CURRICULUM VITAE

NAME: Linda B. Buck, Ph.D.

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PLACE OF BIRTH: Seattle, Washington

EDUCATION AND TRAINING:

1975 B.S.	Microbiology, University of Washington, Seattle, Washington
1975 B.S.	Psychology, University of Washington, Seattle, Washington
1980 Ph.D.	Immunology, Microbiology Department, University of Texas Southwestern Medical Center, Dallas, Texas
1980-82	Postdoctoral Fellow, Immunology, Microbiology Department, Columbia University College of Physicians and Surgeons, New York, New York
1982-84	Postdoctoral Fellow, Neuroscience, Institute of Cancer Research, Columbia University College of Physicians and Surgeons, New York, New York
1984-91	Associate, Howard Hughes Medical Institute, Columbia University College of Physicians and Surgeons, New York, New York

ACADEMIC APPOINTMENTS:

1991-1996	Assistant Professor, Department of Neurobiology, Harvard Medical School, Boston, Massachusetts
1994-2017	Investigator, Howard Hughes Medical Institute
1996-2001	Associate Professor, Department of Neurobiology, Harvard Medical School, Boston, Massachusetts
2001-2002	Professor, Department of Neurobiology, Harvard Medical School, Boston, Massachusetts

2002-	Professor, Division of Basic Sciences, Fred Hutchinson Cancer Center, Seattle, Washington
2003-	Affiliate Professor, Department of Physiology and Biophysics, University of Washington, Seattle, Washington
2004-2007	Associate Director, Division of Basic Sciences, Fred Hutchinson Cancer Center, Seattle, Washington

OTHER APPOINTMENTS:

2000-2003	Scientific Advisor, Primal, Inc., Seattle, WA
2003-2006	Scientific Advisory Board, Nura, Inc., Seattle, WA
2005-2009	Board of Directors, deCODE Genetics, Reykjavik, Iceland
2007-2014	Consultant, Omeros Corp., Seattle, WA
2007-2020	Board of Directors, International Flavors & Fragrances, Inc., New York, NY

PROFESSIONAL SOCIETIES:

1992-	Association for Chemoreception Sciences (AChemS)
1993-	Society for Neuroscience

SELECTED HONORS:

1992	McKnight Scholar Award from The McKnight Endowment Fund for Neuroscience
1992	Alfred P. Sloan Research Fellowship Award
1993	John Merck Scholarship in the Biology of Developmental Disabilities in Children
1995	The 1995 Distinguished Alumnus, Graduate School, University of Texas Southwestern Medical Center
2000	Senior Scholar Award in Aging, The Ellison Medical Foundation
2002	Elected Fellow, the American Association for the Advancement of Science
2003	Elected Member, the National Academy of Sciences

2005	Golden Plate Award, The Academy of Achievement
2005	Distinguished Alumnus Award, University of Washington
2005	Brava Award, Women's University Club
2006	The International Hall of Fame, International Women's Forum
2006	Alumna Summa Laude Dignata, University of Washington
2006	Elected Member, the National Academy of Medicine
2007	The Medal of Merit, State of Washington
2008	Elected Member, the American Academy of Arts & Sciences
2009	Elected Member, the European Academy of Sciences
2011	Doctor of Science, honoris causa, Rockefeller University
2015	Doctor of Science, honoris causa, Harvard University
2015	Doctor of Science, honoris causa, University College London
2015	Elected Foreign Member, The Royal Society
2017	Doctor of Science, honoris causa, Ben Gurion University
2017	Elected, Honorary Member, New York Academy of Sciences

SELECTED AWARDS:

1992	The Takasago Award for Research in Olfaction
1992	The LVMH Moet Hennessy Louis Vuitton Science for Art Prize
1992	The Sense of Smell Award, The Fragrance Foundation
1996	The Unilever Science Award
1996	The R.H. Wright Award in Olfactory Research
1997	The Lewis S. Rosenstiel Award for Distinguished Work in Basic Medical Research
2003	Perl/UNC Neuroscience Prize
2003	The Gairdner Foundation International Award
2004	The Nobel Prize in Physiology or Medicine

