# NATHAN D. PRICE, Ph.D.

**Buck Institute for Research on Aging**
8001 Redwood Blvd
Novato, CA 94945

**Thorne HealthTech**
52 West 57th St, 44th Floor
New York, NY 10019

## EDUCATION

| | |
|---|---|
| 2005 | Ph.D., Bioengineering (with additional specialty in Bioinformatics), UCSD |
| 2002 | M.S., Bioengineering, University of California, San Diego (UCSD) |
| 2000 | B.S. (with University Honors), Chemical Engineering, BYU |

## PROFESSIONAL EXPERIENCE

| | |
|---|---|
| 2024-present | Professor and Co-Director, Center for Human Healthspan, Buck Institute for Research on Aging |
| 2021-present | Chief Scientific Officer, Thorne HealthTech |
| 2020-2021 | CEO, Onegevity Health (acquired by Thorne HealthTech) |
| 2017-present | Co-Director, Hood-Price Integrated Lab for Systems Biomedicine |
| 2015-present | Professor, Institute for Systems Biology (on leave effective November 16, 2020) |
| 2014-2019 | Co-Founder and Board of Directors, Arivale (*GeekWire*'s 2016 Startup of the Year) |
| 2013-2020 | Associate Director, Institute for Systems Biology, Seattle, WA |
| 2011–2015 | Associate Professor, Institute for Systems Biology, Seattle, WA |
| 2011–present | Affiliate Faculty & Member of Graduate College, University of Washington, Departments of Bioengineering, Computer Science & Engineering, and Molecular & Cellular Biology |
| 2011–2016 | Adjunct Faculty, University of Illinois, Urbana-Champaign |
| 2007-2011 | Assistant Professor, University of Illinois, Urbana-Champaign; Department of Chemical and Biomolecular Engineering, Institute for Genomic Biology, Center for Biophysics and Computational Biology, Center for Advanced BioEnergy Research, Department of Bioengineering, Neuroscience program, Department of Computer Science |
| 2005–2007 | ACS Postdoctoral Fellow, Lee Hood Lab, Institute for Systems Biology, Seattle, WA |
| 2001-2005 | Graduate Research Assistant, Bernhard Palsson Lab, University of California, San Diego |

## HONORS & ACTIVITIES

Honors

| | |
|---|---|
| 2023 | Alexander & Mildred Seelig Award, American Nutrition Association |
| 2023 | Health 2.0 Outstanding Leadership Award |
| 2022 & 2023 | *Crain's New York* Notable Healthcare Leader |
| 2021 | Finalist, EY Entrepreneur of the Year, New York |
| 2020 | Healthy Longevity Catalyst Award, *National Academy of Medicine* |
| 2020 | Elected Fellow, American Institute for Medical and Biological Engineering |
| 2019 | *National Academy of Medicine* Emerging Leader in Health and Medicine (1 of 10) |

| | |
|---|---|
| 2016 | Grace A. Goldsmith Award, American College of Nutrition |
| 2011 | Camille Dreyfus Teacher-Scholar |
| 2010 | Young Investigator Award, Roy J Carver Charitable Trust |
| 2009 | National Science Foundation CAREER Award |
| 2008 | Howard Temin Pathway to Independence Award in Cancer Research, National Cancer Institute |
| 2007 | Tomorrow's PIs, Genome Technology |
| 2006–2007 | Sam E. and Kathleen Henry Postdoctoral Fellowship, American Cancer Society |

Company Awards

| | |
|---|---|
| 2023 | Fast Company Innovation by Design Award Finalist, User Experience category, Microbiome Wipe, Thorne HealthTech |
| 2023 | Gold Globee Award, Company of the Year, Wellness Products and Services Category, 8th Annual 2023 Globee Awards for American Business, Thorne HealthTech, Empowering individuals to live healthier longer through personalized scientific wellness |
| 2023 | *MedTech Breakthrough Award for Best Overall Medical Device Product*, Thorne HealthTech OneDraw® Blood Collection Device |
| 2023 | Fast Company annual list of W*orld's Most Innovative Companies*, Top 5 in Wellness Category, Thorne HealthTech |
| 2023 | Titan Platinum Winner for Company & Organization - Health Products & Services, Empowering individuals to live healthier longer through personalized scientific wellness, Thorne HealthTech |
| 2023 | Titan Gold Winner for Company & Organization - *Most Innovative Company of the Year,* Empowering individuals to live healthier longer through personalized scientific wellness, Thorne HealthTech |
| 2022 | Titan Gold Winner for Company & Organization - *Most Innovative Company of the Year*, Thorne HealthTech |

Non-Profit Boards

| | |
|---|---|
| 2022-present | Oversight Board, Walter H. Coulter Center for Translational Research, Univ. of Virginia |
| 2021-present | Board on Life Sciences (BLS), *National Academies of Sciences, Engineering, and Medicine* (NASEM) |
| 2020-present | Chair, Data Safety Monitoring Board (DSMB) of the National Institute on Aging (NIA), Active Minds Study, University of South Florida |
| 2018-2021 | Board of Trustees, Health and Environmental Sciences Institute |
| 2018-2021 | Board of Advisors, American Cancer Society (WA) |
| 2011-2014 | Board of Directors, P4 Medicine Institute |

Scientific Advisory Boards (Research Institutes, Hospitals, and Healthcare Systems)

| | |
|---|---|
| 2023-present | Scientific Advisory Committee on Alternative Toxicological Methods (SACATM), National Institutes of Health (NIH), December 1, 2023–November 03, 2026 |
| 2023-present | External Advisory Board, U19 Alzheimer Gut Microbiome Project (AGMP), Duke University, University of California, San Diego, and California Institute of Technology |
| 2020-present | Advisory Board, Time-Aware ConstrainEd Multimodal Data Fusion (TrACEr) Project |
| 2017-present | Leadership Advisory Council, Personalized Lifestyle Medicine Institute |
| 2017-2020 | Scientific Advisory Council, Providence St. Joseph Health (50+ hospital system) |
| 2016-2018 | External Advisory Board, Institute of Public Health Genetics, University of Washington |
| 2015-2018 | Research Advisory Board, Cleveland Clinic Center for Functional Medicine |

| | |
|---|---|
| 2014-2021 | Scientific Advisory Board, Novo Nordisk Foundation Center for Biosustainability |
| 2014 | Advisory Board, Systems Biology of Pregnancy, Bill & Melinda Gates Foundation and Global Alliance for Preventing Prematurity and Stillbirth (GAPPS) |
| 2014-2017 | External Advisory Board, UW Multidisciplinary Learning Disability Center |
| 2012-2018 | Scientific Advisory Committee, DOE ENIGMA (Ecosystems and Networks Integrated with Genes and Molecular Assemblies) Program at UC Berkeley/LBNL/MIT. *Chair of committee in 2013*. |

Scientific Advisory Boards (Companies)

| | |
|---|---|
| 2023-present | Scientific Advisor, Rue Four Health |
| 2023-present | Scientific Advisor, ProPetDx |
| 2020 | Scientific Advisor, Tribetic |
| 2019 | Scientific Advisory Board, Navican |
| 2018-2019 | Personalized Healthcare Expert Advisory Committee, Roche |
| 2018-2022 | Scientific Advisory Board, Basepaws (sold to Zoetis) |
| 2017-2018 | Clinical Advisory Board, Roche (Personalized Healthcare division) |
| 2016-2019 | Scientific Advisory Board, Habit, Inc. (personalized nutrition company) |
| 2015-present | Scientific Advisor, Sera Prognostics, Inc. |
| 2013-2020 | Scientific Advisory Board, Trelys, Inc. (metabolic engineering company) |
| 2008–2011 | Scientific Advisory Board, TetraVitae Biosciences, Inc. (sold to Eastman in 2011) |

Editorial Boards

| | |
|---|---|
| 2016-2021 | Executive Advisory Board, *Advanced Biosystems* |
| 2015-present | Founding Editorial Board, *Cell Systems* (*Cell* family journal) |
| 2014-2018 | Editorial Advisory Board, *Science Translational Medicine* (*Science* family journal) |
| 2014-2017 | Associate Editor, *IEEE Life Science Letters* |
| 2012–2022 | Editorial Board, *Industrial Biotechnology* |
| 2009–present | Associate Editor, *Biotechnology Journal* |
| 2009–2021 | Deputy Section Editor, *BMC Systems Biology* (Associate Editor, 2009-2011) |
| 2009–2014 | Deputy Editor-in-Chief, *PLOS Computational Biolo*gy (Associate Editor, 2009-2010) |

Other Experience & Activities (Selected)

| | |
|---|---|
| 2022-present | *Co-Chair*, National Academies of Sciences, Engineering, and Medicine (NASEM) workshop series on AI and Biodata (jointly sponsored by U.S. State Department) |
| 2018-2020 | *Chair*, NIH Study Section for Modeling and Analysis of Biological Systems (MABS) |
| 2017-2020 | *Chair*, NIH Special Topics Study Section, Drug Repositioning in Alzheimer's Disease |
| 2016-present | Fellow, European Society of Preventive Medicine |
| 2015-2018 | Standing Member, NIH Study Section for Modeling and Analysis of Biological Systems (MABS) |
| 2014 | Advisor, First Look Forum (group for evaluating early-stage company ideas) |
| 2013-2015 | Member, Center for Cancer Innovation, University of Washington |
| 2013-2014 | Invited member, AAAS-FBI Big Data and National Security Working Group |
| 2012 | Invited participant, NCI Director's Workshop on Data Reproducibility |
| 2010–2012 | Invited Member, Institute of Medicine (IOM) Committee to Review Omics-Based Tests to Predict Clinical Outcomes |
| 2010–2011 | Steering Committee, Mayo Clinic-University of Illinois Alliance for Technology-Driven Medicine |

# PUBLICATIONS

Books

Leroy Hood and **Nathan Price**, The Age of Scientific Wellness: Why the Future of Medicine is Personalized, Predictive, Data-rich, and In Your Hands, Harvard University Press/Belknap. April 4, 2023

Lay Articles

21. Interviewed by Suzanne Hayes, The Big Question I Ask Myself Each Day: Is my memory loss normal or something to worry about?, *the girlfriend*, From AARP, July 19, 2024, online at: https://www.thegirlfriend.com/health/the-big-question-i-ask-myself-each-day

20. Interviewed by Beth Lipton, Do These 3 Things Every Day to Boost Longevity, Says Expert, *cleanplates*, May 22, 2024, online at: https://cleanplates.com/wellness/longevity/longevity-2/

19. Interviewed by Rebecca Strong, Are Biological Age Tests Accurate? Here's What Doctors Say, *AskMen*, May 9, 2024, online at: https://www.askmen.com/fitness/health/biological-age-tests.html

18. Interviewed by Paul Ian Cross, Phd, Carbon beads may help reduce liver disease, restore gut health, *Medical News Today*, April 23, 2024, online at: https://www.medicalnewstoday.com/articles/carbon-beads-may-help-reduce-liver-disease-restore-gut-health?utm_source=ReadNext

17. Interviewed by Maressa Brown, Want to live longer? Longevity experts share 5 habits to adopt., *yahoo!life*, April 12, 2024, online at: https://www.yahoo.com/lifestyle/want-live-longer-longevity-experts-120001311.html

16. Interviewed by Maressa Brown, Lessons on aging from the oldest people in the world: Eat your veggies, avoid toxic people, move your body and more, *yahoo!life*, March 22, 2024, online at: https://www.yahoo.com/lifestyle/lessons-on-aging-from-the-oldest-people-in-the-world-eat-your-veggies-avoid-toxic-people-move-your-body-and-more-201123414.html

15**.** Interviewed by Olivia Haslam, Thorne: Gut bacteria variability impacts drug efficacy, *NutraIngredients Europe*, March 28, 0224, online at: https://www.nutraingredients.com/Article/2024/03/28/Thorne-Gut-bacteria-variability-impacts-drug-efficacy#

14. Interviewed by Olivia Brown, Success in microbiome testing requires expert support and realistic expectations, *NutraIngredients Europe*, February 14, 2024, online at: https://www.nutraingredients.com/Article/2024/02/14/Success-in-microbiome-testing-requires-expert-support-and-realistic-expectations#

13. Interviewed by Kaitlin Reilly, Do I need to worry about using my phone while sitting on the toilet? Experts weigh in., *yahoo!life*, November 1, 2023, online at: https://www.yahoo.com/lifestyle/pooping-while-using-your-phone-130057909.html

12. Interviewed by Kimberly J Decker, Personalized health takes digestive wellness to a higher level, *Nutritional Outlook*, Volume 26, Issue 7, September 8, 2023, online at: https://www.nutritionaloutlook.com/view/personalized-health-takes-digestive-wellness-to-a-higher-level

11. Price, Nathan and Hood, Leroy, New Alzheimer's drugs are costly and controversial. Are we going about this all wrong?, ***LA Times***, June 11, 2023, online at: https://www.latimes.com/opinion/story/2023-06-11/alzheimers-drugs-lecanemab-healthcare-prevention-research

10. Price, Nathan, The AI Revolution in Personalized Health Care, with Nathan Price, Chief Scientific Officer, *Medium*, May 16, 2023, online at: https://medium.com/thornehealthtech/the-ai-revolution-in-personalized-health-care-with-nathan-price-chief-scientific-officer-4b3c3bc109b4

9. Price, Nathan, The AI Revolution in Personalized Health Care, with Nathan Price, Chief Scientific Officer, *Thorne Take 5 Daily Blog*, May 15, 2023, online at: https://www.thorne.com/take-5-daily/article/the-ai-revolution-in-personalized-health-care

8. Interviewed by Tess Brown, Could A.I. Replace Your Doctor?, *Katie Couric Media*, May 10, 2023, online at: https://katiecouric.com/health/artificial-intelligence-in-healthcare/

7. Interview by Longevity by Design Podcast, Dr. Leroy Hood + Dr. Nathan Price—How Assessing Biological Age Improves Wellness, *Inside Tracker Blog*, April 26, 2023, online at: https://blog.insidetracker.com/longevity-by-design-podcast-leroy-hood-nathan-price

6. Hood, L., and **Price, N.**, How "centaur AI"will radically reshape the future of healthcare, *Big Think*, April 27, 2023, online at: https://bigthink.com/health/how-centaur-ai-will-radically-reshape-the-future-of-healthcare/

5. Interviewed by Neil Versel, Modernized Algorithm Predicts Drug Targets for SARS-CoV-2, Other RNA Viruses, *Genomeweb*, April 7, 2023, online at: https://www.genomeweb.com/informatics/modernized-algorithm-predicts-drug-targets-sars-cov-2-other-rna-viruses#.ZGPTv3bMK3A

4. Hood, L., and **Price, N.,** The AI Will See You Now, ***The Wall Street Journal*****,** April 7, 2023, online at: https://www.wsj.com/articles/the-ai-will-see-you-now-5f8fba14

3. Interviewed by Lauryn Higgins, Your Gut Health and Mental Health Are Closely Linked – Here's How to Boost Them Both, *Real Simple*, March 30, 2023, online at: https://www.realsimple.com/gut-brain-axis-7255470

2. Price, Nathan, Evidence-based Wellness Emerges as an Industry, ***Scientific American****,* December 7, 2022

1. Price, Nathan, The Promise in a Preventative View of Alzheimer's, *Healthcare Business Today*, November 20, 2022, online at: https://www.healthcarebusinesstoday.com/the-promise-in-a-preventative-view-of-alzheimers/?amp=1

## PEER-REVIEWED PUBLICATIONS

**h-index = 80 (Google Scholar)**

Published

216. Bauer, B.A., Schmidt, C.M., Ruddy, K.J., Olson, J.E., Meydan, C., Schmidt, J.C., Smith, S.Y., Couch, F.J., Earls, J.C., **Price, N.D.**, Dudley, J.T., Mason, C.E., Zhang, B., Phipps, S.M., Schmidt, M.A., A Multiomics, Molecular Atlas of Breast Cancer Survivors, *Metabolites,* 14(7):396 (2024) PMID: 39057719

215. Paquette, A., Ahuna, K., Hwang, Y.M., Pearl, J., Liao, H., Shannon, P., Kadam, L., Lapehn, S., Bucher, M., Roper, R., Funk, C., MacDonald, J., Bammler, T., Baloni, P., Brockway, H., Mason, W.A., Bush, N., Lewinn, K.Z., Karr, C.J., Stamatoyannopoulos, J., Muglia, L.J., Jones, H., Sadovsky, Y., Myatt, L., Sathyanarayana, S., **Price, N.D.**, A genome scale transcriptional regulatory model of the human placenta, *Science Advances*, 10(26):eadf3411 (2024) PMID: 38941464

214. Hariharan, R., Hood, L., **Price, N.D**., A data-driven approach to improve wellness and reduce recurrence in cancer survivors, *Frontiers in Oncology*, 14:1397008 (2024) PMID: 38665952

213. Hwang, Y..M, Roper, R.T., Piekos, S.N., Enquobahrie, D.A., Hebert, M.F., Paquette, A.G., Baloni, P., **Price, N.D.**, Hood, L., Hadlock, J.J., Timing of selective serotonin reuptake inhibitor use and risk for preterm birth and related adverse events: with a consideration of the COVID-19 pandemic period, *Journal of Maternal Fetal Neonatal Medicine*, 37(1):2313364 (2024) PMID: 38342572

212. Bunyavanich, S., Becker, P.M., Altman, M.C., Lasky-Su, J., Ober, C., Zengler, K., Berdyshev, E., Bonneau, R., Chatila, T., Chatterjee, N., Chung, K.F., Cutcliffe, C., Davidson, W., Dong, G., Fang, G., Fulkerson, P., Himes, B.E., Liang, L., Mathias, R.A., Ogino, S., Petrosino, J., **Price, N.D.**, Schadt, E., Schofield, J., Seibold, M.A., Steen, H., Wheatley, L., Zhang, H., Togias, A., Hasegawa, K., Analytical Challenges in Omics Research on Asthma and Allergy: A National Institute of Allergy and Infectious Diseases Workshop. *Journal of Allergy Clinical Immunology*, 29:S0091-6749(24)00082-4 (2024) PMID: 38295882

211. Yurkovich, J.T., Evans, S.J., Rappaport, N., Boore, J.L., Lovejoy, J.C., **Price, N.D.**, Hood, L.E., The transition from genomics to phenomics in personalized population health, *Nature Reviews Genetics*, 25(4):286-302 (2024) PMID: 38093095

210. Barak, O., Lovelace, T., Piekos, S., Chu, T., Cao, Z., Sadovsky,. E, Mouillet, J.F., Ouyang, Y., Parks, W.T., Hood, L., **Price, N.D.**, Benos, P.V., Sadovsky, Y., Integrated unbiased multiomics defines disease-independent placental clusters in common obstetrical syndromes, *BMC Medicine*, 21(1):349 (2023) PMID: 37679695

209. Piekos, S.N., Hwang, Y.M., Roper, R.T., Sorensen, T., **Price, N.D.**, Hood, L., Hadlock, J.J., Effect of COVID-19 vaccination and booster on maternal-fetal outcomes: a retrospective multicenter cohort study, *The Lancet Digital Health*, 1:S2589-7500(23)00093-6. (2023) PMID: 37537121

208. Watanabe, K., Wilmanski, T., Baloni, P., Robinson, M., Garcia, G.G., Hoopmann, M.R., Midha, M.K., Baxter, D.H., Maes, M., Morrone, S.R., Crebs, K.M., Kapil, C., Kusebauch, U., Wiedrick, J., Lapidus, J., Pflieger, L., Lausted, C., Roach, J.C., Glusman, G., Cummings, S.R., Schork, N.J., **Price, N.D.**, Hood, L., Miller, R.A., Moritz, R.L., Rappaport, N.., Lifespan-extending interventions induce consistent patterns of fatty acid oxidation in mouse livers, *Communications Biology*, 22;6(1):768 (2023) PMID: 37481675

207. Wilmanski T, Gibbons SM, **Price ND.**, Healthy aging and the human gut microbiome: why we cannot just turn back the clock, *Nature Aging*, ;2(10):869-871 (2023) PMID: 37118282

206. Watanabe, K., Wilmanski, T., Diener, C., Earls, J.C., Zimmer, A., Lincoln, B., Hadlock, J.J. Lovejoy, J.C., Gibbons, S.M., Magis, A.T., Hood, L., **Price, N.D.**, and Rappaport, N., Multiomic signatures of body mass index identify heterogeneous health phenotypes and responses to a lifestyle intervention, *Nature Medicine*, online ahead of print (2023) PMID: 36941332

205. Hood, L., **Price, N.D.**, Evans, S.J., What 21st century medicine should be—history, vision, implementation, and opportunities, Can precision medicine be personal; Can personalized medicine be precise? 21–C3.P78 (2022) https://doi.org/10.1093/oso/9780198863465.003.0003

