Department of Nutritional Sciences, Rutgers University School of Environmental and Biological Sciences
2008 - 2009, Research Staff Veterans Administration Hospital, Philadelphia
2005 - 2019, Adjunct Professor, Department of Anatomy and Cellular Biology, University of Pennsylvania, School of Dental Medicine
1999 - 2004 Associate Member, Monell Chemical Senses Center, Philadelphia PA
1994 - 1999 Assistant Member, Monell Chemical Senses Center, Philadelphia PA
1993 - 1996 Adjunct Assistant Professor, University of Illinois at Chicago, Department of Psychology

TEACHING EXPERIENCE: Courses

The Biological Basis of Motivation, (UPenn, Undergraduate)1991.
Physiological Psychology, (UPenn, Undergraduate)1990, 1994.
Learning Theory, UPenn, Undergraduate)1990.
Perception, UPenn, (Undergraduate)1989.
Animal Laboratory in Motivation, (UPenn, Undergraduate) 1987, 1988.
Introductory Psychology, (UPenn, Undergraduate) 1986, 1989, 1992.
Introductory Neuroscience, (UPenn, Undergraduate) 1986.
Mammalian Physiology, (UPenn, Undergraduate) 1987.
Biology of Chemical Senses, (UPenn, Undergraduate) 1997.
Smell and Taste, (UPenn, undergraduate) 1998, 2001, 2004, 2007, 2008.
Sensory Physiology (UPenn, School of Dental Medicine) 2004-2018.
Grant Proposal Writing (Rutgers, Graduate) 2010-2024
Chemosensory Transduction (University of Medicine and Dentistry of New Jersey) 2010-2013
Nutrition Topics in Taste and Smell (Rutgers, Undergrad, Spring) 2012, 2022-2023
Methods In Sensory Analysis (Rutgers, Undergraduate, Fall), 2012-2023

Connections Between Nutrients, Environment, and Disease (Rutgers, Undergraduate, Fall), 2011, 2013, 2015, 2016

Molecular Basis of Physiology/Human Physiology in Medicine (Rutgers Graduate/Rutgers Robert Wood Johnson Medical School) Spring 2016, 2017 (16:761:580/ MSBS 5081S)

Graduate Seminar in Scientific Presentation 2020-2022 (Rutgers, Graduate, Spring)

Graduate Marquee Course: Cognition in Sensory Cortex 2024 (16:185:600:01 & 16:830:638:01)

SCIENTIFIC ACTIVITIES

Society Memberships: The American Association for the Advancement of Science, The American Chemical Society -- Agricultural and Food Chemistry Division, The American Society for Nutrition, The Association for Chemoreception Sciences, The American Psychological Association, The American Psychological Society, The American Society of Human Genetics (& FASEB), The Institute of Food Technologists, The Psychonomic Society, The Society for Neuroscience, The Society for the Study of Ingestive Behavior.

Reviewer for the journals (in alphabetical order): American Journal of Physiology; Appetite; Behavioral Neuroscience; Biological Bulletin; BMC Genetics; BMC Neuroscience; BMC Structural Biology; Brain Research; British Journal of Nutrition; Cell; Chemical Senses; Critical Reviews in Food Science and Nutrition; Current Biology; Flavour and Fragrance Journal; Food Biophysics; Food Quality and Preference; Genome; Journal of Biosciences; Journal of Dental Research; Journal of Experimental Biology; Journal of Food Science; Journal of Gerontology: Biological Sciences; Journal of Neuroscience; Journal of Neuroscience Research; Journal of Nutrition; Journal of Pain; Lancet; Nature; Nature: Scientific Reports, Nature Neuroscience; Neuron; Nutritional Neuroscience; Obesity Research; Perception and Psychophysics; Pharmacology Biochemistry and Behavior; Physiological Reports; Physiology and Behavior; Proceedings of the National Academy of Science (PNAS).

Article managing editor for PNAS.