INTERNATIONAL/NATIONAL SERVICE:

Advisory Boards and Committees

1997-2016	Editorial Board, Current Opinion in Neurobiology
2002-2017	Editorial Board, Molecular and Cellular Neuroscience
2003-2013	Editorial Board, Developmental Neurobiology
2004-2008	Scientific Advisory Board, Center for Molecular Medicine, Karolinska Hospital, Stockholm, Sweden
2005-2013	Medical Advisory Board, The Gairdner Foundation, Toronto, Canada
2005-2019	Advisory Committee, March of Dimes Prize in Developmental Biology
2005-	President's Council, New York Academy of Sciences
2005-2009	Advisory Board, Peter Gruber Foundation Neuroscience Prize
2006-	Founding Board, Rosalind Franklin Society
2007	Committee Member, Unilever Science Prize
2008	Member, 2008 Kavli Prize Committee in Neuroscience
2009	Committee Member, The Royal Swedish Academy of Sciences Göran Gustafsson Prize
2010-2013	Committee Member, Shaw Prize in Life Science and Medicine
2011,13,15, 17,19,21,23	Committee Member, Eric Kandel Young Neuroscientists Prize, The Hertie Foundation
2012-2017	International Advisory Panel, Knut and Alice Wallenberg Foundation, Sweden
2015-	Scientific Advisory Board, The MIT Picower Institute for Learning and Memory
2018-2021	Board Member, The Dan David Prize
2020-	Committee Member, Prix Galien USA

PREVIOUS TRAINEES

Name Current Position

1992-1995	Kerry Ressler, M.D., Ph.D.	Professor of Psychiatry, Chief Scientific Officer, McLean Hospital, Harvard Medical School
1992-1996	Susan Sullivan, Ph.D.	Division of Scientific Programs, NIDCD/NIH, Rockville, MD
1992-1994	Emily Liman, Ph.D.	Professor of Biological Sciences, University of Southern California, Los Angeles, CA
1993-1998	Lisa Horowitz, M.D., Ph.D.	Research Scientist, University of Washington School of Medicine, Seattle, WA
1993-1995	Anna Berghard, Ph.D.	Professor, Department of Molecular Biology, Umea University, Umea, Sweden
1993-1995	Staffan Bohm, Ph.D.	Professor, Department of Molecular Biology, Umea University, Umea, Sweden
1994-1996	Laurence Dryer, Ph.D.	Executive Vice President of R&D at OBAGI COSMECEUTICALS LLC
1995-2001	Jean-Pierre Montmayeur, Ph.D.	Montmayeur Ingredients Innovation LLC
1996-2000	Bettina Malnic, Ph.D.	Associate Professor, Department of Biochemistry, University of Sao Paulo, Sao Paulo, Brazil
1996-2001	Hiroaki Matsunami, Ph.D.	Professor of Molecular Genetics and Microbiology, Duke University Medical Center, Durham, NC
1997-2000	Constantinos Neophytou, Ph.D.	CEO at Teamvision Investment Consulting
1997-2000	Arunava Goswami, Ph.D.	Professor, Indian Statistical Institute, Kolkata, India
1997-2004	Paul Godfrey, Ph.D.	High school teacher, Boston, MA
1997-2005	Zhihua Zou, M.D., Ph.D.	Unknown
1998-2001	Mehran Sam, Ph.D.	Spiritual Teacher, Head of Investment, Private Company
1999-2000	Carlo Rizzuto, Ph.D.	Managing Director at Versant Ventures
2000-2007	Stephen Liberles, Ph.D.	Professor, Department of Cell Biology,