204. Piekos, S.N., **Price, N.D.**, Hood, L., Hadlock, J.J., The impact of maternal SARS-CoV-2 infection and COVID-19 vaccination on maternal-fetal outcomes, *Reproductive Toxicology*, 114:33-43 (2022) PMID: 36283657

203. Baloni, P., Arnold, M., Buitrago, L., Nho, K., Moreno, H., Huynh, K., Brauner, B., Louie, G., Kueider-Paisley, A., Suhre, K., Saykin, A.J., Ekroos, K., Meikle, P.J., Hood, L., **Price, N.D.**, Multi-Omic analyses characterize the ceramide/sphingomyelin pathway as a therapeutic target in Alzheimer's disease, *Communications Biology*, 5(1):1074 (2022) PMID: 36209301

202. Hua, H., Meydan, C., Afshin, E.E., Lili, L.N., D'Adamo, C.R., Rickard, N., Dudley, J.T., **Price, N.D.**, Zhang, B., Mason, C.E., A Wipe-Based Stool Collection and Preservation Kit for Microbiome Community Profiling, *Frontiers in Immunology*, 13:889702 (2022) PMID: 35711426

201. Wilmanski T, Kornilov SA, Diener C, Conomos MP, Lovejoy JC, Sebastiani P, Orwoll ES, Hood L, **Price N.D.**, Rappaport N, Magis AT, Gibbons SM., Heterogeneity in statin responses explained by variation in the human gut microbiome, *Med*, 3(6):388-405 (2022) PMID: 35690059

200. Molani, S., Hernandez, P.V., Roper, R.T., Duvvuri, V.R., Baumgartner, A.M., Goldman, J.D., Ertekin-Taner, N., Funk, C.C., **Price, N.D.**, Rappaport, N., Hadlock, J.J., Risk factors for severe COVID-19 differ by age for hospitalized adults, *Scientific Reports*, 12(1):6568 (2022) PMID: 35484176

199. Omenn, G.S., Magis, A.T., **Price, N.D.**, and Hood, L., Personal Dense Dynamic Data Clouds Connect Systems Biomedicine to Scientific Wellness, Systems Medicine. Methods in Molecular Biology, 2486:315-334 (2022) PMID: 35437729

198. Heath, L., Earls, J.C., Magis, A.T., Kornilov, S.A., Lovejoy, J.C., Funk, C.C., Rappaport, N., Logsdon, B.A., Mangravite, L.M., Kunkle, B.W., Martin, E.R., Naj, A.C., Ertekin-Taner, N., Golde, T.E., Hood, L., **Price, N.D.**, Manifestations of Alzheimer's disease genetic risk in the blood are evident in a multiomic analysis in healthy adults aged 18 to 90, *Scientific Reports*, 12(1):6117 (2022) PMID: 35413975

197. Su, Y., Yuan, D., Chen, D.G., Ng, R.H., Wang, K., Choi, J., Li, S., Hong, S., Zhang, R., Xie, J., Kornilov, S.A., Scherler, K., Pavlovitch-Bedzyk, A.J., Dong, S., Lausted, C., Lee, I., Fallen, S., Dai, C.L., Baloni, P., Smith, B., Duvvuri, V.R., Anderson, K.G., Li, J., Yang, F., Duncombe, C.J., McCulloch, D.J., Rostomily, C., Troisch, P., Zhou, J., Mackay, S., DeGottardi, Q., May, D.H., Taniguchi, R., Gittelman, R.M., Klinger, M., Snyder, T.M., Roper, R., Wojciechowska, G., Murray, K., Edmark, R., Evans, S., Jones, L., Zhou, Y., Rowen, L., Liu, R, Chour, W., Algren, H.A., Berrington, W.R., Wallick, J.A., Cochran, R.A., Micikas, M.E.; ISB-Swedish COVID-19 Biobanking Unit, Wrin, T., Petropoulos, C.J., Cole, H.R., Fischer, T.D., Wei, W., Hoon, D.S.B., **Price, N.D.**, Subramanian, N., Hill, J.A., Hadlock, J., Magis, A.T., Ribas, A., Lanier, L.L., Boyd, S.D., Bluestone, J.A., Chu, H., Hood, L., Gottardo, R., Greenberg, P.D., Davis, M.M., Goldman, J.D., Heath, J.R., Multiple early factors anticipate post-acute COVID-19 sequelae, *Cell*, 185(5):881-895.e20 (2022) PMID: 35216672

196. Gunn, S., Wainberg, M., Song, Z., Andersen, S., Boudreu, R. Feitosa, M.F., Tan, Q., Montasser, M., O'Connell, J., Stitziel, N., **Price, N.D.,** Perls, T., Schork, N.J., Sebastiani, P., Distribution of 54 polygenic risk scores for common diseases in long lived individuals and their offspring, *Geroscience*, (2):719-729 (2022) PMID: 35119614

195. Piekos, S.N., Roper, R.T., Hwang, Y.M., Sorensen, T., **Price, N.D.**, Hood, L., Hadlock, J.J., The effect of maternal SARS-CoV-2 infection timing on birth outcomes: a retrospective multicentre cohort study, *The Lancet Digital Health*, 4(2):e95-e104 (2022) PMID: 35034863

194. Wang, X., Allen, M., İş, Ö., Reddy, J.S., Tutor-New, F.Q., Castanedes Casey, M., Carrasquillo, M.M., Oatman, S.R., Min, Y., Asmann, Y.W., Funk, C., Nguyen, T., Ho, C.C., Malphrus, K.G., Seyfried, N.T., Levey, A.I., Younkin, S.G., Murray, M.E., Dickson, D.W., **Price, N.D.**, Golde, T.E., Ertekin-Taner, N., Alzheimer's disease and progressive supranuclear palsy share similar transcriptomic changes in distinct brain regions, *The Journal of Clinical Investigation*, 132:e149904 (2022) PMID: 34813500

193. Ojanen, X., Cheng, R., Törmäkangas, T., Rappaport, N., Wilmanski, T., Wu, N., Fung, E., Nedelec, R., Sebert, S., Vlachopoulos, D., Yan, W., **Price, N.D.**, Cheng, S., Wiklund, P., Towards early risk biomarkers: serum metabolic signature in childhood predicts cardio-metabolic risk in adulthood, *EBioMedicine*, 72:103611 (2021) PMID: 34628356

192. Diener C, Qin S, Zhou Y, Patwardhan S, Tang L, Lovejoy JC, Magis AT, **Price ND**, Hood L, Gibbons SM., Baseline Gut Metagenomic Functional Gene Signature Associated with Variable Weight Loss Responses following a Healthy Lifestyle Intervention in Humans, *mSytems*, 6(5):e0096421 (2021) PMID: 34519531

191. Lee, J.W., Su, Y., Baloni, P., Chen, D., Palovitch-Bedzyk, A.J., Duvvuri, V.R., Ng, R.H., Choi, J., Xie, J., Zhang, R., Murray, K., Kornilov, S., Smith, B., Magis, A.T., Hoon, D.S.B., Hadlock, J.J., Goldman, J.D., **Price, N.D.**, Gottardo, R., Davis, M.M., Hood, L., Greenberg, P.D, Heath, J.R., Integrated analysis of plasma and single immune cells uncovers metabolic changes in individuals with COVID-19, *Nature Biotechnology*, 40(1):110-120 (2022) PMID: 34489601

190. Paquette, A.G., MacDonald, J., Lapehn, S., Bammler, T., Kruger, L., Day, D.B., **Price, N.D.**, Loftus, C., Kannan, K., Marsit, C., Mason, W.A., Bush, N.R., LeWinn, K.Z., Enquobahrie, D.A., Prasad, B., Karr, C.J., Sathyanarayana, S., A Comprehensive Assessment of Associations between Prenatal Phthalate Exposure and The Placental Transcriptomic Landscape, *Environmental Health Perspectives*, 29(9):97003 (2021) PMID 34478338

189. Baloni, P., Funk, C.C., Readhead, B., **Price ND.**, Systems modeling of metabolic dysregulation in neurodegenerative diseases, *Current Opinion in Pharmacology*, 60:59-65 (2021) PMID 34352486

188. McEwen, S.C., Merrill, D.A., Bramen, J., Porter, V., Panos, S., Kaiser, S., Hodes, J., Ganapathi, A., Bell, L., Bookheimer, T., Glatt, R., Rapozo, M., Ross, M.K., **Price, N.D.**, Kelly, D., Funk, C.C., Hood, L., Roach, J.C., A systems-biology clinical trial of a personalized multimodal lifestyle intervention for early Alzheimer's disease, *Alzheimer's & Dementia*, 7(1):e12191 (2021) PMID: 34295960

187. Zimmer, A., Korem, Y., Rappaport, N., Wilmanski, T., Baloni, P., Jade, K., Robinson, M., Magis, A.T., Lovejoy, J., Gibbons, S.M., Hood, L., **Price, N.D.**, The geometry of clinical labs and wellness states from deeply phenotyped humans, *Nature Communications*, 12(1):3578 (2021) PMID: 34117230

186. Levites, Y., Funk, C., Wang, X., Chakrabarty, P., McFarland, K, Bramblett, B., O'Neal, V., Liu, X., Ladd, T., Robinson, M., Allen, M.A., Carrasquillo, M.M., Dickson, D.W., Cruz, P., Ryu, D. Li, H.D., **Price, N.D.**, Taner, N., Golde, T.E., Modulating Innate Immune Activation States Impacts the Efficacy of Specific Aβ Immunotherapy, *Molecular Neurodegeneration*, 16(1):32 (2021) PMID: 3395736

185. Wilmanski, T., Rappaport, N., Diener, C., Gibbons, S.M., **Price, N.D.**, From taxonomy to metabolic output: what factors define gut microbiome health?, *Gut Microbes*, 13(1):1-20 (2021) PMID: 33890557

184. Wilmanski, T., Diener, C., Rappaport, N., Patwardhan, S., Wiedrick, J., Lapidus, J., Earls, J.C., Zimmer, A., Glusman, G., Robinson, M., Yurkovich, J.T., Kado, D.M., Cauley, J.A., Zmuda, J., Lane, N.E., Magis, A.T., Lovejoy, J.C., Hood, L., Gibbons, S.M., Orwoll, E.S., **Price, N.D.**, Gut microbiome pattern reflects healthy aging and predicts survival in humans, *Nature Metabolism*, 3(2):274-286 (2021) PMID: 33619379

183. Li, H.D., Funk, C.C., McFarland, K., Dammer, E.B., Allen, M., Carrasquillo, M.M., Levties, Y., Chakrabarty, P., Burgess, J.D., Wand, X., Dickson, D., Seyfried, N.T., Duong, D.M., Lah, J.J., Younkin, S.G., Levey, A.I., Omenn, G.S., Ertekin-Taner, N., Golde, T.E., **Price, N.D.**, Integrative functional genomic analysis of intron retention in human and mouse brain with Alzheimer's disease, *Alzheimer's & Dementia*, [Online ahead of print] (2020) PMID: 33480174

182. Baloni, P., Funk, C.C., Yan, J., Yurkovich, J.T., Kueider-Paisley, A., Nho, K., Heinken, A., Jia, W., Mahmoudiandehkordi, S., Louie, G., Saykin, A.J., Arnold, M., Kastenmüller, G., Griffiths, W.J., Thiele, I.; Alzheimer's Disease Metabolomics Consortium, Kaddurah-Daouk, R., **Price, N.D.**, Metabolic Network Analysis Reveals Altered Bile Acid Synthesis and Metabolism in Alzheimer's Disease, *Cell Reports Medicine*, 1(8):100138 (2020) PMID: 33294859

181. Baloni, P., Dinalankara, W., Earls, J.C., Knijnenburg, T.A., Geman, D., Marchionni, L., **Price, N.D.**, Identifying Personalized Metabolic Signatures in Breast Cancer, *Metabolites*, 11(1):E20 (2020) PMID: 33396819

180. Su, Y., Chen, D., Yuan, D., Lausted, C., Choi, J., Dai, C.L., Voillet, V., Duvvuri, V.R., Scherler, K., Troisch, P., Baloni, P., Qin, G., Smith, B., Kornilov, S.A., Rostomily, C., Xu, A., Li, J., Dong, S., Rothchild, A., Zhou, J., Murray, K., Edmark, R., Hong, S., Heath, J.E., Earls, J., Zhang, R., Xie, J., Li, S., Roper, R., Jones, L., Zhou, Y., Rowen, L., Liu, R., Mackay, S., O'Mahony, D.S., Dale, C.R., Wallick, J.A., Algren, H.A., Zager, M.A.; ISB-Swedish COVID19 Biobanking Unit, Wei, W., **Price, N.D.**, Huang, S., Subramanian, N., Wang, K., Magis, A.T., Hadlock, J.J., Hood, L., Aderem, A., Bluestone, J.A., Lanier, L.L., Greenberg, P.D., Gottardo, R., Davis, M.M., Goldman, J.D., Heath, J.R., Multi-Omics Resolves a Sharp Disease-State Shift between Mild and Moderate COVID-19, *Cell*, 183(6):1479-1495 (2020) PMID: 33171100

179. Manor, O., Dai, C.L., Kornilov, S.A., Smith, B., **Price, N.D.**, Lovejoy, J.C., Gibbons, S.M., Magis, A.T., Health and disease markers correlate with gut microbiome composition across thousands of people, *Nature Communications*, 11(1):5206 (2020) PMID: 33060586

178. Magis, A.T., Rappaport, N., Conomos, M.P., Omenn, G.S., Lovejoy, J.C., Hood, L., **Price, N.D.**, Untargeted longitudinal analysis of a wellness cohort identifies markers of metastatic cancer years prior to diagnosis, *Scientific Reports*, 10(1):16275 (2020) PMID: 33004987

177. Wainberg, M., Magis, A.T., Earls, J.C., Lovejoy, J.C., Sinnott-Armstrong, N.A., Omenn, G.S., Hood, L., and **Price, N.D.**, Multiomic blood correlates of genetic risk identify presymptomatic disease alterations, *Proceedings of the National Academy of Sciences*, 117(35):21813-21820 (2020) PMID: 32817414

176. Funk, C.C., Casella, A.M., Jung, S., Richards, M.A., Rodriguez, A., Shannon, P., Donovan-Maiye, R., Heavner, B., Chard, K., Xiao, Y., Glusman, G., Ertekin-Taner, N., Golde, T.E., Toga, A., Hood, L., Van Horn, J.D., Kesselman, C., Foster, I., Madduri, R., **Price, N.D.**, Ament, S.A., Atlas of Transcription Factor

Binding Sites from ENCODE DNase Hypersensitivity Data across 27 Tissue Types, *Cell Reports*, 32(7):108029 (2020) PMID 32814038

175. Wan, Y.W., Al-Ouran, R., Mangleburg, C.G., Perumal, T.M., Lee, T.V., Allison, K., Swarup, V., Funk, C.C., Gaiteri, C., Allen, M., Wang, M., Neuner, S.M., Kaczorowski, C.C., Philip, V.M., Howell, G.R., Martini-Stoica, H., Zheng, H., Mei, H., Zhong, X., Kim, J.W., Dawson, V.L., Dawson, T.M., Pao, P.C., Tsai, L.H., Haure-Mirande, J.V., Ehrlich, M.E., Chakrabarty, P., Levites, Y., Wang, X., Dammer, E.B., Srivastava, G., Mukherjee, S., Sieberts, S.K., Omberg, L., Dang, K.D., Eddy, J.A., Snyder, P., Chae, Y., Amberkar, S., Wei, W., Hide, W., Preuss, C., Ergun, A., Ebert, P.J., Airey, D.C., Mostafavi, S., Yu, L., Klein, H.U., Accelerating Medicines Partnership-Alzheimer's Disease Consortium, Carter, G.W., Collier, D.A., Golde, T.E., Levey, A.I., Bennett, D.A., Estrada, K., Townsend, T.M., Zhang, B., Schadt, E., De Jager, P.L., **Price, N.D.**, Ertekin-Taner, N., Liu, Z., Shulman, J.M., Mangravite, L.M., Logsdon, B.A., Meta-Analysis of the Alzheimer's Disease Human Brain Transcriptome and Functional Dissection in Mouse Models, *Cell Reports*, 32(2):107908 (2020) PMID: 32668255

174. Sadovsky, Y., Mesiano, S., Burton, G.J., Lampl, M., Murray, J.C., Freathy, R.M., Mahadevan-Jansen, A., Moffett, A., **Price, N.D.**, Wise, P.H., Wildman, D.E., Snyderman, R., Paneth, N., Capra, J.A., Nobrega, M.A., Barak, Y., Muglia, L.J.; Burroughs Wellcome Fund Pregnancy Think-Tank Working Group, Advancing Human Health in the Decade Ahead: Pregnancy as a Key Window for Discovery A Burroughs Wellcome Fund Pregnancy Think-Tank, *American Journal of Obstetrics and Gynecology*, S0002-9378(20)30637-2 (2020) PMID: 32565236

173. Madin, J.S., Nielsen, D.A., Brbic, M., Corkrey, R., Danko, D., Edwards, K., Engqvist, M.K.M., Fierer, N., Geoghegan, J.L., Gillings, M., Kyrpides, N.C., Litchman, E., Mason, C.E., Moore, L., Nielsen, S.L., Paulsen, I.T., **Price, N.D.**, Reddy, T.B.K., Richards, M.A., Rocha, E.P.C., Schmidt, T.M., Shaaban, H., Shukla, M., Supek, F., Tetu, S.G., Vieira-Silva, S., Wattam, A.R., Westfall, D.A., Westoby, M., A synthesis of bacterial and archaeal phenotypic trait data. *Scientific Data*, 7(1):170 (2020) PMID: 32503990

172. Levy, R., Magis, A.T., Earls, J.C., Manor, O., Wilmanski, T., Lovejoy, J., Gibbons, S.M., Omenn, G.S., Hood, L., **Price, N.D.**., Longitudinal Analysis Reveals Transition Barriers Between Dominant Ecological States in the Gut Microbiome, *Proceedings of the National Academy of Sciences*, 117(24):13839-13845 (2020) PMID: 32471946

171. Gillespie, M.A., Palii, C.G., Sanchez-Taltavull, D., Shannon, P., Longabaugh, W.J.R., Downes, D.J., Sivaraman, K., Espinoza, H.M., Hughes, J.R., **Price, N.D.**, Perkins, T.J., Ranish, J.A., Brand, M., Absolute Quantification of Transcription Factors Reveals Principles of Gene Regulation in Erythropoiesis, *Molecular Cell*, S1097-2765(20)30199-4 (2020) PMID: 32330456

170. Lieven, C., Beber, M.E., Olivier, B.G., Bergmann, F.T., Ataman, M., Babaei, P., Bartell, J.A., Blank, L.M., Chauhan, S., Correia, K., Diener, C., Dräger, A., Ebert, B.E., Edirisinghe, J.N., Faria, J.P., Feist, A.M., Fengos, G., Fleming, R.M.T., García-Jiménez, B., Hatzimanikatis, V., van Helvoirt, W., Henry, C.S., Hermjakob, H., Herrgård, M.J., Kaafarani, A., Kim, H.U., King, Z., Klamt, S., Klipp, E., Koehorst, J.J., König, M., Lakshmanan, M., Lee, D.Y., Lee, S.Y., Lee, S., Lewis, N.E., Liu, F., Ma, H., Machado, D., Mahadevan, R., Maia, P., Mardinoglu, A., Medlock, G.L., Monk, J.M., Nielsen, J., Nielsen, L.K., Nogales, J., Nookaew, I., Palsson, B.O., Papin, J.A., Patil, K.R., Poolman, M., **Price, N.D.**, Resendis-Antonio, O., Richelle, A., Rocha, I., Sánchez, B.J., Schaap, P.J., Malik Sheriff, R.S., Shoaie, S., Sonnenschein, N., Teusink, B., Vilaça, P., Vik, J.O., Wodke, J.A.H., Xavier, J.C., Yuan, Q., Zakhartsev, M., Zhang, C., MEMOTE for standardized genome-scale metabolic model testing, *Nature Biotechnology*, 38(3):272-276 (2020) PMID 32123384

169. Li, H.D., Funk, C.C., Price, N.D., iREAD: a tool for intron retention detection from RNA-seq data, *BMC Genomics*, 21(1):128 (2020) PMID 32028886

168. Paquette, A.G., Hood, L., **Price, N.D.**, Sadovsky, Y., Deep phenotyping during pregnancy for predictive and preventive medicine, *Science Translational Medicine*, 12(527). pii: eaay1059 (2020) PMID: 31969484

167. Kim, T.K., Lee, I., Cho, J.H., Canine, B., Keller, A., **Price, N.D.**, Hwang, D., Carlson, G., Hood, L., Core transcriptional regulatory circuits in prion diseases, *Molecular Brain*, 13:10 (2020) PMID: 31959236