Co-Director, Science Apprenticeship Program, Monell Chemical Senses Center **2008 – to present.**

Rutgers Faculty Sponsor, Supporting Parents and Caregivers at Rutgers **2023- to present.**

Member, Junior Faculty Mentoring Committee for Mackenzie Ferrante at Rutgers University, **2023- to present.**

Member, Association for Chemoreception Sciences Diversity Committee, **2015- to present.**

President, Association for Chemoreception Sciences, **2023-2024**

Chair, Association for Chemoreception Sciences Bylaws Committee, **2023-2024**

Member, Association of Chemoreception Sciences Awards Committee, **2023-2024**

Member, Faculty Search Committee at Rutgers University for Cluster Hire in Metabolic Health, **2023-2024**

Diversity Representative for Nutritional Sciences Faculty Searches at Rutgers University, **2023-2024**

Chair, Association for Chemoreception Sciences Diversity Committee, 2019- 2023

President Elect, Association for Chemoreception Sciences, 2022-2023

Chair, Association of Chemoreception Sciences Awards Committee, 2022-2023

Member of Strategic Planning Committee for Rutgers University, Nutritional Sciences, 2020-2023

Co-Chair of Strategic Planning Committee for Monell Chemical Senses Center, 2022-2023

Executive Editor for the journal Chemical Senses, 2009 – 2021

Member, NIH Neuroscience of Interoception and Chemosensation Study Section (NIC), 2021-2022

Member, NIH Chemosensory Systems Study Section (CSS), 2018-2021

Editorial Board for *Frontiers in Psychology: Eating Behavior*, 2014 – 2019

Founding Member of the Oleocanthal International Society, 2015.

Science Advisory Board International Life Sciences Institute (ILSI) North America, 2011-2014.

Program Chair, Annual Meeting Association for Chemoreception Sciences (ACHEMS)
(Huntington Beach, CA), 2013.

Member of the Executive Committee of the Association for Chemoreception Sciences, 2012-2013.

Member of Editorial Board for the journal *Food Quality and Preference*, 2003-2009.

Member of Editorial Board for the journal *Chemical Senses*, 2003-2009.

Guest Editor of the journal *Chemosensory Perception* for special issue, 2008.

Member of the Program Committee of the Society for the Study of Ingestive Behavior, 1995-1998.

Member of the Program Committee of the Association for Chemoreception Sciences, 2000-2001,
2010-2012.

Chair of the Polak Young Investigator Award Committee for ACHEMS, 2012.

Member of the Finance Committee of the Association for Chemoreception Sciences, 2006-2009.

Member of the Awards Committee of the Association for Chemoreception Sciences, 2008-2010.

Co-organizer of international conference on Cognition and the Chemical Senses: Associations,
Expectations and Interactions. Lincolnshire, IL, 2001.

Co-organizer of symposium on Interactions Among the Chemical Senses and Flavor, Association
for Chemoreception Sciences, 2001.

Co-organizer of symposium on The Genetics of the Senses, American Society of Human
Genetics, 2003.

Co-organizer of symposium on Interactions Between Taste, Smell, and Somatosensation,
American Chemical Society, Boston 2007.

Co-organizer of symposium on Umami Taste, International Symposium on Olfaction and Taste,
Yokohama, Japan, 2016.

Co-organizer of symposium on Evolution of the Senses Symposium, Annual Meeting of AAAS,
Boston, MA 2017

Co-organizer of symposium on The Gestalt of Fat Perception: More Than Smell and Taste,
Annual meeting of ACHEMS, Bonito Springs, FL 2022.

GRANT REVIEWS

Ad hoc member of NIH IFCN-5 study section on sensorimotor and motor systems
neurophysiology, 1998.

Ad hoc member of NIH NIA study section (RO1 review), 1999.

Ad hoc member of NIH NIDCD study section (RO1 review), 1999.

Ad hoc member of INSERM/INRA Programme National de Recherches en Nutrition Humaine
(PNRH) study section, 2004.