		Harvard Medical School, HHMI
2000-2004	Ulrich Boehm, Ph.D.	Professor, Department of Pharmacology and Toxicology, Saarland University School of Medicine, Homburg, Germany
2001-2003	Rajesh Ranganathan, Ph.D.	Senior Director, Scientific Affairs – Heritage Pharmaceuticals, Inc.
2001-2006	Kiyomitsu Nara, Ph.D.	Technician, Tokyo University, Tokyo, Japan
2002-2009	Michael Petrascheck, Ph.D.	Associate Professor, Scripps Research Institute, La Jolla, CA
2003-2008	James Contos, Ph.D.	Director, SierraRios
2003-2008	Hitomi Sakano, M.D./Ph.D.	Assistant Professor, UT Southwestern Medical Center, Dallas, TX
2004-2005	Rebecca Klein, Ph.D.	Director, Merck & Co., Lansdale, PA
2004-2010	Lisa Horowitz, M.D./Ph.D.	Research Scientist, University of Washington, Seattle, WA
2008-2011	Benjamin Williams, Ph.D.	Program Officer, Helmsley Charitable Trust, New York, NY
2007-2012	James Linton, Ph.D.	Research Scientist, California Institute of Technology, Pasadena, CA
2008-2013	Jin Lee, Ph.D.	Assistant Professor, Division of Biological Sciences and Technology, Yonsei University, Wonju, South Korea
2008-2013	Kyoung-hye Yoon, Ph.D.	Research Professor, Division of Biological Sciences and Technology, Yonsei University, Wonju, South Korea
2008-2013	Luis Saraiva, Ph.D.	Investigator, Sidra Medical and Research Center, Doha, Qatar
2008-2015	Zhonghua Lu, Ph.D.	Investigator, The Brain Cognition and Brain Disease Institute, Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences, Shenzhen, China
2007-2017	Kunio Kondoh, Ph.D.	Assistant Professor, Division of Endocrinology and Metabolism, National Institute for Physiological Sciences, Okazaki, Japan

		unknown
2017-2018	Gili Ezra-Nevo, Ph.D.	Postdoctoral Fellow, Champalimaud Foundation, Portugal
2012-2021	Naresh Hanchate, Ph.D.	Excellence Fellow, University College London, London, UK
2013-2021	Eun Jeong Lee, Ph.D.	Assistant Professor, Anjou University School of Medicine, Suwon, South Korea
2020-2021	Ashley Heck, Ph.D.	Nanostring Technologies, Seattle, WA
2020-2023	Chia-Ying Lee, Ph.D.	Family Leave
	2012-2021 2013-2021 2020-2021	 2012-2021 Naresh Hanchate, Ph.D. 2013-2021 Eun Jeong Lee, Ph.D. 2020-2021 Ashley Heck, Ph.D.

BIBLIOGRAPHY:

Kuang D, Hanchate NK, Lee CY, Heck A, Ye X, Erdenebileg M, <u>Buck LB</u> (2023) Olfactory and neuropeptide inputs to appetite neurons in the arcuate nucleus. bioRxiv doi: https://doi.org/10.1101/2023.02.28.530282

Lee EJ, Saraiva LR, Hanchate NK, Ye X, Asher G, Ho J, <u>Buck LB</u> (2022) Odor blocking of stress hormone responses. Sci. Rep. 12(1):8773. PMC9130126, doi: 10.1038/s41598-022-12663-x.PMID: 35610316

<u>Buck L</u>, Scott K, Zuker C (2021) Smell and taste: the chemical senses. In: Principles of Neural Science, ER Kandel, JD Koester, SH Mack, SA Siegelbaum, eds (New York, McGraw-Hill), pp. 682-706.

Lee EJ, Hanchate NK, Kondoh K, Tong APS, Kuang D, Spray A, Ye X, <u>Buck LB</u> (2020) A psychological stressor conveyed by appetite-linked neurons. Science Advances. 6 (12), eaay5366. PMID: 32206712

Hanchate NK, Lee EJ, Ellis A, Kondoh K, Kuang D, Basom R, Trapnell C, <u>Buck LB</u> (2020) Connect-seq to superimpose molecular on anatomical neural circuit maps. Proc. Natl. Acad. Sci. USA. 2020. 117: 4375-4384. PMID: 32034095.

Saraiva LR, Kondoh K, Ye X, Yoon K-h, Hernandez M, <u>Buck LB</u> (2016) Combinatorial effects of odorants on mouse behavior. Proc. Natl. Acad. Sci. USA. 113:E3300-E3306. PMID: 27208093.