166. Earls, J.C., Rappaport, N., Heath, L., Wilmanski, T., Magis, A.T., Schork, N.J., Omenn, G.S., Lovejoy, J., Hood, L., **Price, N.D.**, Multi-Omic Biological Age Estimation and Its Correlation With Wellness and Disease Phenotypes: A Longitudinal Study of 3,558 Individuals, *The Journals of Gerontology, Series A*, 74(Supplement_1):S52-S60 (2019) PMID: 31724055

165. Yurkovich, J.T, Tian, Q., **Price, N.D.**, and Hood, L., A systems approach to clinical oncology uses deep phenotyping to deliver personalized care, N*ature Reviews in Clinical Oncology,* 17(3):183-194 (2019) PMID: 31619755

164. Zhou, Y., Qin, S., Sun, M., Tang, L., Yan, X., Kim, T.K., Caballero, J., Glusman, G., Brunkow, M.E., Soloski, M.J., Rebman, A.W., Scavarda, C., Cooper, D., Omenn, G.S., Moritz, R.L., Wormser, G.P., **Price, N.D.**, Aucott, J.N., Hood, L., Measurement of Organ-Specific and Acute-Phase Blood Protein Levels in Early Lyme Disease, *Journal of Proteome Research*, 19(1):346-359 (2019) PMID: 31618575

163. Dean, K.R., Hammamieh, R., Mellon, S.H., Abu-Amara. D., Flory, J.D., Guffanti, G., Wang, K., Daigle, B.J. Jr., Gautam, A., Lee, I., Yang, R., Almli, L.M., Bersani, F.S., Chakraborty, N., Donohue, D., Kerley, K., Kim, T.K., Laska, E., Young Lee, M., Lindqvist, D., Lori, A., Lu, L., Misganaw, B., Muhie, S., Newman, J., **Price, N.D.**, Qin, S., Reus, V.I., Siegel, C., Somvanshi, P.R., Thakur, G.S., Zhou, Y.; PTSD Systems Biology Consortium, Hood, L., Ressler, K.J., Wolkowitz, O.M., Yehuda, R., Jett, M., Doyle, F.J. 3rd, Marmar, C., Multi-omic biomarker identification and validation for diagnosing warzone-related post-traumatic stress disorder, *Molecular Psychiatry*, [Epub ahead of print] (2019) PMID: 31501510

162. Wilmanski, T., Rappaport, N., Earls, J.C., Magis, A.T., Manor, O., Lovejoy, J., Omenn, G.S., Hood, L., Gibbons, S., and **Price, N.D.**, Blood metabolome signature predicts gut microbiome alpha-diversity in health and disease, *Nature Biotechnology,* 37(10):1217-1228 (2019) PMID: 31477923

161. Paquette, A.G., Shynlova, O., Wu, X., Kibschull, M., Wang, K., **Price, N.D.**, Lye, S.J., MicroRNA-transcriptome networks in whole blood and monocytes of women undergoing preterm labour, *Journal of Cellular and Molecular Medicine*, 23(10):6835-6845 (2019) PMID: 31342622

160. Baloni, P., Sangar, V., Yurkovich, J.T., Robinson, M., Taylor, S. Karbowski, C.M., Hamadeh, H.K., He, Y.D., **Price, N.D.**, Genome-scale metabolic model of the rat liver predicts effects of diet restriction, *Scientific Reports*, 9(1):9807 (2019) PMID: 31285465

159. Zubair, N., Conomos, M.P., Hood, L., Omenn, G.S., Price, N.D., Spring, B.J., Magis, A.T., Lovejoy, J.C., Genetic Predisposition Impacts Clinical Changes in a Lifestyle Coaching Program, *Scientific Reports*, 9(1):6805 (2019) PMID: 31048771

158. Palii, C.G., Cheng, Q., Gillespie, M.A., Shannon, P., Mazurczyk, M., Napolitani, G., **Price, N.D.**, Ranish. J.A., Morrissey, E., Higgs, D.R., Brand, M., Single-Cell Proteomics Reveal that Quantitative Changes in Co-expressed Lineage-Specific Transcription Factors Determine Cell Fate, *Cell Stem Cell*, 24(5): 812-820 (2019) PMID: 30880026

157. Shen, F., Sun, R., Yao, J., Li, J., Liu, Q., **Price, N.D.**, Liu, C., Wang, Z., OptRAM: In-silico strain design via integrative regulatory-metabolic network modeling, *PLoS Comput Biol*, 15(3):e1006835 (2019) PMID: 30849073

156. Pearl, J.R., Colantuoni, C., Bergey, D.E., Funk, C.C., Shannon, P., Basu, B., Casella, A.M., Oshone, R.T., Hood, L., **Price, N.D.**, and Ament, S.A., Genome-Scale Transcriptional Regulatory Network Models of Psychiatric and Neurodegenerative Disorders, *Cell Systems*, 8(2):122-125 (2019) PMID: 30772379

155. Sorrentino, Z.A., Xia, Y., Funk, C., Riffe, C.J., Rutherford, N.J., Ceballos Diaz, C., Sacino, A.N., **Price, N.D.**, Golde, T.E., Giasson, B.I., Chakrabarty, P., Motor neuron loss and neuroinflammation in a model of α-synuclein-induced neurodegeneration, *Neurobiology of Disease*, 120:98-106 (2018) PMID: 30195075

154. Paquette, A.G., Chu, T., Wu, X., Wang, K., **Price, N.D.**, Sadovsky, Y., Distinct communication patterns of trophoblastic miRNA among the maternal-placental-fetal compartments, *Placenta*, 72-73:28-35 (2018) PMID:30501878

153. Allen, M., Wang X, Serie, D.J., Strickland, S.L., Burges,s J.D., Koga, S., Younkin, C.S., Nguyen, T.T., Malphrus, K.G., Lincoln, S.J., Alamprese, M., Zhu, K., Chan,g R., Carrasquillo, M.M., Kouri, N., Murray, M.E., Reddy, J.S., Funk, C., **Price, N.D.**, Golde, T.E., Younkin, S.G., Asmann, Y.W., Crook, J.E., Dickson, D.W., Ertekin-Taner, N., Divergent brain gene expression patterns associate with distinct cell-specific tau neuropathology traits in progressive supranuclear palsy, *Acta Neuropathologica*, 136:709-727 (2018) PMID: 30136084

152. Chakrabarty, P., Li, A., Ladd, T., Cruz, P.E., Koller, E.J., Strickland, M.R., Burgess, J., Funk, C.C., Li, H., Younkin, M.A., Moore, B., Liu, X., Ceballos-Diaz, C., Rosario, A.M., Janus, C., **Price, N.D.**, Younkin, S.G., Ertekin-Taner, N., Golde, T.E., TLR5 decoy receptor as a novel anti-amyloid therapeutic for Alzheimer's disease, *J Exp Med*, 215:2247-2264 (2018) PMID: 30158114

151. Magis, A.T., Earls, J.C., Glusman, G., Omenn, G.S., Lovejoy, J.C., Price, N.D., Hood, L., Reply to "Precision medicine in the clouds", *Nature Biotechnology*, 36(8):680-682 (2018) PMID: 30080845

150. Readhead, B., Haure-Mirande, J.V., Funk, C.C., Richards, M.A., Shannon, P., Haroutunian, V., Sano, M., Liang, W.S., Beckmann, N.D., **Price, N.D.**, Reiman, E.M., Schadt, E.E., Ehrlich, M.E., Gandy, S., and Dudley, J.T., Multiscale analysis of three independent Alzheimer's cohorts finds disruption of molecular, genetic, and clinical networks by Human herpesvirus, *Neuron*, 99(1):64-82. e7 (2018) PMID: 29937276

149. Paquette, A., **Price, N.D**., Lye, S.J., Reply, *American Journal of Obstetrics & Gynecology*, 219(1):123-124 (2018) PMID: 29604285

148. Paquette, A., Baloni, P., Holloman, A., Nigam, S., Bammler, T., Mao, Q., **Price, N.D.**, Temporal Transcriptomic Analysis of Metabolic Genes in Maternal Organs and Placenta During Murine Pregnancy, *Biology of Reproduction*,99(6):1255-1265 (2018) PMID: 29939228

147. **Price, N.D.**, Segal, E., Editorial overview: Systems biology: Data, discovery, delivery, *Current Opinion in Biotechnology*, 51:vii-viii (2018) PMID: 29891032

146. Kearney, P., Boniface, J.J., **Price, N.D.**, and Hood, L., The building blocks of successful translation of proteomics to the clinic, *Current Opinion in Biotechnology*, 51:123-129 (2018) PMID: 29427919

145. Mikheev, A.M., Mikheeva, S.A., Severs L.J., Funk, C., Schwensen, J., Huang, L., **Price, N.D.**, McFaline, J.L., Trapnell, C., Wong, S., and Rostomily, R.C., Targeting TWIST1 through loss of function inhibits tumorigenicity of human glioblastoma, *Molecular Oncology*, 12(7):1188-1202 (2018) PMID: 29754406

144. King, B., Farrah, T., Richards, M.A., Mundy, M., Simeonidis, E., **Price, N.D.**, ProbAnnoWeb and ProbAnnoPy: probabilistic annotation and gap-filling of metabolic reconstructions, *Bioinformatics*, 34(9):1594-1596 (2018) PMID: 29267848

143. Dinalankara, W., Ke, Q., Xu, Y., Ji, L., Pagane, N., Lien, A., Matam, T., Fertig, E.J., **Price, N.D.**, Younes, L., Marchionni, L., Geman, D., Digitizing omics profiles by divergence from a baseline, *Proceedings of the National Academy of Sciences*, 115(18):4545-4552 (2018) PMID: 29666255

142. Trachana, K., Bargaje, R., Glusman, G., **Price, N.D.**, Huang, S., Hood, L.E., Taking Systems Medicine to Heart, *Circulation Research*, 122(9):1276-1289 (2018) PMID: 29700072

141. Ament, S.A., Pearl, J.R., Cantle, J.P., Bragg, R.M., Skene, P.J., Coffey, S.R., Bergey, D.E., Wheeler, V.C., MacDonald, M.E., Baliga, N.S., Rosinski, J., Hood, L.E., Carroll, J.B., **Price, N.D**., Transcriptional regulatory networks underlying gene expression changes in Huntington's disease, *Molecular Systems Biology*, 14(3):e7435 (2018) PMID: 29581148

140. Allen, M.[*], Burgess, J.[*], Wang, X.[*], Serie, D., Chai, H-S, Younkin, C.S., Nguyen, T., Malphrus, K.G., Lincoln, S., Golde, T.E., **Price, N.D.**, Petersen, R.C., Graff-Radford, N.R., Younkin, S.G., Dickson, D.W., Crook, J.R., Asmann, Y.W., and Ertekin-Taner, N., Conserved brain myelination networks are altered in human neurodegenerative diseases, *Alzheimer's and Dementia*, 14(3):352-366 (2018) PMID: 29107053

139. Paquette, A.G., Shynlova, O., Kibschull, M., **Price, N.D.**, Lye, S.J., Comparative analysis of gene expression in maternal peripheral blood and monocytes during spontaneous preterm labor, *American Journal of Obstetrics & Gynecology*, 218(3):345.e1-345.e30 (2018) PMID: 29305255

138. Chung, J., Zhang, X., Allen, M., Wang, X., Ma, Y., Beecham, G., Montine, T.J., Younkin, S.G., Dickson, D.W., Golde, T.E., **Price, N.D.,** Ertekin-Taner, N., Lunetta, K.L., Mez, J., Alzheimer's Disease Genetics Consortium, Mayeux, R., Haines, J.L., Pericak-Vance, M.A., Schellenberg, G., Jun, G.R., Farrer, L.A., Genome-wide Pleiotropy Analysis of Neuropathological Traits Related to Alzheimer's Disease, *Alzheimer's Research & Therapy*, 10(1):22 (2018) PMID: 29458411

137. Ridge, P.G., Karch, C.M., Hsu, S., Arano, I., Teerlink, C.C., Ebbert, M.T.W., Murcia, J.D.G., Farnham, J.M., Damato, A.R., Allen, M., Wang, X., Harari, O., Fernandez, V.M., Guerreiro, R., Bras, J., Hardy, J., Munger, R., Norton, M., Sassi, C., Singleton, A., Younkin, S.G., Dickson, D.W., Golde, T.E., **Price, N.D.**, Ertekin-Taner, N., Cruchaga, C., Goate, A.M., Corcoran, C., Tschanz, J., Cannon-Albright, L.A., Kauwe, J.S.K., Correction to: Linkage, whole genome sequence, and biological data implicate variants in RAB10 in Alzheimer's disease resilience, *Genome Medicine*, 10(1):4 (2018) PMID: 29329552

136. Paquette, A.G., Brockway, H.M., **Price, N.D.**, Muglia, L.J., Comparative transcriptomic analysis of human placentae at term and preterm delivery, *Biology of Reproduction*, 98(1):89-101 (2018) PMID: 29228154

135. Ridge, P.G., Karch, C.M., Hsu, S., Arano, I., Teerlink, C.C., Ebbert, M.T.W., Gonzalez, J., Farnham, J.M., Allen, M., Wang, X., Harari, O., Fernandez, V.M., Guerreiro, R., Hardy, J., Munger, R., Norton, M., Sassi, C., Singleton, A., Younkin, S.G., Dickson, D.W., Golde, T.E., **Price, N.D.**, Ertekin-Taner, N., Cruchaga, C., Goate, A.M., Corcoran, C., Tschanz, J., Cannon-Albright, L.A., Kauwe, J., Linkage, whole genome sequence, and biological data implicate variants in RAB10 in Alzheimer's disease resilience, *Genome Medicine*, 10(1):4 (2018) PMID:29183403

134. Alfano, C.M, Zucker, D.S., Pergolotti, M., Ness, K.K., Jones, L.W., **Price, N.D.**, Schmitz, K.H., and Ligibel, J.A., A Precision Medicine Approach to Improve Cancer Rehabilitation's Impact and Integration with Cancer Care and Optimize Patient Wellness, *Curr Phys Med Rehabil Rep*, 5: 64 (2017)

133. Pearl, J., Heath, L., Bergey, D.E., Kelly, J.P., Smith, C., Laurino, M., Weiss, A., **Price, N.D.**, LaSpada, A., Bird, T.D., Jayadev, S., Enhanced retinal responses in Huntington's disease patients, *Journal of Huntington's Disease*, 6(3):237-247 (2017) PMID: 28968243

132. Samal, A., Craig, J.P., Coradetti, S.T., Benz, J.P., Eddy, J.A., **Price, N.D.**, Glass, N.L., Network reconstruction and systems analysis of plant cell wall deconstruction by *Neurospora crassa*, *Biotechnology Biofuels*, 10:225 (2017) PMID: 28947916

131. Seo, S.O., Jenssen, H., Magis, A., Wang, Y., Lu, T., **Price, N.D.**, Jin, Y.S., and Blaschek, H.P. Genomic, transcriptional and phenotypic analysis of the glucose derepressed *Clostridium beijerinckii* mutant exhibiting acid crash phenotype, *Biotechnology Journal*, 12(11) (2017) PMID: 28762642

130. Sims, R., … **Price, N.D.**, …, *et al*., Rare coding variants in PLCG2, ABI3 and TREM2 implicate microglial-mediated innate immunity in Alzheimer's disease, *Nature Genetics*, 49(9):1373-1384 (2017) PMID: 28714976

129. **Price, N.D.***, Magis, A.T., Earls, J.C., Glusman, G., Levy, R., Lausted, C., McDonald, D.T., Kusebauch, U., Moss, C.L., Zhou, Y., Qin, S., Moritz, R.L., Brogaard, K., Omenn, G.S., Lovejoy, L.C., and Hood, L.*, A wellness study of 108 individuals using personal, dense, dynamic data clouds, *Nature Biotechnology*, 35(8):747-756 (2017). *Co-corresponding authors. PMID: 28714965

128. Marshall-Colon, A., Long, S.P., Allen, D.K, Allen, G., Beard, D.A., Benes, B., Christensen, A.J., Cox, D.J., Hart, J.C., Hirst, P.M., Kannan, K., Katz, D.S., Lynch, J.P., Millar, A.J., Panneerselvam, B., **Price, N.D.**, Raila, D., Shekar, R.G., Shrivastava, S., Shukla, D., Srinivasan, V., Stitt, M., Voit, E.O., Wang, Y., Yin, X., Zhu, Xin-Guang, Crops *in silico*: generating virtual crops using an integrative and multi-scale modeling platform, *Frontiers in Plant Science*, 8:786 (2017) PMID: 28555150

127. Wang, Z., Danziger, S.A., Heavner, B.D., Ma, S., Smith, J.J., Li, S., Herricks, T., Simeonidis, E., Baliga, N.S., Aitchison, J.D., **Price, N.D.**, Combining inferred regulatory and reconstructed metabolic networks enhances phenotype prediction in yeast, *PLOS Computational Biology*, 13(5):e1005489 (2017) PMID: 28520713

126. Coffey, S.R., Bragg, R.M., Minnig, S., Ament, S.A., Cantle, J.P., Glickenhaus, A., Shelnut, D., Carrillo, J.M., Shuttleworth, D.D., Rodier, J.A., Noguchi, K., Bennett, C.F., **Price, N.D.**, Kordasiewicz,

H.B., Carroll, J.B., Peripheral huntingtin silencing does not ameliorate central signs of disease in the B6.HttQ111/+ mouse model of Huntington's disease, *PLoS One*, 12(4):e0145968 (2017) PMID: 28453524

125. Ghosh, D., Funk, C.C., Caballero, J., Shah, N., Rouleau, K., Earls, J.C., Soroceanu, L., Foltz, G., Cobbs, C.S., **Price, N.D.**, Hood, L., A cell-surface membrane protein signature for glioblastoma, *Cell Systems*, 4(5):516-529 (2017) PMID: 28365151

124. Ament, S.A., Pearl, J.R., Grindeland, A., St Claire, J., Earls, J.C., Kovalenko, M., Gillis, T., Mysore, J., Gusella, J.F., Lee, J.M., Kwak, S., Howland, D., Lee, M.Y., Baxter, D., Scherler, K., Wang, K., Geman, D., Carroll, J.B., MacDonald, M.E., Carlson, G., Wheeler, V.C., **Price, N.D.**, Hood, L.E., High resolution time-course mapping of early transcriptomic, molecular and cellular phenotypes in Huntington's disease CAG knock-in mice across multiple genetic backgrounds, *Human Molecular Genetics*, 26(5):913-922 (2017) PMID: 28334820

123. Pollak, J., Rai, K.G., Funk, C.C., Arora, S., Lee, E., Zhu, J., **Price, N.D.**, Paddison, P.J., Ramirez, J.M., Rostomily, R.C., Ion channel expression patterns in glioblastoma stem cells with functional and therapeutic implications for malignancy, *PLoS One*, 12(3): e0172884 (2017) PMID: 28264064

122. Bragg, R.M., Coffey, S.R., Weston, R.M., Ament, S.A., Cantle, J.P., Minnig, S., Funk, C.C., Shuttleworth, D., Woods, E., Sullivan, B., Jones, L., Glickenhaus, A., Anderson, J., Anderson, M., Dunnett, S.B., Wheeler, V.C., MacDonald, M.E., Brooks, S.P., **Price, N.D.**, and Carroll, J.B., Motivational, proteostatic and transcriptional deficits precede synapse loss, gliosis and neurodegeneration in the B6.HttQ111/+ model of Huntington's disease, *Scientific Reports*, 7:41570 (2017) PMID: 28176805

121. Carrasquillo, M.M., Allen, M., Burgess, J., Wang, X., Strickland, S.L., Aryal, S., Siuda, J., Kachadoorian, M.L., Medway, C., Younkin, C.S., Nair, A., Wang, C., Chanana, P., Serie, D., Nguyen, T., Lincoln, S., Malphrus, K.G., Morgan, K., Golde, T.E., **Price, N.D.**, White, C.C., De Jager, P.L,Bennett, D.A., Asmann, Y.W., Crook, J.E., Petersen, R.C., Graff-Radford, N.R., Dickson, D.W., Younkin, S.G., Ertekin-Taner, N., A candidate regulatory variant at the TREM gene cluster associates with decreased Alzheimer's disease risk and increased TREML1 and TREM2 brain gene expression, *Alzheimer's & Dementia*, 13(6):663-673 (2017) PMID: 27939925

120. Richards, M.A., Lie, T.J., Zhang, J., Ragsdale, S.W., Leigh, J.A., **Price, N.D**., Exploring Hydrogenotrophic Methanogenesis: a Genome Scale Metabolic Reconstruction of Methanococcus maripaludis, *Journal of Bacteriology*, 198(24):3379-3390 (2016) PMID: 27736793