Ad hoc member of NIH NIDCD study section (P30 review), 2005.

Ad hoc member of NSF-MCB Biomolecular Systems review panel, 2005.

Ad hoc member of NIH IFCN-K study section (RO1 review), 2007.

Participant with the NIH Toolbox for Assessment of Neurological and Behavioral Function, NIA-
260-00007

Ad hoc member of NIH IFCN-K study section (RO1 review), 2008.

Ad hoc member of NSF review panel, 2008

Ad hoc member of NIH IFCN-4 study section (RO1 review), 2009.

Ad hoc member of NSF Physical Anthropology review panel, 2009.
Ad hoc member of NIH ZDC-1 study section (RO3 reviews), 2009.
Ad hoc member of NIH/ NIDCD L30 Review Panel, 2010.
Ad hoc member of NIH NDPR study section (RO1 review), 2010.
Ad hoc member of NIH ZRG-1/IFCN-N study section (R01 review), 2011.
Ad hoc member of NIH ZRG-1/ BBBP-V(SBIR review), 2014.
Ad hoc reviewer for the Louis Leakey Foundation, 2015.
Ad hoc member of NIH ZRG-1/IFCN-B study section (R21 review), 2015.
Ad hoc member of the Swiss National Science Foundation review panel, 2015.
Member of the Busch Biomedical Foundation review panel, 2016.
Ad hoc member of NIH ZRG-1/IFCN-B study section (R43 reviews), 2018.
Ad hoc member of NIH ZRG1/IFCN-B-55R study section (R01 Reviews), 2018.
Elected Sitting Member of NIH Chemosensory Systems Study Section (CSS) 2018-2021
Elected Sitting Member of NIH Neuroscience of Interoception and Chemosensation Study Section (NIC) 2021-2022
Ad hoc member of NIH NRSA Fellowship Study Section (ZDC1 SRB-Y), NIDCD, 2022, **2024**.

INVITED SYMPOSIA:

- The Importance of Examining Individual Components of Taste Reactivity; Society for Neuroscience 1993.
- Kirin International Symposium on Bitter Taste; Tokyo, Japan 1993 (Panelist).
- Suppression of Some Bitter Tasting Compounds by Sodium Salts; IFT, 1995.
- Flavor Modification with Sodium Chloride (NaCl); American Chemical Society, 1995.
- The Psychophysics of Taste Matching; Association for Chemoreception Sciences, 1995.
- Measurement of Stimulus Quality in the Chemical Senses; Gordon Conference, 1996.
- Flavors and Basic Taste Interactions; PepsiCo Taste Symposium, 1997.
- Sweet Taste; Gordon Conference, 1998 (Panelist).
- Multidisciplinary Approaches to Studying the Chemical Senses; Industrial Symposium at Montclair State, 1999.
- Stimulus Quality in the Chemical Senses; NY Institute of Food Technologists, 1999.
- Interactions Among the Chemical Senses; American Chemical Society, 2000.
- Mixing and Matching: Addressing Classical Questions in Taste Psychophysics; American Chemical Society Flavor Conference, 2000.
- The Role of the Proton in Human Sour Taste: A Psychophysical Perspective; ISOT/ECRO, 2000.
- Enhancing and Suppressing Tastes, NY Institute of Food Technologists, 2000.
- Subthreshold Interactions of Taste and Smell Contribute to Flavor Perception; AChemS, 2001.
- Suppression of Bitter Taste, Annual Meeting of New Jersey Pharmaceutical Association for Science and Technology, 2001.
- Learned Congruency of Tastes and Smells; Pangborn Symposium, 2003.
- Modifying Flavor, Keynote address for Society of Flavor Chemists, 2003.
- Flavor Interactions at the Sensory Level; American Chemical Society, 2004.
- Olfactory Sensitization in Young Women: Effects of Hormones and Cognition; ISOT, 2004.
- Inhibition of sweeteners illuminates sensory transduction, adaptation, and taste after-effects, American Chemical Society 2006.
- Taste Psychogenomics and Industry, Association for Chemoreception Sciences 2006.
- Sensory Integration in the Oral Cavity, Association for Chemoreception Sciences 2006.
- From Genes to Perception: The evolution of nutrient preferences, Pangborn Symposium 2007.
- Subthreshold Integration of Taste and Smell, an fMRI Perspective, ACS National Meeting 2007.