Kondoh K, Lu L, Ye X, Olson DP, Lowell BB, <u>Buck LB</u> (2016) A specific area of olfactory cortex involved in stress hormone responses to predator odours. Nature. 532:103-106. PMID: 27001694.

Hanchate NK, Kondoh K, Lu Z, Kuang D, Ye X, Qiu X, Pachter L, Trapnell C, <u>Buck LB</u> (2015) Single-cell transcriptomics reveals receptor transformations during olfactory neurogenesis. Science. 350:1251-1255. PMID: 26541607.

Yoon, K-h, Ragoczy T, Lu Z, Kondoh K, Kuang D, Groudine M, <u>Buck LB</u> (2015) Olfactory receptor genes expressed in distinct lineages are sequestered in different nuclear compartments. Proc. Natl. Acad. Sci. USA. 112:E2403-2409. PMID: 25897022.

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<u>Buck L</u>, Bargmann CI (2012) Smell and taste: the chemical senses. In Principles of Neural Science, ER Kandel, JH Schwartz, TM Jessell, S Siegelbaum, AJ Hudspeth eds. (New York, McGraw-Hill), pp.712-742.

Nara K, Saraiva LR, Ye X, <u>Buck LB</u> (2011) A large-scale analysis of odor coding in the olfactory epithelium. J. Neurosci. 31:9179-9191. PMID: 21697369.

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Liberles SD, Horowitz LF, Kuang D, Contos JJ, Wilson KL, Siltberg-Liberles J, Liberles DA, <u>Buck LB</u> (2009) Formyl peptide receptors are candidate chemosensory receptors in the vomeronasal organ. Proc. Natl. Acad. Sci. USA. 106:9842-9847. PMID: 19497865.

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Buck LB (2005-2006) Unraveling smell. Harvey Lect. 101:117-134.

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Malnic B, Godfrey PA, and <u>Buck LB</u> (2004) The human olfactory receptor gene family. Proc. Natl. Acad. Sci. USA. 101:2584-2589. PMID: 14983052.

Godfrey PA, Malnic B, and <u>Buck LB</u> (2004) The mouse olfactory receptor gene family. Proc. Natl. Acad. Sci. USA. 101:2156-2161. PMID: 14769939.

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Berghard A, <u>Buck LB</u>, and Liman ER (1996) Evidence for distinct signaling mechanisms in two mammalian olfactory sense organs. Proc. Natl. Acad. Sci. USA 93:2365-2369. PMID: 8637879.

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<u>Buck L</u> (1993) Identification and analysis of a multigene family encoding odorant receptors: implications for mechanisms underlying olfactory information processing. Chem. Senses 18:203-208.

Ressler KJ, Sullivan SL and <u>Buck LB</u> (1993) A zonal organization of odorant receptor gene expression in the olfactory epithelium. Cell 73:597-609. PMID: 7683976.

Ngai J, Dowling MM, <u>Buck L</u>, Axel R and Chess A (1993) The family of genes encoding odorant receptors in the channel catfish. Cell 72:657-666.

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<u>Buck L</u> and Axel R (1991) A novel multigene family may encode odorant receptors: a molecular basis for odor recognition. Cell 65:175-187. PMID: 1840504.

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Hynes MA, <u>Buck LB</u>, Gitt M, Barondes S, Dodd J and Jessell TM (1989) Carbohydrate recognition in neuronal development: structure and expression of surface oligosaccharides and beta-galactoside-binding lectins. In: Carbohydrate Recognition in Cellular Function. Ciba Found. Sympos. 145. New York: John Wiley and Sons, pp 189-209.

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<u>Buck LB</u>, Bigelow JM and Axel R (1987) Alternative splicing in individual Aplysia neurons generates neuropeptide diversity. Cell 51:127-133.

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Vitetta E, Pure E, Isakson P, <u>Buck LB</u> and Uhr J (1980) The activation of murine B cells: the role of surface immunoglobulins. Immunol. Rev. 52:211-231.

<u>Buck LB</u>, Yuan D and Vitetta ES (1979) A dichotomy between the expression of IgD on B cells and its requirement for triggering such cells with two T-independent antigens. J. Exp. Med. 149:987-992.