119. Allen, M[*], Carrasquillo, M.M.[*], Funk, C.C., Heavner, B.D., Zou F., Younkin, C.S., Burgess J.D., Chai, H.S., Crook, J., Eddy, J.A., Li, H., Logsdon, B., Wang, X., Serie, D., Wang, C., Nguyen, T., Lincoln S., Malphrus, K., Bisceglio, G., Li, M., Golde, T.E., Mangravite, L., Asmann, Y., **Price, N.D.,** Petersen, R.C., Graff-Radford, N.R., Dickson, D.W., Younkin, S.G., Ertekin-Taner, N., Human whole genome genotype and transcriptome data for Alzheimer's and other neurodegenerative diseases, *Scientific Data*, 3:160089 (2016) PMID: 27727239

118. Sagner, M., McNeil, A., Puska, P., Auffray, C., **Price, N.D.**, Hood, L., Lavie, C.J., Han, Z., Chen, Z., Brahmachari, S.K., McEwen, B.S., Soares, M.B., Balling, R., Epel, E., and Arena, R. The P4 Health Spectrum – A Predictive, Preventive, Personalized and Participatory Continuum for Promoting Healthspan, *Progress in Cardiovascular Diseases*, 59(5):506-521 (2017) PMID: 27546358

117. Dinov, I.D., Heavner, B., Tang, M., Glusman, G., Chard, K., Darcy, M., Madduri, R., Pa, J., Spino, C., Kesselman, C., Foster, I., Deutsch, E.W., Price, N.D., Van Horn, J.D., Ames, J., Clark, K., Hood, L., Hampstead, B.M., Dauer, W., Toga, A.W., Predictive big data analytics: A study of Parkinson's disease using large, complex, heterogeneous, incongruent, multi-source, and incomplete observations, *PLOS ONE* 11(8):e0157077 (2016) PMID: 27494614

116. Allen, M., Burgess, J.D., Ballard, T., Serie, D., Wang, X., Younkin, C.S., Sun, Z., Kouri, N., Baheti, S., Wang, C., Carrasquillo, M.M., Nguyen, T., Lincoln, S., Malphrus, K., Murray, M., Golde, T., **Price, N.D.**, Younkin, S.G., Schellenberg, G.D., Asmann, Y., Ordog, T., Crook, J., Dickson, D., Ertekin-Taner, N., Gene expression, methylation and neuropathology correlations at progressive supranuclear palsy risk loci, *Acta Neuropathologica*, 132(2):197-211(2016) PMID: 27115769

115. Zhou, J.X.[*], Samal, A.[*], Fouquier d'Hérouël, A., **Price, N.D.**, Sui Huang, Relative stability of network states in Boolean network models of gene regulation in development, *Biosystems* 142-143:15-24 (2016) PMID: 26965665

114. McDonald, D.T., Glusman, G., and **Price, N.D.**, Personalized nutrition through big data, *Nature Biotechnology*, 34(2):152-4 (2016). PMID: 26849520

113. Garcia de Lomana, A.L., Schäuble, S., Valenzuela, J., Imam, S., Carter, W., Bilgin, D.D., Yohn, C.B., Turkarslan, S., Reiss, D., Orellana, M.V., **Price, N.D.**, and Baliga, N.S., Transcriptional program for nitrogen starvation-induced lipid accumulation in *Chlamydomonas reinhardtii*, *BMC Biotechnology for Biofuels,* 8:207 (2015) PMID: 26633994

112. Ma, S., Minch, K.J., Rustad, T.R., Hobbs, S., Zhou, S.L., Sherman, D.R., and **Price, N.D.**, Integrated modeling of gene regulatory and metabolic networks in *Mycobacterium tuberculosis*, *PLOS Computational Biology*, 11(11):e1004543 (2015) PMID: 26618656

111. Pestal, K., Funk, C.C., Snyder, J.M., **Price, N.D.**, Treuting, P.M., Stetson, D., Isoforms of RNA-Editing Enzyme ADAR1 independently control nucleic acid sensor MDA5-driven autoimmunity and multi-organ development, *Immunity*, 43(5):933-44 (2015) PMID: 26588779

110. Heavner, B.D., and **Price, N.D.**, Comparative analysis of yeast metabolic network models highlights progress, opportunities for metabolic reconstruction, *PLOS Computational Biology*, 11(11):e1004530 (2015) PMID: 26566239

109. Imam, S., Schäuble, S., Valenzuela, J., García de Lomana, A.L., Carter, W., **Price, N.D.**, and Baliga, N.S., A refined genome-scale reconstruction of Chlamydomonas metabolism provides a platform for systems-level analyses, *The Plant Journal*, 84(6): 1239-56 (2015) PMID: 26485611

108. Almaas, E., Bauer, E., Bordbar, A., Burgard, A.P., Chang, R.L., Dräger, A., Ebrahim, A., Famili, I., Feist, A.M., Fleming, R.M.T., Fong, S.S., Hatzimanikatis, V., Herrgård, M.J., Holder, A., Hyduke, D., Jamshidi, N., Lee, S.Y., Lerman, J.A., Lewis, N.E., Ma, D., Mahadevan, R., Maranas, C., Nagarajan, H., Navid, A., Nielsen, J., Nielsen, L.K., Nogales, J., Noronha, A., Pal, C., Palsson, B. Ø, Papin, J.A., Patil, K.R., **Price, N.D.**, Reed, J.L., Saunders, M., Senger, R.S., Sonnenschein, N., Sun, Y., and Thiele, I. (author order alphabetical), Do Genome-scale Models Need Exact Solvers or Clearer Standards?, *Molecular Systems Biology*, 11(10):831 (2015) PMID: 26467284

107. Tian, Q., Sangar, V., and **Price, N.D.**, Emerging proteomic technologies provide enormous and underutilized potential for brain cancer research, *Molecular & Cellular Proteomics*, 15(2): 362-7 (2016) PMID: 26407994

106. Magis, A.T., Funk, C.C., and **Price, N.D.**, SNAPR: a bioinformatics pipeline for efficient and accurate RNA-seq alignment and analysis, *IEEE Life Science Letters*, 1(2):22-35 (2015) PMID: 29270443

105. Toga, A.W., Foster, I., Kesselman, C., Madduri, R., Chard, K., Deutsch, E.W., **Price, N.D.**, Glusman, G., Heavner, B.D., Dinov, I.D., Ames, J., Van Horn, J., Kramer, R., and Hood, L., Big biomedical data as the key resource for discovery science, *Journal of the American Medical Informatics Association* (JAMIA), 22(6):1126-31 (2015) PMID: 26198305

104. Hood, L., Brogaard, K., and **Price, N.D.**, A Vision for 21st Century Healthcare, Cancer Medicine (Eds. Kufe, D.W., Pollock, R.E., Weichselbaum, R.R., Bast, R.C., Gansler, T.S., Holland, J.F., and Frei, E), Ninth Edition, (2015)

103. Eddy, J.A., Funk, C.C., and **Price, N.D.**, Fostering synergy between cell biology and systems biology, *Trends in Cell Biology*, 25(8):440-5 (2015) PMID: 26013981

102. Imam, S., Schauble, S., Brooks, A.N., Baliga, N.S., and **Price, N.D.**, Data-driven integration of genome-scale regulatory and metabolic network models, *Frontiers in Microbiology,* 6:409 (2015) PMID: 25999934

101. Turkarslan, S., Peterson, E., Rustad, T., Minch, K., Reiss, D.J., Morrison, B., Ma., S., **Price, N.D.**, Sherman, D.R., and Baliga, N.S., A comprehensive map of genome-wide regulation in *Mycobacterium tuberculosis*, *Scientific Data* 2:150010 (2015) PMID: 25977815

100. Ament, S.A., Szelinger, S., Glusman, G., Detera-Wadleigh, S., Ashworth, J., Hou, L., Akula, N., Shekhtman, T., Badner, J.A., Brunkow, M.E., Mauldin, D.E., Stittrich, A.B., Rouleau, K., Nurnberger, J.I., Edenberg, H.J., Gershon, E.S., Schork, N.J., The Bipolar Genome Study, **Price, N.D.**, Gelinas, R., Hood, L., Craig, D.W., McMahon, F.J., Kelsoe, J.R., Roach, J.C., Rare variants in neuronal excitability genes influence risk for bipolar disorder, *Proc. Natl. Acad. Sci. USA*, 112(11):3576-81 (2015) PMID: 25730879

99. Chandrasekaran, S., Rittschof, C., Djukovic, D., Gu, H., Raftery, D., **Price, N.D.***, and Robinson, G.* Aggression is Associated with Aerobic Glycolysis in the Honey Bee Brain, *Genes, Brain, and Behavior* 14(2):158-66 (2015). PMID: 25640316 *Corresponding authors

98. Chakrabarty, P., Li, A., Ceballos-Diaz, C., Funk, C.C., Eddy, J.A., Moore, B., Rosario, A.M., Verbeeck, C., Sacino, A., Nix, S., Janus, C., **Price, N.D.**, Das, P., Golde, T.E., IL-10 Alters Immunoproteostasis in APP mice, Increasing Plaque Burden and Worsening Cognitive Behavior, *Neuron*, 85(3):519-33 (2015) PMID: 25619653

97. Minch, K.J., Rustad, T.R., Peterson, E. Winkler, J., Reiss, D.J., Ma, S., Hickey, M., Brabant, B., Morrison, B., Turkarslan, S., Mawhinney, C., Galagan, J., **Price, N.D.**, Baliga, N.S., and Sherman, D.R., The DNA binding network of *Mycobacterium tuberculosis*, *Nature Communications* 6:5829 (2015) PMID: 25581030

96. Simeonidis, E., and **Price, N.D.**, Genome-scale modeling for metabolic engineering, *Journal of Industrial Microbiology and Biotechnology*, 42(3):327-338 (2015) PMID: 25578304

95. Hood, L., Lovejoy, J., and **Price, N.D.**, Integrating big data and actionable health coaching to optimize wellness, *BMC Medicine*, 13:4 (2015). **Highly Accessed** (special distinction given to the most downloaded papers in the journal) PMID: 25575752

94. Heavner, B., and **Price, N.D.**, Transparency in metabolic network reconstruction enables scalable biological discovery, *Current Opinion in Biotechnology*, 34:105-109 (2015) PMID: 25562137

93. Geman, D., Ochs, M., **Price, N.D.**, Tomasetti, C., and Younes, L., An Argument for Mechanism-Based Statistical Inference in Cancer, *Human Genetics,* 134(5):479-95 (2015) PMID: 25381197

92. Rustad, T.R., Minch, K.J., Winkler, J., Hobbs, S., Hickey, M, Brabant, W., Turkarslan, S., **Price, N.D.**, Baliga, N.S., and Sherman, D.R., Mapping and manipulating the *Mycobacterium tuberculosis* transcriptome using a transcription factor overexpression-derived regulatory network, *Genome Biology,* 15(11):502 (2014). **Highly Accessed** (special distinction given to the most downloaded papers in the journal) PMID: 25380655

91. Ma, S., Sung, J., Magis, A.T., Wang, Y., Geman, D., and **Price, N.D.**, Measuring the effect of inter-study variability on estimating prediction error, *PLOS ONE,* 9(10):e110840, (2014) PMID: 25330348

90. Benedict, M.N., Mundy, M.B., Henry, C.S., Chia, N., and **Price, N.D.**, Likelihood-based gene annotations for gap filling and quality assessment in genome-scale metabolic models, *PLOS Computational Biology*, 10(10):e1003882 (2014) PMID: 25329157

89. Richards, M.A., Cassen, V., Heavner, B.D., Ajami, N., Herrmann, A., and **Price, N.D.**, MediaDB: a database of microbial growth conditions in defined media, *PLOS ONE*, 9(8):e103548 (2014) PMID:25098325

88. Sangar, V., Funk, C.C., Kusebauch, U., Campbell, D.S., Moritz, R.L., and **Price, N.D.**, Quantitative proteomic analysis reveals effects of epidermal growth factor receptor (EGFR) on invasion-promoting proteins secreted by glioblastoma cells, *Molecular and Cellular Proteomics*, 13(10):2618-31 (2014) PMID: 24997998

87. Craig, T.A., Zhang, Y., Magis, A.T., Funk, C.C., **Price, N.D.**, Ekker, S.C., and Kumar, R., Detection of 1α,25-Dihydroxyvitamin D-Regulated miRNAs in Zebrafish by Whole Transcriptome Sequencing, *Zebrafish*. 11(3):207-18 (2014) PMID: 24650217

86. Hood, L., and **Price, N.D.**, Promoting Wellness and Demystifying Disease: The 100K Project, *Clinical Omics,* 1(3):20-23 (2014). Featured in *Genetic Engineering & Biotechnology News.*

85. Ma, S., Earls, J., Eddy, J.A., and **Price, N.D.**, Integrative Omics Approaches in Network Medicine, Network Medicine, Eds. E. Silverman and J. Loscalzo (2014)

84. Hood, L., and **Price, N.D.**, Demystifying Disease, Democratizing Health Care, *Science Translational Medicine*, 6(225), 225ed5 (2014) PMID: 24574336

83. Benedict, M.N., Henriksen, J.R., Metcalf, W.W., Whitaker, R.J., and **Price, N.D.**, ITEP: An integrated toolkit for exploration of pan-genomes, *BMC Genomics*, 15:8 (2014) PMID: 24387194

82. Chandrasekaran, S., and **Price, N.D.**, Metabolic constraint-based refinement of transcriptional regulatory networks, *PLOS Computational Biology*, 9(12):e1003370 (2013). Highlighted in *Nature Reviews Genetics*. PMID: 24348226

81. Dong, Y., Kumar, C.G., Kim, P.J., Chia, N.L.P., Flynn, T., Miller, P., Cann, I.K.O., Mackie, R.M., **Price, N.D.**, Sanford, R., … Friend, G., Yannarell, A.C., Shilts, W.W., Finley, R.J., and Fouke, B.W.,

*Halomonas sulfidaeris*-dominated microbial community inhabits 1.8 km-deep subsurface Cambrian Sandstone reservoir, *Environmental Microbiology*, 16(6):1695-708 (2014) PMID: 24238218

80. Lausted, C., Lee, I., Zhou, Y., Qin, S., Sung, J., **Price, N.D.**, Hood, L. and Wang, K., Systems approach to neurodegenerative disease biomarker discovery, *Annual Review of Pharmacology and Toxicology,* 54:457-81 (2014) PMID: 24160693

79. Wang, C., Funk, C.C., Eddy, J.A., **Price, N.D.**, Transcriptional analysis of aggressiveness and heterogeneity across grades of astrocytoma, *PLOS ONE*, 8(10):e76694 (2013) PMID: 24146911

78. Bai, J., Abernethy, D.R., **Price, N.D.**, Sangar, V., Systems pharmacology modeling: an approach to improving drug safety, *Biopharmaceutics & Drug Disposition,* 35(1):1-14 (2013) PMID: 24136298

77. Li, X.J., Hayward, C., Fong, P.Y., Dominguez, M., Hunsucker, S.W., Lee, L.W., McLean, M., Law, S., Butler, H., Schirm, M., Gingras, O., Lamontagne, J., Allard, R., Chelsky, D., **Price, N.D.**, Lam, S., Massion, P.P., Pass, H., Rom, W.N., Vachani, A., Fang, K.C., Hood, L., and Kearney, P., A blood-based proteomic classifier for the molecular characterization of pulmonary nodules, *Science Translational Medicine,* 5(207):207ra142 (2013) PMID: 24132637

76. Georgatos, F., Ballereau, S., Pellet, J., Ghanem, M., Price, N.D., Hood, L., Guo, Y.K., Boutigny, D., Auffray, C., Balling R., and Schneider, R., Computational infrastructures for data and knowledge management in systems biology, Systems Biology: Integrative Biology and Simulation Tools, Editors: Prokop, A. and Csukas, B., Springer (2013)

75. **Price, N.D.,** Genome-scale models for microbial factories, *Industrial Biotechnology*, 9: 177-178 (2013)

74. Sung, J., Kim, P.J., Ma, S., Funk, C.C., Magis, A.T., Wang, Y., Hood, L., Geman, D., and **Price, N.D.**, Multi-study integration of brain cancer transcriptomes reveals organ-level molecular signatures, *PLOS Computational Biology,* 9(7):e1003148 (2013) PMID 23935471

73. Heavner, B.D., Smallbone, K., **Price, N.D.**, and Walker, L.P., Version 6 of the Consensus Yeast Metabolic Network Refines Biochemical Coverage and Improves Model Performance, *Database*, (2013) PMID: 23935056

72. Labhsetwar, P., Cole, J., Roberts, E., **Price, N.D.**, and Luthey-Schulten, Z., Heterogeneity in protein expression induces metabolic variability in a modeled *Escherichia coli* population, *Proceedings of the National Academy of Sciences USA,* 110(34):14006-11 (2013)PMID: 23908403

71. Wang, Y., Li, X. Milne, C.B., Jansson, H., Lin, W., Phan, G., Jin, Y.S., **Price, N.D.**, and Blaschek, H.P., Development of a gene knockout system using mobile group II introns (Targetron) and genetic disruption of acid production pathways in *Clostridium beijerinckii*, *Applied and Environmental Microbiology*, 79(19):5853-63 (2013) PMID: 23872562

70. Earls, J.C., Eddy, J.A., Funk, C., Ko, Y., Magis, A., and **Price, N.D.**, AUREA: An open-source software system for accurate and user-friendly identification of relative expression molecular signatures, *BMC Bioinformatics*, 14:78(2013). **Highly Accessed** (special distinction given to the most downloaded papers in the journal) PMID: 23496976

69. Thiele, I., Swainston, N., Fleming, R.M.T., Hoppe, A., Sahoo, S., …**Price, N.D.**, … , Goryanin, I., Nielsen, J., Westerhoff, H.V., Kell, D.B., Mendes, P., and Palsson, B.O., A community-driven global reconstruction of human metabolism, *Nature Biotechnology,* 31(5):419-25 (2013) PMID: 23455439

68. Gonnerman, M.C., Benedict, M.N., Feist, A.M., Metcalf, W.W., **Price, N.D.**, Genomically and biochemically accurate metabolic reconstruction of *Methanosarcina barkeri Fusaro,* iMG746, *Biotechnology Journal,* 8(9):1070-79 (2013) PMID: 23420771

67. Simeonidis, E., Chandrasekaran, S., and **Price, N.D.**, A guide to integrating transcriptional regulatory and metabolic networks using PROM (probabilistic regulation of metabolism), *Methods in Molecular Biology*, 985:103-12 (2013) PMID: 23417801

66. Ko, Y.[*], Ament, S.A.[*], Eddy, J.A., Caballero, J., Earls, J.C., Hood, L., and **Price, N.D.**, Cell type-specific genes show striking and distinct patterns of spatial expression in the mouse brain, *Proceedings of the National Academy of Sciences USA*, 110(8):3095-3100 (2013). PMID: 23386717

65. Flores, M., Glusman, G., Brogaard, K., **Price, N.D.**, and Hood, L., P4 Medicine: How Systems Medicine Will Transform the Healthcare Sector and Society, *Personalized Medicine*, 10(6):565-576 (2013) PMID: 25342952

64. Wang, Y., Eddy, J.A., and **Price, N.D.**, Reconstruction of genome-scale metabolic models for 126 human tissues using mCADRE, *BMC Systems Biology*, 6:153 (2012). **Highly Accessed** (special distinction given to the most downloaded papers in the journal) PMID: 23234303

63. Yang, J.L., Cogdell, D., Eddy, J.A., Trent, J., Price, N.D., and Zhang, W., Expression of PRUNE2 mRNA and its positive correlation with non-coding RNA PCA3 in leiomyosarcoma*, Chinese journal of oncology*, 34: 497 (2012)

62. Simcha, D., **Price, N.D.**, and Geman, D., The limits of *de novo* DNA motif discovery, *PLOS ONE*, 7(11):e47836 (2012) PMID: 23144830

61. Sangar, V., Eddy, J.A., Simeonidis, E., and **Price, N.D.**, Mechanistic modeling of aberrant energy metabolism in disease, *Frontiers in Computational Physiology and Medicine*, 3:404 (2012) PMID: 23112774

60. Magis, A.T., and **Price, N.D.**, The top-scoring 'N' algorithm: a generalized relative expression classification method from small numbers of biomolecules, *BMC Bioinformatics*, 13:227 (2012) PMID: 22966958

59. Craig, T.A., Zhang, Y. McNulty, M.S., Middha, S., Magis, A.T., Funk, C.C., **Price, N.D.**, Ekker, S.C., and, R., Research Resource: Whole Transcriptome RNA Sequencing Detects Multiple 1α,25-Dihydroxyvitamin D3-Sensitive Metabolic Pathways in Developing Zebrafish, *Molecular Endocrinology*, 26(9):1630-42 (2012) PMID: 22734042

58. Committee for the Review of Omics-Based Tests for Predicting Patient Outcomes in Clinical Trials (including **Price, N.D.**); Christine M. Micheel, Sharyl J. Nass, Gilbert S. Omenn, Editors; Evolution of Translational Omics: Lessons Learned and the Path Forward. Institute of Medicine (2012) *National Academy of Sciences Press*. 300 pages.