- The Role of Receptor Polymorphisms on Perception of Taste Compounds and Foods, International Symposium on Taste and Olfactory Perception, Kyushu University, 2007.
- Taste Receptors and Their Impact on Taste Perception, Symposium on Taste, Nutrition and Disease, University of Maryland, 2008
- Individual Differences in Bitter Taste, Symposium on the Genetics of Taste, AChemS Meeting 2008
- Genetics of Flavor Perception SUNY Binghamton, 2008
- Dean's Psychobiology Workshop: Educational Lectures in Science SUNY Binghamton 2008
- Experimental Cuisine Collective Lecture Series New York University 2008
- 100 Anniversary Symposium of Umami Taste Tokyo Japan 2008.
- The Institute of Medicine Committee on Strategies to Reduce Sodium Intake , Washington, D.C. 2009.
(<http://iom.edu/~media/Files/Activity%20Files/Nutrition/ReduceSodiumStrat/BRESLIN.pdf>)
- Evidence of a central gustatory map in humans. Symposium on Sensory Integration and Competition. Annual meeting of the Association for Chemoreception Sciences at St Pete Beach. 2010.
- Epithelial Sodium Channel (ENaC) is Involved in Reception of Sodium Taste: Evidence from Mice with a Tissue-Specific Conditional Targeted Mutation of the ENaC-alpha Gene. Symposium on Tip of the Tongue. Annual meeting of the Association for Chemoreception Sciences at St Pete Beach.2010. (Delivered for Sasha Bachmanov in his absence.)
- Unusual pungency from Extra Virgin Olive Oil via Tissue Specific Expression of TRPA1 Channel in the Human Oro-Pharynx. Symposium on New Frontiers in Chemesthesis Annual meeting of the Association for Chemoreception Sciences at St Pete Beach.2011.
- The mechanisms for human salt taste. Meeting of Institute of Food Technologists. New Orleans, 2011
- The psychogenomics of oral perception. Meeting of the International Life Sciences Institute, Washington D.C., 2011.
- Agriculture, Cooking, and Evolutionary Adaptations. Annual Food Sense meeting, Public Outreach Lecture. University of Missouri, Columbia, 2012.
- Why Are The Senses Important to Digestion? or Why Did Ivan Pavlov Win a Nobel? Annual Food Sense meeting, Plenary Lecture. University of Missouri, Columbia, 2012.
- Bitter Taste: The ubiquitous Paradox from Toxins in Our Food. Annual meeting of the Society for the Study of Ingestive Behavior, Zurich, Switzerland, 2012
- Gustatory detection and perception of oral food chemicals. Annual meeting of MARM-ACS, Philadelphia, 2012.
- Food choices and eating patterns. Annual meeting of the International Life Sciences Institute, 2013.
- Anticipatory digestive responses to foods. Non-Wood Forest Products, Health, and Well-Being" University of Helsinki & University of Turku, Finland January 2014
- Anticipating Foods, Physiological Responses, Cornell University, Department of Food Science 2014
- Oleocanthal, TEDX Meeting: Ideas in Action. Rutgers University, March, 2015.
- Oleocanthal and Health, Oleocanthal International Society meeting, Zakynthos, Greece 2015.
- Salt Taste and Substitutes, at ILSI Symposium "Safety of Sodium Reduction in the Food Supply", Washington DC, 2015.
- Olive Oil and Cancer, National Extension Association of Family and Consumer Sciences (NEAFCS), New Jersey 2015.