57. Hood, L., Flores, M.A., Brogaard, K.R., and **Price, N.D.**, Systems medicine and the emergence of proactive P4 medicine: predictive, preventive, personalized, and participatory, Handbook of Systems Biology (A. J. Marian Walhout, Marc Vidal, and Job Dekker, editors), Elsevier, San Diego, CA. (2012)

56. Sung, J., Wang, Y., Chandrasekaran, S., Witten, D.M., and **Price, N.D.**, Molecular signatures from omics data: from chaos to consensus, *Biotechnology Journal*, 7(8):946-57 (2012) PMID: 22528809

55. Bebek, G., Koyuturk, M., **Price, N.D.**, and Chance, M.R., Network biology methods integrating biological data for translational science, *Briefings in Bioinformatics*, 13(4):446-59 (2012) PMID: 22390873

54. Kim, P.-J., and **Price, N.D.**, Genetic co-occurrence network across all sequenced microbes, *PLoS Computational Biology,* 7(12):e1002340 (2011) PMID: 22219725

53. Tian, Q., **Price, N.D.**, and Hood, L., Systems cancer medicine: towards realization of predictive, preventive, personalized, and participatory (P4) medicine, *Journal of Internal Medicine*, 271(2):111-21 (2012) PMID: 22142401

52. Benedict, M.N., Gonnerman, M.C., Metcalf, W.W., and **Price, N.D.**, Genome-scale metabolic reconstruction and hypothesis testing in the methanogenic archaeon *Methanosarcina acetivorans* C2A, *Journal of Bacteriology*, 194(4):855-65 (2012) PMID: 22139506

51. Ghosh, A., Zhao, H., and **Price, N.D.**, Genome-scale consequences of cofactor balancing in engineered pentose utilization pathways in *Saccharomyces cerevisiae*, *PLoS ONE 6(11):* e27316 (2011) PMID: 22076150

50. Chandrasekaran, S., Ament, S.A., Eddy, J.A., Rodriguez-Zas, S., Schatz, B.R., **Price, N.D.**[*] and Robinson, G.E.[*], Behavior-specific changes in transcriptional modules lead to distinct and predictable neurogenomic states, *Proceedings of the National Academy of Sciences USA*, 108(44):18020-5 (2011). PMID: 21960440 *Co-corresponding authors

49. Milne, C.B., Eddy, J.A., Raju, R., Ardekani, S., Kim, P.-J., Senger, R.S., Jin, Y.-S., Blaschek, H.P., and **Price, N.D.**, Metabolic network reconstruction and genome-scale model of butanol-producing strain Clostridium beijerinckii NCIMB 8052, *BMC Systems Biology*, 5:130 (2011). **Highly Accessed** (special distinction given to the most downloaded papers in the journal) PMID: 21846360

48. Li, Q., Singh, C.R., Ma, S., **Price, N.D.**, and Jagannath, C., Label-free proteomics and systems biology analysis of mycobacterial phagosomes in dendritic cells and macrophages, *Journal of Proteome Research,* 10(5):2425-39 (2011) PMID: 21413810

47. Magis, A.T., Earls, J.C., Ko, Y.,-H, Eddy, J.A., and **Price, N.D.**, Graphics processing unit implementations of relative expression analysis algorithms enable dramatic computational speedup, *Bioinformatics*, 27(6):872-3 (2011) PMID: 21257608

46. Yan, X., Ma, L., Yi, D., Yoon, J.G., Diercks, A., Foltz, G., **Price, N.D.**, Hood, L., and Tian, Q., A CD133-related gene expression signature identifies an aggressive glioblastoma subtype with excessive mutations, *Proceedings of the National Academy of Sciences USA*, 108(4):1591-1596 (2011) PMID 21220328

45. Ma, S., Funk, C., and **Price, N.D.**, Systems approaches to molecular cancer diagnostics, *Discovery Medicine*, 10(55):531-42 (2010) PMID: 21189224

44. Chandrasekaran, S., and **Price, N.D.**, Probabilistic integrative modeling of genome-scale metabolic and regulatory networks in *Escherichia coli* and *Mycobacterium tuberculosis*, *Proceedings of the National Academy of Sciences USA*, 107(41):17845-50 (2010) PMID: 20876091

43. Edelman, L.B., Eddy, J.A., and **Price, N.D.**, *In silico* models of cancer, *Wiley Interdisciplinary Reviews: Systems Biology and Medicine*, 2(4): 438–459 (2010) PMID: 20836040

42. Shi, L., et al. (MAQC-II Consortium), The MicroArray Quality Control (MAQC)-II study of common practices for the development and validation of microarray-based predictive models, *Nature Biotechnology*, 28(8): 827-838 (2010) PMID: 20676074

41. **Price, N.D.**, and Lee, S.Y., Editorial: Systems biology for biotech applications, *Biotechnology Journal*, 5(7):636-637 (2010) PMID: 20665637

40. Yang, J., Eddy, J.A., Pan, Y., Hategan, A., Tabus, I., Wang, Y., Cogdell, D., **Price, N.D.**, Pollock, R.E., Lazar, A.J.F, Hunt, K.K., Trent, J.C., and Zhang, W., Integrated proteomics and genomics analysis reveals a novel mesenchymal to epithelial reverting transition in leiomyosarcoma through regulation of slug, *Molecular and Cellular Proteomics*, 9(11):2405-13 (2010) PMID: 20651304

39. Eddy, J.A., Hood, L., **Price, N.D.**[*], and Geman, D., Identifying tightly regulated and variably expressed networks by Differential Rank Conservation (DIRAC), *PLoS Computational Biology,* 6(5):e1000792 (2010) PMID: 20523739 *Corresponding author

38. Kim, P.J., and **Price, N.D.**, Macroscopic kinetic effects of cell-to-cell variation in biochemical reactions, *Physical Review Letters*, 104(14):148103 (2010). Highlighted by *Science News (*"Enzymes Exposed", 2010*)*. PMID: 20481966

37. Eddy, J.A., Sung, J., Geman, D., and **Price, N.D.**, Relative expression analysis for molecular cancer diagnosis and prognosis, *Technology in Cancer Research and Treatment*, 9(2):149-159 (2010) PMID: 20218737

36. Galas, D.J., Nykter, M., Carter, G.W., **Price, N.D.**, and Shmulevich, I., Biological information as set-based complexity, *IEEE Transactions on Information Theory*, 56(2): 667 - 677 (2010) PMID: 27857450

35. Ezeji, T., Milne, C.B., **Price, N.D.**, and Blaschek, H.P., Achievements and perspectives to overcome the poor solvent resistance in acetone and butanol producing microorganisms, A*pplied Microbiology and Biotechnology,* 85(6):1697-1712 (2010) PMID: 20033401

34. Edelman, L.B., Chandrasekaran, S., **Price, N.D.**, Systems biology of embryogenesis, *Reproduction, Fertility, and Development*, 22(1):98-105 (2009). PMID: 20003850

33. Eddy, J.A., Geman, D., **Price, N.D**., Relative expression analysis for identifying perturbed pathways, *Conference Proceedings IEEE Engineering in Medicine and Biology Society.*, 2009:5456-9 (2009) PMID: 19964680

32. Edelman, L.B., Toia, G., Geman, D., Zhang, W., and **Price, N.D.**, Two-transcript gene expression classifiers in the diagnosis and prognosis of human diseases, *BMC Genomics,* 10:e583 (2009). **Highly Accessed** (special distinction given to the most downloaded papers in the journal) PMID: 19961616

31. Milne, C.B., Kim, P.J., Eddy, J.A., and **Price, N.D.**, Accomplishments of genome-scale *in silico* modeling for industrial and medical biotechnology, *Biotechnology Journal*, 4(12):1653-1670 (2009) PMID: 19946878

30. Blaschek, H.P., Ezeji, T., and **Price, N.D.**, Present and future possibilities for the deconstruction and utilization of lignocellulosic biomass, Handbook of Bioenergy (2009)

29. Hwang, D., Lee, I.Y., Yoo, H., Gehlenborg, N., Cho, J.H., Petritis, B., Baxter, D., Pitstick, R., Young, R., Spicer, D., **Price, N.D.**, Hohmann, J., DeArmond, S.J., Carlson, G.A., Hood, L., A Systems Approach to Prion Disease, *Molecular Systems Biology,* 5:252 (2009) PMID: 19308092

28. Eddy, J.A., and **Price, N.D.**, "Biological data integration and model building," Encyclopedia of Complexity and Systems Science, (Meyers, R.A., editor) Springer (2009)

27. **Price, N.D.**, Edelman, L.B., Lee, I., Yoo, H., Hwang, D., Carlson, G., Galas, D.J., Heath, J.R., and Hood, L., Systems biology and systems medicine, Genomic and Personalized Medicine: From Principles to Practice (Ginsburg, G. and Willard, H., editors). Vol.1, pp. 131-141, Elsevier, (2009)

26. Nykter, M., **Price, N.D.**, Larjo, A., Aho, T., Kauffman, S.A., Yli-Harja, O., and Shmulevich, I., Critical networks exhibit maximal information diversity in structure-dynamics relationships, *Physical Review Letters*, 100(5):058702 (2008) PMID: 18352443

25. Nykter, M., **Price, N.D.**, Aldana, M., Ramsey, S., Kauffman, S.A., Hood, L., Yli-Harja, O., and Shmulevich, I., Gene expression dynamics in the macrophage exhibit criticality, *Proceedings of the National Academy of Sciences USA*, 105(6):1897-1900 (2008) PMID: 18250330

24. **Price, N.D.**, Foltz, G., Madan, A., Hood, L., and Tian, Q., Systems biology and cancer stem cells, *Journal of Cellular and Molecular Medicine*, 12(1):97-110 (2008) PMID: 18031300

23. **Price, N.D.**, and Shmulevich, I., Biochemical and statistical network models for systems biology, *Current Opinion in Biotechnology*, 18(4):365-370 (2007) PMID: 17681779

22. **Price, N.D.**, Trent, J., El-Naggar, A.K., Cogdell, D., Taylor, E., Hunt, K.K., Pollock, R.E., Hood, L., Shmulevich, I., and Zhang, W., Highly accurate two-gene classifier for differentiating gastrointestinal stromal tumors and leiomyosarcomas, *Proceedings of the National Academy of Sciences USA,* 104(9):3414-3419 (2007) PMID: 17360660

21. Gianchandani, E.J., Papin, J.A., **Price, N.D.**, Joyce, A., and Palsson, B.Ø., Matrix formalism to describe functional functional states of transcriptional regulatory systems, *PLoS Computational Biology,* 2(8): e101 (2006) PMID: 16895435

20. **Price, N.D.**, Thiele, I., and Palsson, B.Ø., Candidate states of *Helicobacter pylori*'s genome-scale metabolic network upon application of loop law thermodynamic constraints, *Biophysical Journal*, 90(11):3919-3928 (2006) PMID: 16533855

19. Barrett, C., **Price, N.D.**, and Palsson, B.Ø., Network-level analysis of metabolic regulation in the human red blood cell using random sampling and singular value decomposition, *BMC Bioinformatics*, 7:132 (2006) PMID: 16533395

18. Becker, S.A., **Price, N.D.**, and Palsson, B.Ø., Metabolite coupling in genome-scale metabolic networks, *BMC Bioinformatics*, 7:111 (2006) PMID: 16519800

17. Allen, T.E., **Price, N.D.**, Joyce, A., and Palsson, B.Ø., Long-range periodic patterns in microbial genomes indicate significant multi-scale chromosomal organization, *PLoS Computational Biology*, 2(1): e2 (2006) PMID: 16410829

16. Thiele, I., Vo, T., **Price, N.D.**, and Palsson, B.Ø., Expanded metabolic reconstruction of *Helicobacter pylori* (iIT341 GSM/GPR): an *in silico* genome-scale characterization of single- and double-deletion mutants, *Journal of Bacteriology*, 187(16):5818-5830 (2005) PMID: 16077130

15. Thiele, I., **Price, N.D.**, Vo, T. and Palsson, B.Ø., Candidate metabolic network states in human mitochondria. Impact of diabetes, ischemia, and diet, *Journal of Biological Chemistry*, 280(12):11683-11695 (2005) PMID: 15572364

14. **Price, N.D.**, Reed, J.L., and Palsson, B.Ø., Genome-scale models of microbial cells: evaluating the consequences of constraints, *Nature Reviews Microbiology*, 2(11): 886-897 (2004) PMID: 15494745

13. **Price, N.D.**, Schellenberger, J., and Palsson, B.Ø., Uniform sampling of steady state flux spaces: means to design experiments and interpret enzymopathies, *Biophysical Journal*, 87(4):2172-2186 (2004) PMID: 15454420

12. Papin, J.A., Stelling, J., **Price, N.D.**, Klamt, S., Schuster, S., Palsson, B.Ø., Comparison of network-based pathway analysis methods, *Trends in Biotechnology*, 22(8):400-405 (2004) PMID: 15283984

11. Raghunathan, A., **Price, N.D.**, Kolker, E., *et al*., *In silico* metabolic model and protein expression of *Haemophilus influenzae* strain Rd KW20 in rich medium, *OMICS*: *A Journal of Integrative Biology*, 8(1):25-42 (2004) PMID: 15107235

10. Papin, J.A., **Price, N.D.**, and Palsson, B.Ø., *In silico* cells: studying genotype-phenotype relationships using constraints-based models, in: Metabolic Engineering in the Post-Genomic Era (Westerhoff, H., and Kholodenko, B., editors) (2004)

9. **Price, N.D.**, Reed, J.L., Papin, J.A., Wiback, S.J., and Palsson, B.Ø., Network-based analysis of metabolic regulation in the human red blood cell, *Journal of Theoretical Biology*, 225(2):185-194 (2003) PMID: 14575652

8. Papin, J.A., **Price, N.D.**, Wiback, S.J., Fell, D.A., and Palsson, B.Ø., Metabolic pathways in the post-genome era, *Trends in Biochemical Sciences*, 28(5):250-258 (2003) PMID: 12765837

7. Palsson, B.Ø., **Price, N.D.**, Papin, J.A., Development of network-based pathway definitions: the need to analyze real metabolic networks, *Trends in Biotechnology*, 21(5):195-198 (2003) PMID: 12727379

6. **Price, N.D.**, Papin, J.A., Schilling, C.H., and Palsson, B.Ø., Genome-scale microbial i*n silico* models: the constraints-based approach, *Trends in Biotechnology*, 21(4):162-169 (2003) PMID: 12679064

5. **Price, N.D.**, Reed, J.L., Papin, J.A., Famili, I. and Palsson, B.Ø., Analysis of metabolic capabilities using singular value decomposition of extreme pathway matrices, *Biophysical Journal*, 84(2 Pt1):794-804 (2003) PMID: 12547764

4. Papin, J.A., **Price, N.D.**, and Palsson, B.Ø., Extreme pathway lengths and reaction participation in genome-scale metabolic networks, *Genome Research*, 12(12):1889-1900 (2002) PMID: 12466293

3. **Price, N.D.**, Famili, I., Beard, D.A. and Palsson, B.Ø., Extreme pathways and Kirchhoff's second law, *Biophysical Journal*, 83(5):2879-2882 (2002) PMID: 12425318

2. Papin, J.A., **Price, N.D.**, Edwards, J.S., and Palsson, B.Ø., The genome-scale metabolic extreme pathway structure in *Haemophilus influenzae* shows significant network redundancy, *Journal of Theoretical Biology*, 215(1):67-82 (2002) PMID: 12051985

1. **Price, N.D.**, Papin, J.A., Palsson, B.Ø., Determination of redundancy and systems properties of the metabolic network of *Helicobacter pylori* using genome-scale extreme pathway analysis, *Genome Research*, 12(5):760-769 (2002) PMID: 11997342

## GRANTS

Completed Grants

National Academy of Medicine Healthy Longevity Catalyst Award (PI: Price) 10/16/2020–10/15/2021
**Elucidating mechanisms through which the gut microbiome can be optimized across the human lifespan**
Role: PI

NIH U01AG046139 (MPI: Golde/Taner/Price) 09/20/13–11/15/2020
**A Systems Approach to Targeting Innate Immunity in AD**
Role: Multiple PI

NIH RO1 (Marchioni/Price) 04/05/16–11/15/2020
**Hardwiring Mechanism into Predicting Cancer Phenotypes by Computational Learning**
Role: Subcontract PI

NIH R01 HD091527 (MPI: Muglia, Price) 03/10/17–11/15/2020
**Harnessing "omics": A Systems Biology approach to discovery of biological pathways in placental development and parturition**
Role: Multi-PI

NIH R01 GM123993 (Witten) 06/16/18–11/15/2020
**A Modeling Framework for Multi-View Data, with Applications to the Pioneer 100 Study and Protein Interaction Networks**
Role: Subaward PI

NIH/NIA U19 AG023122 (Cummings) 09/01/18-11/15/2020
**Longevity Consortium**
Role: Core C PI

NIH/NIA U01AG061359 (Kaddurah-Daouk) 09/30/18 – 11/15/2020
**Metabolic Signatures for Disease Sub-Classification and Target Prioritization in AMP AD**
Role: Co-I

NIH R01AG057443 (Mangravite/Price/Schadt) 09/01/17–08/31/20
**Open systems for AMP-AD target enhancement**
Role:Subcontract PI

NIH R01AG057452 (Kaddurah-Daouk) 09/01/17–08/31/20
**Metabolic Network Analysis of Biochemical Trajectories in Alzheimer's Disease**
Role: Subaward PI

DOE DE-SC0018420 (Delucia) 12/01/17–11/30/19
**Center for Advanced Bioenergy and Bioproducts Innovation (CABBI)**
Role: Subaward PI

NIH R01NS091251 (Rostomily) 02/01/18–10/31/19
**Therapeutically relevant targets of Twist1 dimers in glioma**
Role: Subaward PI

NIH U54EB020406 (Toga) 08/29/14–09/30/19
**Big Data for Discovery Science**
Role: Subcontract PI

Cohen Foundation Grant Agreement (Hood) 03/15/16–03/31/19
**Lyme Immune Response After Acute Infection**
Role: Co-I

Gates Foundation OPP1113966 (Muglia/Price) 11/17/14–10/31/18 (NCE)
**Systems Biology Approaches to Birth Timing and Preterm Birth Risk**

NIH P50GM076547 (Aitchison) 09/01/12–12/31/17
**Quantitative Systems Biology**
Role: Co-I

NSF IOS-1256705 (Price) 09/15/13-08/31/17
**Collaborative Research: Brain Metabolic Plasticity and Aggression**
Role: Subcontract PI

Janssen Pharmaceuticals (Price) 09/01/15–08/31/17
**Discovery and verification of clinically-useful biomarkers to predict diabetes disease progression**
Role: PI

CHDI A-7936 (Price) 06/01/14-05/31/16
**Connecting transcriptional regulation to metabolic networks in Huntington's Disease**
Role: PI

DOE DE-AR0000426 (Ragsdale) 01/09/14-12/31/16
**Anaerobic bioconversion of methane to methanol**
Role: Co-I

CHDI/Western Washington University (Carroll) 07/01/15-12/31/16
**Mapping molecular network dynamics in response to environmental perturbation in primary hepatocytes**
Role: Subcontract PI

NIH/UW 2R01AI084914-06 (Stetson) 05/01/15–07/11/16
**Intracellular nucleic acid detection in autoimmunity**
Role: Co-I

Bay Area Lyme Foundation (Hood/Price) 04/01/15–01/31/16
**Application of Advanced Proteomics and Data Analysis to Lyme Disease - Biomarker Discovery (SLICE)**
Role: Co-PI

DE-EE0006315 (Behnke) 03/01/14-06/30/15
**Biomass productivity technology advancement towards a commercially viable, integrated algal biomass production unit**
Role:Co-I

Amgen 2014585129 (Price) 07/01/14-12/31/14
**Multi-Omic Analysis of CHO Cells**
Role: PI

Huntington Soc. of Canada/WWU 56329-A Carroll (PI) 07/01/13-06/30/14

# PRESENTATIONS

Invited Talks

285. Invited Talk, Personalized and Precision Nutrition: Intersection of Technology and Practical Recommendations, Tactical Nutrition Summit, Virtual, August 5, 2024

284. Keynote, Digital twins and longitudinal deep phenotyping for precision health, University of Michigan Biomedical Engineering Summer Symposium Metabolism & Precision Health: A Biomedical Engineering Workshop, Ann Arbor, MI, July 25, 2024

283. Keynote, Digital twins and longitudinal deep phenotyping for preventive medicine and precision health, SysMod COSI meeting during the ISMB 2024 conference hosted by ISCB, Montreal, Canada, July 16, 2024

282. Invited Talk, Developments in Microbiome Technology, Actionable Microbiome Insights for Health, Disease, Aging, and Drug Responses, NI Microbiome: Mastering the Market 2024, Virtual, June 25, 2024

281. Co-instructor, Coulter Center Translational Grant Writing Workshop, Virtual, May 31, 2024

280. Keynote, DOHAD a look into the future: Health Span Extension and Precision Prevention in the Age of Scientific Wellness, Oregon Nutrition Day, Oregon Health & Science University, Portland, OR, May 16, 2024

279. Invited Talk, The Age of Scientific Wellness: Why the Future of Medicine is Personalized, Predictive, Data-Rich, and In Your Hands, Young Presidents' Organization (YPO) Health and Wellness Network, Wellness Wednesday Talk, Virtual, May 1, 2024

278. Invited Talk, Leveraging the gut microbiome to promote human longevity, Gut Microbiota for Health (GMFH) World Summit hosted by the American Gastroenterological Association, Arlington, VA, March 23, 2024

277. Invited Talk, Digital twin models of cognitive health in aging, National Institute on Aging (NIA) 4th Cognitive Aging Summit, Bethesda, MD, March 21, 2024

276. Panel Discussion, Wellness, Screening, and Lifespan, 12th Annual /BioMedical Engineering and Imaging Institue (BMEII) Symposium, New York, NY, March 20, 2024

275. Invited Talk, Actionable Microbiome Insights for Health, Disease, Aging, and Drug Responses, Probiota Conference 2024, Milan, Italy, February 8, 2024

274. Invited Talk, The Age of Scientific Wellness, Young President's Organization Meeting, New York Chapter, Virtual, January 31, 2024

273. Invited Talk, OneDraw blood collection device and multi-omics analysis in health, PROMETHEUS Retreat, Virtual, January 26, 2024

272. Chair, Panel Discussion, Insight and Actionable Strategies for Microbiome Innovation, Precision Medicine World Conference, Santa Clara, CA, January 26, 2024

271. Keynote, Actionable Microbiome Insights for Health, Disease, Aging, and Drug Responses, Future of the Microbiome Winter Summit, Virtual, January 10, 2024

270. Invited Talk, Deconstructing disease complexity to inform development of combination therapies for AD/ADRD, Workshop: Precision Medicine Approaches for Developing Combination Therapies for the Treatment and Prevention of Alzheimer's Disease (AD) and AD-Related Dementias, National Institute on Aging, Bethesda, MD, December 4, 2023

269. Inaugural Packer Lecture, What deeply monitoring health trajectories of thousands of people teaches us about the future of medicine, Rensselaer Polytechnic Institute, Troy, NY, November 16, 2023

268. Invited Talk, Interpreting Microbiomes via Multi-Omics in Health, Disease, Aging, and Drug Responses, Center for Mucosal and Microbiome's Annual Symposium on Gut-Brain Axis, University of Texas Health, San Antonio, TX, November 2, 2023

267. Invited Talk, Healthy Aging and Precision Prevention in the Age of Scientific Wellness, American Nutrition Association's Personalized Nutrition 2023 Summit, Charlotte, NC, October 19, 2023

266. Keynote, Digital twins and longitudinal deep phenotyping for preventive medicine and scientific wellness, International Conference on Systems Biology (ICSB) 2023, Hartford, CT, October 12, 2023, online at: https://www.youtube.com/watch?v=OE6r_5IG56M

265. Invited Talk, Effects on microbiome, Session VIII. Metabolic Effects and their Cellular and Physiologic Basis, Part I National Institute on Aging (NIA)Workshop, Methods and Measurement in Trials of 5-year Caloric Restriction and Time-restricted Eating Interventions, Virtual, October 11, 2023

264. Panel Discussion, Who Wants to Live to Be a 100 Years Old: How the Data World Can Help Us Live Longer, 2023 Future of Health Data Summit, Washington, DC, October 3, 2023

263. Seminar, What longitudinal multi-omics health tracking on thousands of people tells us about the future of medicine, Buck Institute for Research on Aging Seminar series, Novato, CA, September 7, 2023

262. Panel Discussion, The Opportunities and Challenges for NAMs in Biomedical Research, Novel Alternative Methods (NAMs) Working Group Meeting, Catalyzing Development and Use of Novel alternative methods, Bethesda, MD, August 21, 2023

261. Invited Talk, Digital Twins and Alternative Clinical Trial Designs, Novel Alternative Methods (NAMs) Working Group Meeting, Catalyzing Development and Use of Novel alternative methods, Bethesda, MD, August 21, 2023

260. Invited Talk, Digital Twins for Brain Health, presentation to Atria Physicians, Virtual, August 15, 2023

259. Invited Book Talk, Fireside Chat for PayPal employees with Nathan Price and Lee Hood, Virtual, July 13, 2023

258. Panel Discussion, AI In Healthcare Brings Need For Heightened Data Security Standards, Health 2.0 Conference USA, Las Vegas, NV, July 11, 2023

257. Panel Discussion, Future Of Wellness: Time To Go Back To The Roots?, Health 2.0 Conference USA, Las Vegas, NV, July 10, 2023

256. Invited Talk, Actionable Microbiome Insights for Health, Disease, Aging, and Drug Responses, Future Microbiome 2023 Conference, Boston, MA, June 27, 2023

255. Invited Book Talk, Can Data Stop Disease?, Town Hall Seattle and the Institute for Systems Biology present Leroy Hood and Nathan Price with Jim Heath, Seattle, WA, June 16, 2023, https://townhallseattle.org/event/leroy-hood-and-nathan-price-with-jim-heath/

254. Invited Talk, Actionable Microbiome Insights for Health, Disease, Aging, and Drug Responses, Microbiome: Mastering the Market virtual conference, Virtual, May 24, 2023

253. Invited Talk, The Age of Scientific Wellness, Author Talk with Nathan Price and Lee Hood, The Battery, San Francisco, May 23, 2023

252. Invited Book Talk, Nathan Price and Lee Hood, Young Presidents Organization, Los Olivos, CA, May 20, 2023

251. Webinar, Future of Personalized Medicine, Ask the Expert Webinar with Patty Sherman Campbell, Functional Medicine Coaching Academy, Virtual, May 15, 2023

250. Invited Book Talk, The Age of Scientific Wellness, a conversation with Nathan Price, MIT/JHU Salon Series, Virtual, April 25, 2023

249. Invited Talk, Interpreting Microbiomes via Multi-Omics in Health, Disease, Aging, and Drug Responses, 8th Annual Translational Microbiome Conference, Arlington, VA, April 17, 2023

248. Book Talk, The Age of Scientific Wellness: The future of Medicine is Personalized, Predictive, Data-Rich, and in Your Hands, moderated by Robert Lee Kilpatrick, Commonwealth Club, San Francisco, CA, April 5, 2023

247. Seminar, The health phenotype: how do we define it, how do we keep it, and what are the challenges?, 23andMe company seminar, Sunnyvale, CA, April 5, 2023

246. Invited Talk, Mining Scientific Wellness Cohorts for Early Diagnosis, part of the Hot Topic Session: Circulating Molecular and Cell-Derived Biomarkers for Translational Toxicology, Society of Toxicology (SOT) 62nd Annual Meeting and ToxExpo, Nashville, TN, March 23, 2023

245. Co-Chair, Engaging Scientists to Prevent Harmful Exploitation of Advanced Data Analytics and Biological Data-A Workshop Series, National Academies Sciences Engineering Medicine (NASEM), Virtual: https://www.nationalacademies.org/our-work/engaging-scientists-to-prevent-harmful-exploitation-of-advanced-data-analytics-and-biological-data-a-workshop-series, February 9, 2023

244. Panel Discussion, Panel 5: Special Session Privacy, Ethics, and Data Issues, Opportunities and Challenges for Digital Twins in Biomedical Sciences - A Workshop, National Academies Sciences Engineering Medicine (NASEM), Virtual: https://www.nationalacademies.org/event/01-30-2023/opportunities-and-challenges-for-digital-twins-in-biomedical-sciences-a-workshop, brief found here: https://nap.nationalacademies.org/catalog/26922/opportunities-and-challenges-for-digital-twins-in-biomedical-research-proceedings, January 30, 2023

243. Seminar, What longitudinal multi-omics health tracking on thousands of people tells us about the future of medicine, Environmental Science and Geobiology Departmental Seminar, Caltech, December 8, 2022

242. Invited talk, Lessons from longitudinal multi-omic health monitoring on thousands of people, NIAID Omics Workshop: “Analytical Challenges in Omics Research on Asthma and Allergy”, Virtual, December 6-7, 2022

241. Panel Moderator, Can we make healthy aging products truly personalised? Healthy Aging and Nutrition Summit, San Diego, CA, December 6-7, 2022

240. Invited talk, Monitoring microbiome effects for scientific wellness using longitudinal multi-omic data on thousands of people, Future of the Microbiome (FOM) Summit, Virtual, November 30-December 2, 2022

239. Invited talk, The health phenotype: how we define it, how we keep it, and what are the challenges?, RNA at the Bench and Bedside III, Presented by: Ionis Pharmaceuticals, Nature Biotechnology, in partnership with the University of California, San Diego, Carlsbad, CA, November 8-10, 2022

238. Invited talk, Interpreting microbiomes via multi-omics for precision health, 9th World Congress on Targeting Microbiota 2022, Virtual (in person location, Paris, France), October 19-20, 2022

237. Invited talk, Microbiome and metabolic analysis in health and disease, 8th conference on Constraint-Based Reconstruction and Analysis (COBRA 2022), Galway, Ireland, September 28-30, 2022

236. Invited talk, Lessons from longitudinal multi-omic health monitoring of thousands of people, 9th IFAC Conference on Foundations of Systems Biology in Engineering (FOSBE 2022), Boston, MA, August 28-31, 2022

235. Panel Chair, Direct-to-consumer testing and technologies panel, Precision Medicine World Conference (PMWC), Silicon Valley, CA, June 28-30, 2022

234. Invited talk, The Impact of Gut Bacteria in Disease Prevention: Personalizing Nutrition, Company Showcase in Microbiome track, Precision Medicine World Conference (PMWC), Silicon Valley, June 28-30, 2022

233. Seminar, Longitudinal multi-omic data analysis on thousands of people to guide precision health, LifeOmic Biomedical Seminar, Virtual, two-part seminar June 24, 2022, and July 29, 2022

232. Invited talk, Insights into biological aging from longitudinal multi-omics monitoring of thousands of people, Systems Aging Gordon Research Conference, Newry, ME, June 1, 2022

231. Guest lecture (virtual), Precision Wellness and Personalized Preventive Medicine, University of California Irvine Healthspan Sciences Course, Irvine, CA and virtual, May 26, 2022

230. Round Table Discussion, The Impact of Gut Bacteria in Disease Prevention: Personalizing Nutrition, Food Innovation & Investment Summit, San Francisco, CA, May 18, 2022

229. Department Seminar, Deep phenotyping across thousands of people for precision health, University of Virginia, Department of Biomedical Engineering, Charlottesville, VA, April 8, 2022

228. Invited talk (virtual), Scientific wellness, deep phenotyping, and digital twins to enhance human health, 29th International Molecular & Precision Med Tri-Con, San Diego, CA and Virtual, February 21, 2022

227. Invited talk (virtual), Interpreting microbiome health effects in the context of longitudinal multi-omic data, Society for Laboratory Automation and Screening (SLAS) 2022 International Conference and Exhibition, Boston, MA and Virtual, February 8, 2022

226. Invited talk, Data to Health in the Post COVID-19 World, 2021 Magee Womens Summit

225. Invited talk, Mechanistic and dynamic systems modeling of Alzheimer's disease across lifespan, 2021 Alzheimer's Disease Genetics Global Symposium: Pathway to Translation, pre-recorded presentation available July 25, 2021 – live Q&A session September 1, 2021

224. Seminar, Microbiome Science and Clinical Practice, presentation to 98point6 Physicians, August 16, 2021

222. Invited talk, Exploring the role of genomics on lifestyle interventions, and panel discussion, The Essential Role of Data in Driving Personalized Nutrition Forward, Personalized Nutrition Innovation Summit, June 29, 2021

221. Invited talk, Using polygenic risk scores combined with multi-omics data to provide insights into prodromal disease and prevention, NHGRI Multi-omics workshop, June 18, 2021

220. Panel Talk, Multi-Omics: Using Data to Detect Disease at Its Earliest Inception, as part of the panel "Emerging Technologies and Biomedical Engineering to Improve Disease Detection and Treatment", NAM Emerging Leaders Forum, Virtual Event, April 21, 2021

219. Plenary Talk, New Mechanistic Insights and Technologies for Precision Medicine Research on Aging and Alzheimer's, 2021 NIH Alzheimer's Research Summit, Virtual Event, April 19, 2021

218. Opening talk, Gut microbiome pattern reflects healthy aging and predicts survival in humans, Future of the Microbiome Conference, Virtual Event, March 23, 2021

217. Webinar, Multi-omic analysis of health and disease across thousands of people, Informatics Institute Powertalk Seminar Series, UAB School of Medicine, The University of Alabama at Birmingham, Virtual Event, February 12, 2021

216. Seminar, Molecular reflections of health and disease from longitudinal deep phenotyping across thousands of people, Institute for Computational Medicine's 2020-2021 Distinguished Seminar Series, Johns Hopkins University, Virtual Event, February 2, 2021

215. Invited talk, Health Intelligence and Healthy Longevity, Health Intelligence and Healthy Longevity, ANA's 61st annual Personalized Nutrition Summit 2020, Personalized Nutrition Business Leaders Forum, Innovation Showcase, Virtual Event, November 12, 2020

214. Seminar, Lessons from big data precision health studies across thousands of people, University of Michigan BioMedical Engineering Seminar, Virtual Seminar, October 8, 2020

213. Invited talk, Precision health and the future of preventive medicine, Providence Health & Services Heart & Stroke Essentials for Primary Care 2020, Virtual Conference, September 25, 2020

212. Invited talk, Metabolomics in monitoring health and disease across thousands of people using longitudinal deep phenotyping, Metabolomics Association of North America (MANA) symposium at University of California Davis on Biological and Computational Interpretation of Metabolomic Datasets, Virtual Symposium, September 4, 2020

211. Invited talk, Proteomics in monitoring health and disease across time in thousands of people, HUPO August Webinar: Impact of Proteomics on Precision Medicine, Virtual Webinar, August 20, 2020

210. Keynote, The new science of wellness and what it means for 21st century medicine, American Association of Colleges of Pharmacy, Virtual Meeting, July 20, 2020

209. Plenary talk, Predictive Biomarkers and Biological Aging Health Information, IFM Annual International Conference, Virtual Meeting, June 12, 2020

208. Invited talk, Leveraging Omics profiling to estimate biological age, National Academies Workshop on Aging and Environmental Health, Virtual Meeting, June 9, 2020

207. Invited talk, What we have learned from big data precision health studies across thousands of people, Providence Grand Rounds, Everett, WA, January 15, 2020

206. Invited talk, A Deeper Dive: A New View of the Patient Through the Lens of Systems Biology, Platinum Summit, Denver, CO, December 7, 2019

205. Invited talk, Systems biology of pregnancy: A grand opportunity to prototype predictive and preventive medicine, Burroughs Wellcome Fund Pregnancy Think Tank, Research Triangle Park, NC, November 20, 2019

204. Invited talk, Multi-omic biological age estimation and association with health and disease Phenotypes, The Gerontological Society of America Annual Meeting, Austin, TX, November 14, 2019

203. Keynote, The highs, lows, twists, and turns of a "successful" career, 25th Anniversary UCSD Bioengineering Breakfast with Industry, San Diego, CA, November 7, 2019

202. Invited talk, Longitudinal Deep Phenotyping of Thousands of People: Insights for Precision Medicine, 20th International Conference for Systems Biology, Okinawa, Japan, October 31-November 5, 2019

201. *Keynote*, What We Have Learned from Big Data Precision Health Studies across Thousands of People, Precision Nutrition Symposium, Cornell, Ithaca, NY, October 14-15, 2019

200. Invited talk, What Has Been Learned About Personalizing Nutrition From Scientific Wellness Outcome Studies, 2019 PLMI Seventh Annual Thought Leaders Consortium, Renton, WA, October 11-12, 2019

199. Invited talk, Metabolic analysis in Alzheimer's Disease, NIA-AA Symposium at AAIC: Enabling Precision Medicine for AD through Open Science, Los Angeles, CA, July 11-12, 2019

198. Invited talk, Longitudinal multi-omic profiling for thousands of people, Stanford ITI and CHSI Conference on Human Immune Monitoring Technology and Bioinformatics, Stanford, CA, May 2, 2019

197. Invited talk, Scientific Wellness, Deep Phenotyping and the Future of Precision Medicine, Genentech Medical Affairs Summit, San Diego, CA, March 20, 2019

196. Seminar, Longitudinal deep phenotyping of thousands of people to enhance health and drive biological discovery, Washington University, St. Louis, MO, March 8, 2019

195. Invited talk, Deep Phenotyping, Scientific Wellness, Disease Reversal & the Future of Health, 3rd Annual Reversal of Chronic Diseases Meeting, Howey-In-the-Hills, FL, February 2, 2019

194. Invited talk, P4 Medicine: Genomics, Informatics, Scientific Wellness & the Future of Health, Providence St. John's Conference: Riding the Waves of Primary Care, Maui, Hawaii, November 8, 2018

193. Invited talk, Computational analysis of dense phenotyping data from thousands of people, 2nd International Symposium of Human Phenomics, Fudan University, Shanghai, China, November 1, 2018

192. Invited talk, Computational analysis of dense phenotyping data from thousands of people, 1st International Symposium on Translational Systems Medicine, Shanghai Jiao Tong University, Shanghai, China, October 30, 2018

191. Invited talk, Proteomics Analysis in Context of Personal, Dense, Dynamic Data Clouds from Thousands of People,17th Human Proteome Organization World Congress, Orlando, FL, October 3, 2018

190. Invited talk, Microbiomes in the Context of Personal, Dense, Dynamic Data Clouds for Human Health, First Biennial Symposium of the Microbiome Research Initiative at Fred Hutch, Seattle, WA, September 18, 2018

189. Invited talk, Healthy Aging with Scientific Wellness, The Geriatric Patient Management Conference, Providence, Lynnwood, WA, September 14, 2018

188. *Opening Keynote,* Mining personal, dense, dynamic, data clouds to enhance health and drive biological discovery, Foundations of Systems Biology in Engineering (FOSBE) Bi-Annual Meeting, Chicago, IL, August 5, 2018

187. *Keynote*, Aging and cancers in the context of personal, dense, dynamic, data clouds, NIH Cancer and Accelerating Aging Workshop, Washington, D.C., July 25, 2018

186. *Opening Keynote*, Mining personal, dense, dynamic, data clouds to enhance health and drive biological discovery, International Society for Thrombosis and Hematology, Dublin, Ireland, July 18, 2018

185. Invited talk, Microbiomes in the context of personal, dense, dynamic, data clouds, Health and Environmental Sciences Institute (HESI) Microbiome Workshop, Washington, D.C., June 26, 2018

184. Seminar, Mining personal, dense, dynamic data clouds to enhance health and drive biological discovery, University of Washington, Data Science Seminar, May 30, 2018

183. Invited Talk, P4 Medicine and Scientific Wellness, Association for Women in Science Evening Meeting, Seattle, WA, May 16, 2018

182. Seminar, Mining personal, dense, dynamic data clouds to enhance health and drive biological discovery, Flatiron Institute, May 8, 2018

181. *Keynote*, Mining personal, dense, dynamic data clouds to enhance health and drive biological discovery, Northeastern University IEEE International Conference on Software Architecture, May 2, 2018

180. Seminar, Mining personal, dense, dynamic data clouds to enhance health and drive biological discovery, Johns Hopkins University, April 26, 2018

179. *Keynote*, Mining personal, dense, dynamic data clouds to enhance health and drive biological discovery Sage Assembly, Seattle, WA, April 20, 2018

178. *Keynote*, Mining personal, dense, dynamic data clouds to enhance health and drive biological discovery, Stanford University Biomedical Computation Conference (BCATS), Palo Alto, CA, April 19, 2018

177. Invited talk, Scientific Wellness: A home run for medicine's future, Spring Primary Care Conference at SafeCo Field, Seattle, WA, April 13, 2018

176. *Keynote*, New paradigms for biomarker discovery in the era of big data, Biomarkers Summit, San Diego, CA, February 28, 2018

175. Invited talk, Genome-scale metabolic network analysis for AD, Alzheimer's Disease Summit, National Institutes of Health, Bethesda, MD, March 1, 2018

174. Invited talk, Mining personal, dense, dynamic data clouds to enhance health and drive biological discovery, Molecular Tri-Con, San Francisco, CA, February 12, 2018

173. Invited talk, Mining personal, dense, dynamic data clouds for personalized nutrition insights, NIDDK Office of Nutrition Research Symposium , Washington, D.C., February 1, 2018