- Oleocanthal: Cancer and Alzheimer's Disease. Oleocanthal International Society: Health and Gastronomy Congress, Ubeda-Baeza, Spain, 2015.
- Amino acids, food processing, and protein appetite. International Symposium on Olfaction and Taste. Yokohama, Japan, 2016.
- Moderator and Discussant "Beyond the Basic Tastes" at Symposium on Taste: Basic Tastes and More, The University of Tokyo, Tokyo Japan, 2016.
- Chemosensory signaling in the alimentary tract. At Symposium on Food Allergy: Signals to Circuits. Center for the Study of Inflammatory Bowel Disease. Mass General Hospital, Cambridge, MA, 2016.
- Spit: What is it good for? Department of Nutritional Sciences, Rutgers University, New Brunswick, NJ 2016
- Salivary Amylase. Gordon Conference on Salivary Glands and Exocrine Biology. Galveston Texas, 2017
- The Evolution of Taste. Annual American Association for the Advancement of Science (AAAS) meeting Boston, MA, 2017
- The Evolution of Umami Taste, Culinary Institute of America (CIA), Key Note Address, Poughkeepsie, New York, 2017
- Does your skin taste yummy ? Gustatory inputs guide mosquito feeding. Department of Entomology, Rutgers University, New Brunswick, NJ, 2017
- Reducing sugar intake. Food System Seminar, University of Pennsylvania, Philadelphia, PA, 2017.
- Establishing a sugar reduction working group. Annual meeting of ACHEMS, Industrial Symposium, Bonita Springs, FL, 2017.
- Oleocanthal and health: From Alzheimer's to Cancer. HNRCA: Tufts University, Boston, MA 2017.
- Taste receptors help regulate metabolism. Child Health Institute of New Jersey, New Brunswick, NJ 2017.
- Ameliorating bitterness of drugs with salts. Bill and Melinda Gates Foundation Drug Development CMC Partner Forum, New York, NY, 2018
- Olive Oil Polyphenols: How much is enough? Meeting of the North American Olive Oil Association, Chicago, IL, 2018
- When we modulate sweet taste, what else are we modulating? Annual meeting of the American Chemical Society (ACS), Boston, MA 2018.
- Common Problems with tastes and their solution so far. Joint First session of American Chemical Society (ACS) and Food and Drug Administration (FDA), Colloquium on Frontiers in Flavor Chemistry, College Park, MD, 2019
- Science Fiction, Food, and Public Health. Department of Political Science, School of Arts and Sciences, Rutgers University, 2019.
- Why are pre-digested foods so desirable? Science and Culture of Fermentation Symposium, Dartmouth University, 2019.
- Taste receptors as metabolic sensors and regulators, Human Evolutionary Biology Group, Dornsife College, University of Southern California, 2022.
- Webinar: Adding Perspective to Recent Sugar Intake Trends: Does It Need To Be So Sweet?, International Food Information Council, April 28, 2022.
- The Questions of Dietary Fructose: Why, What, Where, How?, Seminar, Food Science Department, Rutgers University, December 1, 2023.
- Oral influences on carbohydrate metabolism. Endocrinology, Grand Rounds, Robert Wood Johnson, Rutgers University. February 9, 2024.

--Reducing Dietary Sodium, Keynote Address at Sodium Reduction Conference with Cargill and Pespico, Plano, Texas. June 20, 2024.

PATENTS:

Use of the irritating principal Oleocanthal in olive oil, as well as structurally and functionally similar compounds.

1. U.S. Patent # 8,585,632
2. Australian Patent # 2006244136
3. European Patent # 1888091
4. Canadian Patent # 2607977

Compositions and methods for preventing or treating irritation caused by agonists of the transient receptor potential family of ion channel A1.

5. US Patent. # 61/378,798

Glucose beverage comprising exogenous flavour source and color.