172. Seminar, Mining personal, dense, dynamic data clouds to enhance health and drive biological discovery, Boston University (Statistical Genetics), January 12, 2018

171. Invited talk, National Academy of Science Food Forum Workshop on Nutrigenomics, Washington, D.C, December 5, 2017

170. Invited talk, Roche Clinical Advisory Board Meeting, Zurich, Oct 27, 2017

169. Panel, Future of food and nutrigenomics, Cleveland Clinic's 2017 Medical Innovation Summit, Cleveland, OH, October 25, 2017

168. Panel, Scientific Wellness and the Future of Health, Personalized Lifestyle Medicine Institute Thought Leaders Conference, October 14, 2017

167. Invited talk, Systems analysis of omics data in pregnancy conditions, Keystone Symposia on Maternal-Fetal Cross Talk, Washington, D.C., October 7, 2017

166. Invited talk, Mining personal, dense, dynamic data clouds to enhance health and drive biological discovery, DigiMed, San Diego, CA, October 5, 2017

165. Invited talk, Systems Biology, Scientific Wellness, and the Future of Neuroscience, Genentech, San Francisco, CA, September 29, 2017

164. Seminar, Mining Personal, Dense, Dynamic Data Clouds to Enhance Health, Memorial Sloan Kettering Cancer Center, September 18, 2017

163. Invited talk, Microbiomes in the context of personal dense, dynamic, data clouds, Multi-Omics for Microbiomes, Pasco, WA, August 2, 2017

162. Grand Rounds, How scientific wellness will transform the future of health, Cleveland Clinic, Cleveland, OH, July 18

161. Panel, Artificial Intelligence: Opportunities and Challenges in Transforming the Biopharma Value Chain, BIO International Convention, San Diego, June 20, 2017

160. Invited talk, Scientific Wellness and Personalized Nutrition, Nature's Bounty Scientific Advisory Board meeting, New York, NY, May 16 2017

159. Invited talk, Mining dense, dynamic, personal data clouds to optimize health, Data-driven Biotechnology conference, Copenhagen, Denmark, May 10, 2017

158. *Keynote*, How scientific wellness will transform the future of (brain) health, Global Brain Health and Performance Summit, Ohio State University, Columbus, OH, April 27, 2017

157. Invited talk, Systems analysis of cancer and neurodegenerative disease, Allen Institute Symposium: The Nexus of Neurodegeneration and Cancer, Seattle, WA, April 19, 2017

156. Seminar, Mining personal, dense, dynamic, data clouds to enhance health, Oregon State University, Corvallis, OR, April 18, 2017

155. Invited talk, Systems analysis of omics data in pregnancy conditions, Society for Reproductive Investigation, Orlando, FL, March 16, 2017

154. Panel, Giving Back: How Returning Data Can Improve Health, SXSW, Austin, TX, March 14, 2017

153. Invited Talk, The Genome-enabled Present & Future, INMEGEN National Center for Genomics meeting, Mexico City, Mexico, March 8, 2017

152. Invited talk, Omics, big data, informatics and the future of medicine, Amgen, Thousand Oaks, CA, February 10, 2017

151. Invited talk, Mining personal, dense, dynamic data clouds for scientific wellness, International Life Sciences Institute (ILSI) Annual Meeting, San Diego, CA, January 24, 2017

150. Seminar, How scientific wellness will drive the future of health, Department of Chemical Engineering & Material Science, University of Southern California, Los Angeles, CA, January 12, 2017

149. Invited talk, Big Data Analyses for Optimizing Wellness & Minimizing Disease, Quantitative Systems Pharmacology meeting, San Francisco, December 7, 2016

148. Invited talk, Interpreting dense, dynamic, personal data clouds for precision health, World Precision Medicine Congress, Washington, D.C., November 15, 2016

147. Invited talk, How Scientific wellness will drive the future of health, Hyper Wellbeing Meeting, San Francisco, CA, November 14, 2016

146. *Grace A. Goldsmith Award Lecture*, Annual meeting of the American College of Nutrition, Scientific Wellness and the Future of Health and Nutrition, San Diego, November 9, 2016

145. Invited talk, Genomics, Big Data, Informatics, and the Future of Medicine, Swedish Medical Group Annual Meeting, Seattle, WA, October 29, 2016

144. Invited talk, Genomics, Big Data, Informatics, and the Future of Medicine, Personalized Lifestyle Medicine Institute Thought Leaders Conference, Phoenix, AZ, October 22, 2016

143. *Keynote*, Mining personal, dense, dynamic, data clouds to drive biological discovery, University of Chicago Postdoctoral Association Annual Meeting, Chicago, IL, October 18, 2016

142. *Keynote*, Actionable big data for proactive healthcare, Big Data in Life Sciences, Seattle, WA, October 2, 2016

141. Panel talk, Optimizing health and reducing disease through scientific wellness, Stanford Medicine X, Palo Alto, CA, September 18, 2016

140. Widely broadcast panel, Why personalized nutrition with revolutionize the way we approach health, MindBodyGreen Revitalize Meeting, Phoenix, AZ, September 17, 2017

139. Plenary talk, Genome-scale analysis of mRNA and miRNA regulation in preterm birth, Bioinformatics and Systems Biology Symposium, International Federation of Placental Associations, Portland, OR, September 14, 2016

138. Invited talk, A scientific wellness approach to improving pregnancy outcomes, Bioinformatics and Systems Biology Symposium, International Federation of Placental Associations, Portland, OR, September 14, 2016

137. Invited talk, Systems biology approaches to human wellness and disease, Earle A. Chiles Research Institute at Providence Cancer Center, Portland, OR, September 13, 2016

136. Plenary talk, The 100K Wellness Project: A data-rich longitudinal study for the digital age, 2nd International Summer Symposium on Systems Biology, INMEGEN, Mexico City, Mexico, August 2, 2016

135. Invited talk, Integrating longitudinal multi-omics data for personalized health, Intelligent Systems in Molecular Biology Annual Meeting, Orlando, FL, July 10, 2016

134. Keynote, Metabolic analyses in microbes and humans, Systems Modeling Meeting at the Intelligent Systems in Molecular Biology Annual Meeting, Orlando, FL, July 9, 2016

133. Seminar, Integrating longitudinal multi-omics data for personalized health, West Virginia University School of Medicine, Blacksburg, WV, June 21, 2016

132. Distinguished Seminar Series, The 100K Wellness Project: A data-rich longitudinal study for the digital age, Institute for Computational Medicine, Johns Hopkins University, Baltimore, MD, May 3, 2016

131. Invited talk, The 100K Wellness Project: Enhancing health via actionable big data, Takeda Pharmaceuticals meeting on Precision Medicine, Boston, MA, May 2, 2016

130. Plenary talk, The 100K Wellness Project: An integrative longitudinal study for the digital age, Presidential Symposium, American College of Nutrition, San Diego, CA, April 4, 2016

129. Invited talk, The 100K Wellness Project: Enhancing health via actionable big data, Molecular Medicine Tri-Con, San Francisco, CA, March 7, 2016

128. *50th Anniversary Lecture*, The 100K Wellness Project: A data-rich longitudinal study for the digital age, 50th Anniversary of the UCSD Bioengineering Department lecture, La Jolla, CA, January 29, 2016

127. Seminar, Harnessing longitudinal data to optimize wellness and reduce disease, Indian Institute of Science, Bangaluru, India, December 11, 2015

126. Invited lecture, Integrated mechanistic and statistical network analysis for metabolic engineering, Quantitative Systems Biology School, Bangaluru, India, December 10, 2015

125. Invited lecture, Integrated modeling of metabolic and gene regulatory networks: Introduction to methods, Quantitative Systems Biology School, Bangaluru, India, December 9, 2015

124. Invited lecture, Introduction to metabolic network reconstruction and modeling, Quantitative Systems Biology School, Bangaluru, India, December 8, 2015

123. R.A. Mashelkar Endowment Lecture, Harnessing longitudinal data to optimize wellness and reduce disease, National Chemical Laboratory, Pune, India, December 7, 2015

122. Plenary talk, A 360-degree view of you: Scientific Wellness and Precision Food, Panel on Revolutions in Healthcare: Impacts on the Future of the Food Industry, MIT Media Lab and Culinary Institute of America's ReTHINK Food conference, Napa Valley, CA, November 7, 2015

121. Invited talk, Panel Discussion on Precision Medicine, SINAInnovations meeting, Mt. Sinai Hospital, New York City, NY October 27, 2015, New York City, NY

120. Plenary talk, Genomics, Big Data, Informatics, and the Future of Medicine, Personalized Lifestyle Medicine Institute Thought Leaders Consortium, Chicago, IL, October 23, 2015

119. *Keynote*, Predicting and preventing disease: Lessons from the 100K Wellness Project, Gordon Research Conference, on Toxicity Andover, NH, August 10, 2015

118. Invited talk, Integrating multi-omic data analytics and health coaching to optimize wellness and minimize disease, 11th International Conference on Pathways, Networks, and Systems Medicine, Chania, Crete, Greece

117. Keynote, Integrating the principles of preventive and personalized medicine to advance wellness, The Clinical Genome Conference, San Francisco, CA, June, 22, 2015

116. Plenary talk, The 100K person wellness project: A data-rich longitudinal study for the digital age, Institute for Functional Medicine Annual Conference, Austin, TX, May 30, 2015

115. Invited talk, Integrated mechanistic and statistical network modeling for metabolic engineering, Cell Factories and Biosustainability Conference, Copenhagen, Denmark, May 18, 2015

114. Invited talk, The 100K person wellness project: A data-rich longitudinal study for the digital age, Technology Alliance Symposium on Big Data in Washington State, Seattle, WA, March 3, 2015

113. Invited talk, From genomics to health actionability: the 100(K) person wellness project, Public Health Genomics Symposium, Seattle, WA, January 28, 2015

112. Session Keynote, The 100K Person Wellness Project: A Data-rich Longitudinal Study for the Digital Age, Pacific Symposium on Biocomputing – Personalized Medicine Session, Kona, Hawaii, January 7, 2015

111. Seminar, Integrative data analysis for biology, medicine, and wellness, Columbia University, December 10, 2014

110. Invited talk, The 100K Person Wellness Project: A Data-rich Longitudinal Study for the Digital Age, Association of Academic Health Centers Annual Meeting, December 4, 2014

109. Seminar, Integrative data analysis for biology, medicine, and wellness, Washington University, St. Louis, MO, December 2, 2014

108. *Keynote*, Systems approaches to diagnostics, Amgen Biomarker Symposium, Thousand Oaks, CA, September 19, 2014

107. *Keynote*, Integrating the Principles of Preventative and Personalized Medicine to Advance Wellness, Leaders in BioBanking Congress, Seattle, WA, September 15, 2014

106. Invited talk, Metabolic Reconstruction of Methanogenic Archaea, Gordon Research Conference on Molecular Basis of Microbial One-Carbon Metabolism, South Hadley, MA, August 12, 2014

105. *Keynote*, Generating Tailored Solutions from Big Data: In Silico Modeling of Biological Networks, Annual Meeting of Health and Environmental Sciences Initiative, Washington, D.C., June 11, 2014

104. Seminar, Harnessing omics data for biological and medical discovery, Department of Molecular and Cellular Biology, Dartmouth College, Hanover, NH, June 3, 2014

103. Invited talk, Integrated analytics for health and omics analysis of astronauts before, during, and after extended space travel, NASA-CASIS Biomedical Research Symposium, Columbia University, May 28, 2014

102. Invited talk, Reconstruction, refinement, and relevance of metabolic networks, 3rd Constraint-based Reconstruction and Analysis (COBRA) Meeting, Charlottesville, VA, May 23, 2014

101. *Keynote*, Systems approaches to P4 Medicine across multiple diseases, Sleep Apnea Genetics International Consortium Annual Meeting, San Diego, CA, May 16, 2014

100. Invited talk, Computational biology and *in silico* modeling, Bill & Melinda Gates Foundation-Global Alliance to Prevent Prematurity and Stillbirth Workshop, April 28, 2014

99. Plenary talk, Harnessing omics data for biological and medical discovery, UT-KBRIN Bioinformatics Summit, Lake Barkley State Park, KY

98. Seminar, Multi-Omic Interrogation of Perturbed Networks in Cancer, Dana Farber Cancer Institute, Harvard Medical School, April 2, 2014

97. Invited talk, Modeling and simulating cellular networks, MITRE Comporation Meeting, McLean, VA, March 26, 2014

96. Invited talk, Integrative modeling of metabolic and regulatory networks, Advanced Lecture Course on Systems Biology, Innsbruck, Austria, March 4, 2014

95. Invited talk, Challenges in Translational Omics: Strategies for Success, Personalized Medicine World Congress, Palo Alto, CA, January 21, 2014

94. Seminar, Biomolecular network analysis of biological and medical discovery, Duke Center for Systems Biology & Duke Institute for Genome Sciences and Policy, Duke University, Durham, NC, November 18, 2013

93. Seminar, Harnessing big data for biological and medical discovery, Department of Biochemistry, Baylor College of Medicine, Houston, TX, November 7, 2013

92. Seminar, Integrated statistical and mechanistic modeling for systems biology, Department of Chemical Engineering, Princeton University, Princeton, NJ, October 23, 2013

91. Invited talk, New computational technologies for RNA sequencing and multi-network integration, 2nd Annual Systems Biomedicine Symposium, Luxembourg, Oct 22, 2013

90. Invited talk, Biomolecular networks in the brain, International Workshop on Bioinformatics and Systems Biology, Kyoto, Japan, July 20, 2013

89. Invited talk, Biomolecular networks in the brain, Luxembourg-ISB Partnership Symposium, Luxembourg, June 10, 2013

88. *Keynote*, Harnessing Big Data to Drive Innovation in Biology and Medicine, Amgen Innovation Summit, Seattle, WA, (video broadcast also to Thousand Oaks, CA campus), May 16, 2013

87. *Keynote*, Harnessing Big Data for Biological and Medical Discovery, 1st Annual Big Data in Biology Symposium, University of Texas, Austin, TX, May 10, 2013

86. Invited talk, Challenges in Translational Omics: Strategies for Success, American Association of Clinical Chemists, April 19, 2013

85. Seminar, Integrated statistical and mechanistic models for biological and medical discovery, Food and Drug Administration, Washington, D.C., February 26, 2013

84. Invited talk, Integrated statistical and mechanistic models for biological and medical discovery, Symposium on Quantitative Approach to Biological Complexity, Pohang, Korea, February 18, 2013

83. Invited talk, Molecular Medicine Tri-Con, Feb. 14, 2013, San Francisco, CA

82. *Session keynote*, Identification of perturbed networks from high-throughput data, Pacific Symposium on Biocomputing, January 6, 2013

81. Invited talk, Systems approaches to molecular diagnostics, Zing Conference on Mathematical and Computational Medicine, December 4, 2012

80. *Theodore L. Badger Lecture in Network Medicine*, Network medicine approaches to disease, Channing Division of Network Medicine, Harvard Medical School, November 13, 2012

79. Invited talk, Educational experiences provided via the Illinois IGEM team, Camille Dreyfus Teacher-Scholars Symposium: "Research Frontiers in the Chemical Sciences," October 26, 2012

78. Seminar, Integrated network modeling for human health and disease, Mayo Clinic, Rochester, MN, October 19, 2012

77. Invited talk, Reproducibility of inter-lab studies with omics data, NCI Director's Workshop of Data Reproducibility, Bethesda, MD, September 14, 2012

76. Invited panelist, The Coming Future of Precision Medicine, Milken Institute-Sponsored Celebration of Science, Washington, D.C., September 9, 2012

75. Seminar, Integrated analysis of genome-scale biomolecular networks, Vancouver Bioinformatics User Group, University of British Columbia, Vancouver, Canada, September 20, 2012

74. Seminar, Integrated analysis of genome-scale biomolecular networks, Vancouver Bioinformatics User Group, University of British Columbia, Vancouver, Canada, September 20, 2012

73. Invited talk, Systems approaches to disease diagnosis, Short Course Introduction to Systems Biology, Seattle, WA, August 10, 2012

72. Invited talk, Integrated modeling of genome-scale metabolic and transcriptional regulatory networks, National Centers for Systems Biology Annual Meeting, Chicago, IL, July 20, 2012

71. Invited talk, Integrated modeling of genome-scale metabolic and transcriptional regulatory networks, Canadian Society of Microbiology annual meeting, Vancouver, Canada, June 23, 2012

70. Seminar, Integrated analysis of genome-scale biomolecular networks, Simon Fraser University, Vancouver, Canada, June 22, 2012

69. Invited talk, Integrated modeling of genome-scale metabolic and transcriptional regulatory networks, Aegean Pathways, Networks, and Systems Medicine Meeting, Rhodes, Greece, June 13, 2012

68. Invited talk, Systems approaches to disease diagnostics, Center for Clinical and Translational Science Annual Scientific Meeting, Ohio State University, May 18, 2012

67. Seminar, Integrated analysis of genome-scale biomolecular networks, Seattle BioMed, Seattle, WA April 9, 2012

66. Seminar, Systems analysis of gene expression in the brain, Center for Sleep and Circadian Neurobiology, University of Pennsylvania Medical School, January 13, 2012

65. Seminar, Integrated analysis of genome-scale biomolecular networks, Department of Chemical Engineering, Rice University, TX, September 20, 2011

64. Invited talk, Integrated modeling of metabolic and transcriptional regulatory networks, Energy Biosciences Institute Symposium, Urbana, IL, October 1, 2011

63. Seminar, Integrated analysis of genome-scale biomolecular networks, Department of Chemical Engineering, University of Texas, Austin, TX, September 20, 2011

62. Invited Talk, Probabilistic modeling of integrated biomolecular networks, Metabolic Pathways Workshop, International Conference on Systems Biology, September 3, 2011

61. Invited Talk, Integrative modeling of regulatory and metabolic networks, DOE workshop on Genomics Driving Modeling in Biology, Park City, UT, July 27, 2011

60. Invited Talk, Systems and network-based approaches to genomic medicine, NHLBI Genomic Medicine and Lung Diseases Workshop, Bethesda, MD, July 18, 2011

59. Seminar, Systems approaches for glioma research, Neuro-Oncology Group, Mayo Clinic, Rochester, MN, June 20, 2011

58. Keynote talk, Genomics-enable science for medicine, energy, and the environment, University of Illinois Alumni Event, Seattle, WA, May 18, 2011

57. Seminar, Model-guided discovery for systems biology and medicine, Department of Bioengineering, University of Washington, Seattle, WA, May 17, 2011

56. Seminar, Integrated network models to link genotype and phenotype, Department of Chemical Engineering, University of California, Santa Barbara, May 12, 2011

55. Seminar, Integrated network models to link genotype and phenotype, Department of Physiology & Biophysics, Case Western Reserve University, Cleveland, OH, May 9, 2011

54. Invited Talk, Integrated modeling of metabolic and regulatory networks, Metabolic Pathways Workshop, University of Edinburgh, Edinburgh, Scotland, UK, April 7, 2011

53. Seminar, Microbial systems biology for energy and the environment, Institute for Systems Biology, Seattle, WA, March 14, 2011

52. Seminar, Systems approaches to disease diagnostics and perturbed network identification, School of Informatics, Indiana University, IN, Apr 22, 2011

51. Seminar, Systems approaches to disease diagnostics and perturbed network identification, SomaLogic, Inc., Boulder, CO, Feb 28, 2011

50. Invited talk, Automated approaches to building integrated regulatory and metabolic models, Workshop on Environmental Systems Biology, Seattle, WA, January 10, 2011

49. Tutorial, Integrative –omics for translational science, Pacific Symposium on Biocomputing, Hawaii, January 3, 2011

48. Seminar, Argonne National Laboratory, Integrated modeling of genome-scale biomolecular networks, December 2, 2010

48. Invited Talk, International Conference on Systems Biology, Metabolic Pathways Workshop, Edinburgh, Scotland, UK, October 15, 2010

47. Invited Talk, NSF Workshop on Marine Microbiology, Washington, D.C., October 11, 2010

46. Seminar, Center for Pharmaceutical Biotechnology, University of Illinois, Chicago, September 23, 2010

45. Seminar, Department of Bioengineering, University of Illinois, Urbana-Champaign, IL, September 2, 2010

44. Department of Defense Microbial Data Integration Workshop, Lawrence-Berkeley National Labs, Berkeley, CA, August 12, 2010

43. Systems Biology Short Course, Systems approaches to disease stratification, Institute for Systems Biology, Seattle, WA, August 6, 2010

42. 8$^{th}$ International Aegean Conference on Pathways, Networks, and Systems Medicine, Rhodes, Greece, July 12, 2010

41. Institute for Systems Biology Retreat, Spatial expression patterns of cell-type specific genes in the brain, June 19, 2010

40. Panelist Speaker, Personalized Medicine Symposium, Research Triangle Park, Durham, NC, June 15, 2010

39. Translation Biomedical Research Seminar, University of Illinois, Systems approaches to disease diagnosis and prognosis, April 5, 2010

38. Seminar, Genome Institute of Singapore, Systems approaches to disease stratification, Jan. 21, 2010

37. Seminar, Institute of Chemical and Engineering Sciences, Singapore, Model-guided cellular engineering for biotechnology and bioenergy, Jan. 20, 2010.