6. Japanese Patent # 6,995,850
7. U.S. Patent # 11,219,229
9. European Union Patent #

PUBLICATIONS

JOURNAL PUBLICATIONS: (h-index 54; i10-index 91; 11,932 Citations)

1. Spector A.C., **P.A.S. Breslin**, and H.J. Grill. (1988) Taste reactivity as a dependent measure of the rapid formation of conditioned taste aversion: A tool for the neural analysis of taste-visceral associations. *Behavioral Neuroscience*, **102**, 942-952. PMID: 2850815
2. **Breslin, P.A.S.**, T.L. Davidson, and H.J. Grill. (1990) Conditioned reversal of reactions to normally avoided tastes. *Physiology and Behavior*, **47**, 535-538. PMID: 235976
3. **Breslin, P.A.S.** (1991) The roles of gustatory and internal state variables on sodium ingestion in the rat. Ph.D. dissertation in Psychology at the University of Pennsylvania, Philadelphia.
4. **Breslin, P.A.S.**, A.C. Spector, and H.J. Grill. (1992) A quantitative comparison of taste reactivity behaviors to sucrose before and after LiCl pairings: A unidimensional account of palatability. *Behavioral Neuroscience*, **106**, 823-839. PMID: 1332732
5. **Breslin, P.A.S.**, J.M. Kaplan, C.M. Zambito, A.C. Spector, and H.J. Grill. (1993) Lick rate analysis of sodium taste-drive combinations. *Am. J. Physiol.*, **264**, R312-R318. PMID: 8447486
6. **Breslin, P.A.S.**, A.C. Spector, and H.J. Grill. (1993) Chorda Tympani section decreases the ion specificity of depletion-induced sodium appetite in rats. *Am. J. Physiol.*, **264**, R319-R323. PMID: 8447487
7. **Breslin, P.A.S.**, M.M. Gilmore, G.K. Beauchamp, and B.G. Green. (1993) Psychophysical evidence that oral astringency is a tactile sensation. *Chemical Senses*, **18**, 405-417.

8. **Breslin, P.A.S.**, S. Kemp, and G.K. Beauchamp. (1994) Single Sweetness Signal. *Nature*, **369**, 447-448. PMID: 8202133
9. **Breslin, P.A.S.** and G.K. Beauchamp. (1995) Suppression of bitterness by sodium: Variation among bitter compounds. *Chemical Senses*, **20**, 609-623. PMID: 8788095
10. **Breslin, P.A.S.**, A.C. Spector, and H.J. Grill. (1995) Sodium specificity of salt appetite in the Fischer-344 and Wistar strains is impaired by chorda tympani nerve transection. *Am. J. Physiol.*, **269**, R350-R356. PMID: 7653656
11. **Breslin, P.A.S.**, Beauchamp, G.K., and Pugh, E.N., Jr. (1996) Monogeusia for fructose, glucose, sucrose and maltose. *Percept. & Psychophys.*, **58**, 327-341. PMID: 8935894
12. **Breslin, P.A.S.**, Davis, J.D., and Rosenak, R. (1996) Saccharin increases the effectiveness of glucose in stimulating ingestion in rats but has little effect on negative feedback. *Physiol. Behav.*, **60**, 411-416. PMID: 8840899
13. **Breslin, P.A.S.** (1996) Interactions among salty, sour and bitter compounds. *Trends Food Sci. Technol.*, **7**, 390-399.
14. **Breslin, P.A.S.** and G.K. Beauchamp. (1997) Salt enhances flavour by suppressing bitterness. *Nature*, **387**, 563. PMID: 9177340
15. Davis, J.D. and **P.A.S. Breslin.** (2000) A behavioral analysis of the ingestion of glucose, maltose, and maltooligosaccharide in rats. *Physiology and Behavior*, **69**, 477-485. PMID: 10913787
16. Shikata, H., D.B.T. McMahon, and **P.A.S. Breslin.** (2000) Psychophysics of taste lateralization on anterior tongue. *Percept. and Psychophys.*, **62**, 684-694. PMID: 10883577
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