36. *Keynote address*, Systems biology approaches to embryogenesis, International Embryo Transfer Society Annual Meeting, Cordoba, Argentina, January 11, 2010

35. Seminar, Systems medicine approaches to disease diagnosis and prognosis, Department of Genetics, Case Western Medical School, Dec. 9, 2009

34. *Keynote address*, Genome-scale *in silico* models: applications in biotechnology and biomedicine, Metabolic Pathway Analysis Workshop, Leiden, Netherlands, Oct 29, 2009

33. Invited talk, Human disease diagnosis and prognosis using relative expression analysis, IEEE Engineering in Medicine and Biology Meeting, Minneapolis, MN, Sept 5, 2009

32. Invited talk, Systems approaches to disease stratification, Institute for Systems Biology, Seattle, WA, August 3, 2009

31. Seminar, Relative expression analysis for cancer diagnosis and perturbed network identification, Mathematical Biology Seminar, Department of Mathematics, University of Illinois, Urbana, IL, April 2, 2009

30. Invited talk, Relative expression analysis for cancer diagnosis and perturbed network identification, International Conference on Biomedical Engineering (special Systems Biology session sponsored by Eli Lily), Singapore, December 5, 2008

29. Seminar, Relative expression analysis for cancer diagnosis and perturbed network identification, Physics of Living Cells Seminar, Department of Physics, University of Illinois, Urbana, IL, October 31, 2008

28. Invited talk, Relative expression analysis for cancer diagnosis and perturbed network identification, Institute for Operations Research and The Management Sciences (INFORMS) Annual Meeting, Washington, D.C., October 14, 2008

27. Invited talk, Tutorial on Constraint-based Reconstruction and Analysis of Genome-Scale Biochemical Networks, IEEE Genomics and Signal Processing (GENSIPS) meeting, Phoenix, AZ, June 8, 2008

26. Invited talk, Towards the engineering of *Clostridium beijerinckii* for improved bio-butanol production, Governmental Forum, Chinese Academy of Sciences, Shanghai, China, April 17, 2008

25. Invited talk, Model-guided Cellular Engineering, Partner Institute for Computational Biology, Chinese Academy of Sciences, Shanghai, China, April 16, 2008

24. Seminar, Systems biology in medicine: applications to anemia, diabetes, and cancer, John Hopkins University, Institute for Computational Medicine, Baltimore, MD, February 8, 2008

23. Seminar, Systems biology in medicine: applications to anemia, diabetes, and cancer, Purdue University Department of Statistics Seminar, West Layfayette, IN, February 5, 2008

22. Seminar, Relative expression analysis for cancer diagnosis and prognosis, Information Theory and Applications Meeting, University of California, San Diego, January 31, 2008

21. Seminar, Systems biology in medicine: applications to anemia, diabetes, and cancer, University of Illinois Department of Statistics Seminar, December 6, 2007

20. Invited talk, Computational challenges for systems biology and personalized medicine, DOE Frontiers in Extreme Computing Workshop, Santa Cruz, October 22, 2007

19. Invited talk, Relative expression classifiers for cancer diagnosis and prognosis, National Cancer Institute Nanotechnology Alliance Investigators Meeting, October 18, 2007

18. Invited talk, Relative expression molecular signatures of cancer diagnosis and prognosis, Biomedical Engineering Society Annual Meeting, Los Angeles, CA, Sept. 27, 2007

17. Invited talk, Computational challenges in systems biology, Argonne National Lab Town Hall Meeting: Simulation and Modeling at the Exascale for Energy, Ecological Sustainability and Global Security, Argonne, IL, May 31, 2007

16. Invited talk, Marker pairs for highly-accurate cancer diagnosis, Institute for Systems Biology Board of Directors Meeting, Seattle, WA, May 16, 2007

15. Invited talk, Simple two-gene test to accurately differentiate gastrointestinal stromal tumor and leiomyosarcoma, National Cancer Institute Site Visit for the Nanosystems Biology Cancer Center, California Institute of Technology, Pasadena, CA, Mar. 28, 2007

13. Seminar, Systems biology in medicine: applications to anemia, diabetes, and cancer, Chemical Engineering Department Seminar, Brigham Young University, Mar 22, 2007

12. Invited talk, Molecular signatures to diagnose cancer and inform treatment choice, Nanosystems Biology Cancer Center Retreat, Ventura, CA, Feb. 24, 2006

11. Invited talk, Molecular signatures to identify causal network perturbations: a case study in *Halobacterium*, Nanosystems Biology Cancer Center Retreat, Ventura, CA, Feb. 23, 2006

10. Invited talk, Molecular signatures for cancer diagnosis and target identification, Aegean Conferences: Pathways, Networks, and Systems IV, Mykonos, Greece, Oct. 2006

9. Invited talk, Glioblastoma diagnosis and drug target identification using systems analysis of blood: A vision for the future, Pacific Northwest Brain Tumor Alliance VC Meeting, Seattle, WA, Apr. 2006

8. Invited talk, Gene expression markers to predict outcome of chemotherapy in ovarian cancer, Pacific Ovarian Cancer Research Consortium External and Internal Advisory Meeting, Seattle, WA, Apr. 2006

7. Invited talk, Glioblastoma diagnosis and drug target identification using systems analysis of blood: A vision for the future, Nanosystems Biology Cancer Center Retreat, Ventura, CA, Apr. 2006

6. Invited talk, Comprehensive assessment of genome-scale metabolic network states under physico-chemical constraints, Institute for Systems Biology, Oct. 2005, Seattle, WA

5. Seminar, Assessing the capabilities of genome-scale metabolic networks, University of Virginia, Department of Chemical Engineering, Mar. 2005, Charlottesville, VA

4. Seminar, Assessing the capabilities of genome-scale metabolic networks, Georgia Institute of Technology, Department of Chemical and Biomolecular Engineering, Feb. 2005, Atlanta, GA

3. Seminar, Assessing the capabilities of genome-scale metabolic networks, Cornell University, Department of Biomedical Engineering, Feb. 2005, Ithaca, NY

2. Seminar, Assessing the capabilities of genome-scale metabolic networks, University of Illinois at Urbana-Champaign, Department of Chemical and Biomolecular Engineering, Jan. 2005, Urbana, IL

1. Seminar, Genome-scale models of metabolism: evaluating the consequences of constraints, Institute for Systems Biology, Jan. 2005, Seattle, WA

Podcasts and Interviews

69. "Our 100th Episode: How to Live to 100 and Beyond", Thone's Take 5 Daily Podcast, hosted by Dr. Robert Rountree, July 25, 2024, https://www.thorne.com/take-5-daily/podcast/how-to-live-to-100-and-beyond

68. "Nathan Price: Scientific Wellness and AI at the Forefront", We're Not Getting Any Younger...Yet. Podcast hosted by Gordon Lithgow at the Buck Institute, July 24, 2024, https://podcasts.apple.com/us/podcast/were-not-getting-any-younger-yet/id1650690747

67. "Regulations on at-home medical tests", live interview on Scripps NewsLine, June 24, 2024, https://video.snapstream.net/Play/8YislfHLjNMIb7Q8Tfce03?accessToken=dn0e5dg7fed9j

66. "#252 - Nathan Price, PhD and Leroy Hood, MD, PhD: The Age Of Scientific Wellness, Genome Sequencing, Genetic Risks Vs. Lifestyle Risks, Alzheimer's & Anti-Amyloid Therapies, Disease Processes, Direct To Consumer Testing, And More!", The Melanie Avalon Biohacking Podcast, May 31, 2024, https://podcasts.apple.com/us/podcast/252-nathan-price-phd-and-leroy-hood-md-phd-the/id1474706111?i=1000657372456

65. "The Emerging Science of Wellness with Nathan Price, PhD | MGC Ep. 69", The Mind Gut Conversation Podcast, hosted by Emeran Mayer, MD, May 19, 2024, https://emeranmayer.com/podcast/the-emerging-science-of-wellness-with-nathan-price-phd/

64. "Episode 5: Nathan Price on scientific wellness and a Mojito", The Translational Mixer, hosted by Andy Marshall and Juan-Carlos Lopez, May 1, 2024, https://podcasts.apple.com/us/podcast/episode-5-nathan-price-on-scientific-wellness-and-a-mojito/id1723766599?i=1000654143767

63. "The Age of Data Driven Wellness is Here", Episode 78, Sapio, hosted by Buck Joffrey, MD, April 8, 2024, https://sapiopodcast.com/posts/78-the-age-of-data-driven-wellness-is-here/

62. "Episode 2: Revolutionizing Health: Unleashing the Power of Personalized Medicine and Digital Twins with Dr. Nathan Price", The DNA of Things, hosted by Jeremy Koenig, April 7, 2024, https://podcasts.apple.com/us/podcast/episode-2-revolutionizing-health-unleashing-the-power/id1738771019?i=1000652702138

61. "Dr. Nathan Price on Alzheimers, Digital Twins, and the Future of Medicine in the Age of AI", Podcast, Biomedical Frontiers: Stories with Innovators in Healthcare by Dasha Tyshle, March 13, 2024, https://rss.com/podcasts/biomedicalfrontiers/1388277/ and https://www.youtube.com/watch?v=dZaAKN3tmp4

60. "Artificial Intelligence Meets Healthcare with special guest Nathan Price, PhD", The Dr. Pat Show, hosted by Dr. Pat Baccili, March 13, 2024, https://www.transformationtalkradio.com/show/episodes/view/35958

59. "031024-NATHAN MORRIS", The Way Home with Laura Smith, March 10, 2024, Segment runs from 28:46 to 36:49, https://omny.fm/shows/the-way-home-with-laura-smith/031024-nathan-morris#description

58. "Using AI to Identify Early Signs of Diseases with Thorne", Into Tomorrow with Dave Graveline, March 8, 2024, https://intotomorrow.com/using-ai-to-identify-early-signs-of-diseases-with-thorne/

57. "American Dream: Your Perfect Spring Break! Attorney Brooke Goff Talks Motherhood While Running an Empire; Scientific Wellness", Passport Mommy Podcast hosted by Michelle Jerson, March 7, 2024, Segment runs from 32:30 to 38:00, https://podcasts.apple.com/us/podcast/american-dream-your-perfect-spring-break-attorney-brooke/id1439090930?i=1000648389397

56. "AI in Our Everyday Life", Tell Me More Podcast, hosted by Carol Holloway, March 4, 2024, Segment runs from 23:46 to 43:23, https://wwdbam.com/episodes/tell-me-more-with-carol-holloway-ai-in-our-everyday-life-03-04-24/

55. "Dr. Nathan Price and Scientific Wellness", The Daily Focus Podcast, WISR 680AM, hosted by Tyler Friel, March 4, 2024, https://podcasters.spotify.com/pod/show/wisr/episodes/Dr--Nathan-Price-and-Scientific-Wellness-e2gkl93

54. "The Dr. Daliah Show Wednesday February 28 2024 Hour 2", The Dr. Daliah Show, February 28, 2024, Segment runs from 13:30 to 23:45, https://podcasts.apple.com/us/podcast/the-dr-daliah-show-wednesday-february-28-2024-hour-2/id1595946675?i=1000647436320

53. "Precision Medicine via AI Health Simulations | Nathan Price PhD of Thorne HealthTech", Wise Athletes Podcast, hosted by Joe Lavelle, February 16, 2024, https://www.wiseathletes.com/podcast/126-precision-medicine-via-ai-health-simulations-nathan-price-phd-of-thorne-healthtech/

52. "AI, Digital Twins, and the Future of Personalized Medicine Interventions with Dr. Nathan Price", New Frontiers in Functional Medicine Podcast, hosted by Dr. Kara Fitzgerald, February 16, 2024, https://www.drkarafitzgerald.com/2024/02/14/ai-digital-twins-and-the-future-of-personalized-medicine-interventions-with-dr-nathan-price/

51. "An Ounce of Prevention is Worth a $4 Trillion Dollars of the Cure", The Cost of Care Podcast, hosted by David Smith, January 17, 2024, https://omny.fm/shows/the-cost-of-care-1/an-ounce-of-prevention-is-worth-a-4-trillion-dolla

50. "Thorne HealthTech Insights: Nathan Price on the Fusion of Science, Technology, and Wellness", HealthTech With Purpose, hosted by Ayush Jain, December 11, 2023, https://www.youtube.com/watch?v=LDZ-SkZ2rxc

49. "The US Health System Has Forgotten About Alzheimer's Patients", The Cost of Care Podcast, hosted by David Smith, November 9, 2023, https://omny.fm/shows/the-cost-of-care-1/the-us-health-system-has-forgotten-about-alzheimer

48. "Brain Health in Scientific Wellness" Dr Nathan Price, Episode 3, Modern Healthspan Podcast, September 25, 2023, https://www.youtube.com/watch?v=nlBrfH2UVHs

47. "Surprising Results We Saw From The Scientific Wellness Studies", Dr Nathan Price, Episode 2, Modern Healthspan Podcast, September 25, 2023, https://www.youtube.com/watch?v=PjJz3pGVAps

46. "Optimize Healthspan With Scientific Wellness" Dr Nathan Price, Episode 1, Modern Healthspan Podcast, September 25, 2023, https://www.youtube.com/watch?v=k5qg_JUX4mM

45. "The Next Revolution In Medicine: Scientific Wellness, AI And Disease Reversal", The Doctor's Farmacy Podcast hosted by Mark Hyman, Episode 782, September 20, 2023, https://drhyman.com/blog/2023/09/20/podcast-ep782/

44. "'Healthier For Longer': Thorne HealthTech Is Pointing The Way", Hedgeye Webcast, September 5, 2023, https://app.hedgeye.com/insights/138835-webcast-healthier-for-longer-thorne-healthtech-pioneering-a-better?type=guest-interviews%2Cmarket-insights

43. "Reverse Cancer, Avoid Alzheimer's, Decrease Your Biological Age: The Future of Healthcare & How to Take Full Advantage with Dr. Leroy Hood & Dr. Nathan Price", The Liz Moody Podcast, Healthier Together, Episode 191, August 2023, https://www.lizmoody.com/healthiertogetherpodcast-leroy-hood-nathan-price/

42. Reddit Ask Me Anything (AMA) Session, Virtual, July 26, 2023, https://www.reddit.com/user/thornehealth/comments/155se7d/im_dr_nathan_price_chief_scientific_officer_at/

41. "Healthspan Revolution: Extending Vital Years of Quality Living | Dr. Leroy Hood and Dr. Nathan Price", The Lindsey Elmore Show, July 25, 2023, https://podcasts.apple.com/us/podcast/healthspan-revolution-extending-vital-years-of/id1496692066?i=1000622222763

40. "The Future of Medicine, with Dr. Leroy Hood and Dr. Nathan Price", Keeping It Real: Conversations with Jillian Michaels, July 17, 2023, https://podcasts.apple.com/pg/podcast/the-future-of-medicine-with-dr-leroy-hood-and-dr-nathan-price/id418368811?i=1000621360574

39. "Dr. Lee Hood & Dr. Nathan Price", Invisible Machines S2E3, Invisible Machines podcast by UX Magazine, July 13, 2023, https://www.youtube.com/watch?v=rrrEu5TNqFg

38. "The Future of Medicine: What You Need to Know", Episode 360: Scientific Wellness — Leroy Hood and Nathan Price on Why the Future of Medicine Is Personalized, Predictive, Data-Rich and in Our Hands, The Michael Sermer Show, June 20, 2023, https://www.skeptic.com/michael-shermer-show/leroy-hood-nathan-price-future-of-scientific-wellness-personalized-predictive-data-rich/

37. "What is Scientific Wellness", Healthy Tips After 50 Podcast hosted by Susan Rosin, June 17, 2023, https://healthytipsafter50.com/scientific-wellness/

36. "Lee Hood & Nathan Price (on the future of medicine)", Armchair Expert with Dax Shepard, June 8, 2023, https://armchairexpertpod.com/pods/lee-hood-and-nathan-price

35. "Scientific Wellness: How to use your blood, your genes, and AI to help you live longer with Dr. Nathan Price", Episode 432, Smart People Podcast, June 5, 2023, https://www.smartpeoplepodcast.com/episode/episode-432-scientific-wellness-how-to-use-your-blood-your-genes-and-ai-to-help-you-live-longer-with-dr-nathan-price/

34. "Scientific Wellness: Healthcare in Our Hands with Nathan Price PhD", Harvesting Happiness Talk Radio with Lisa Cypers Kamen, May 31, 2023, https://podcasts.apple.com/us/podcast/scientific-wellness-healthcare-in-our-hands-with/id405336362?i=1000615070697

33. "The Age of Scientific Wellness: Why the Future of Medicine Is Personalized, Predictive, Data-Rich, and in Your Hands", Inside The War Room hosted by Ryan Ray, May 24, 2023,

https://podcasts.apple.com/us/podcast/the-age-of-scientific-wellness-why-the-future/id1566250068?i=1000614314934
32. "Making Optimal Well+being Predictable" 33 Voices with Moe Abdou, https://33voices.com/interviews/nathan-price/

31. "Leroy Hood & Nathan Price | Personalized Predictive Health In 'The Age of Scientific Wellness'", Episode 395, The Armen Show Podcast hosted by Armen Shirvanian, May 9, 2023, http://www.armenshirvanian.com/podcast/395-leroy-hood-nathan-price-personalized-predictive-health-in-the-age-of-scientific-wellness/

30. "Coaching in an Age of Scientific Wellness", Fresh From FMCA: The Health Coaching Podcast hosted by Dr. Sandra Scheinbaum, May 04, 2023, https://podcasters.spotify.com/pod/show/fmca/episodes/Coaching-in-an-Age-of-Scientific-Wellness-e23gqjn

29. "Is predictive, personalized treatment the future of medicine?", UnDisciplined podcast hosted by Matthew LaPlante, April 27, 2023, https://www.upr.org/show/undisciplined/2023-04-27/undisciplined-is-predictive-personalized-treatment-the-future-of-medicine

28. "From Illness to Wellness - Can Science Tell Us How Healthy We Really Are (Part I)?? Dr. Leroy Hood and Dr. Nathan Price", Episode E23017, BioTech Nation hosted by Dr. Moira Gunn, April 26, 2023, https://www.biotechnation.com/episodes/well-well-wellness

27. "Dr. Leroy Hood + Dr. Nathan Price—How Assessing Biological Age Improves Wellness" Longevity by Design Podcast hosted by Dr. Gil Blander, Produced by Inside Tracker, April 26, 2023, https://podcasts.apple.com/us/podcast/dr-leroy-hood-dr-nathan-price-how-assessing-biological/id1566067452?i=1000610707893

26. "How scientific wellness is changing medicine | Dr. Leroy Hood and Nathan Price", 40+ Fitness Podcast hosted by Allan Misner, April 18, 2023, https://40plusfitnesspodcast.com/how-scientific-wellness-is-changing-medicine-dr-leroy-hood-and-nathan-price/

25. "The Age of Scientific Wellness: Why the Future of Medicine Is Personalized, Predictive, Data-Rich, and in Your Hands | Nathan Price", Episode #112, Mind & Matter podcast hosted by Nick Jikomes, April 13, 2023, https://mindandmatter.substack.com/p/the-age-of-scientific-wellness-why-939#details

24. "Dr. Leroy Hood and Dr. Nathan Price, Co-Authors of 'The Age of Scientific Wellness'", BioTalk Podcast hosted by Rich Bendis, April 10, 2023, https://www.biohealthinnovation.org/biohealth-news/biotalk-with-rich-bendis-podcast/14371-the-biotalk-podcast-welcomes-dr-leroy-hood-and-dr-nathan-price-co-authors-of-the-age-of-scientific-wellness

23. "Welcome to the Age of Scientific Wellness: Nathan Price on why the future of medicine will be personalized, predictive, data-rich, and in all of our hands", Keen On Podcast hosted by Andrew Keen, April 4, 2023, https://podcasts.apple.com/us/podcast/welcome-to-the-age-of-scientific-wellness-nathan/id1448694012?i=1000607418793

22. "The Future of Medicine is Personalized, Predictive, and in Your Hands! Dr. Leroy Hood & Dr. Nathan Price", The James Altucher Show, recorded March 18, 2023, released March 23, 2023, https://jas.simplecast.com/episodes/963-leroy-hood-nathan-price-bfjhR36L

21. "Sneak Peak Into The Future Of Medicine: Personalized, Predictive, Data-Rich and In The Palm Of Your Hands: Dr Lee Hood and Nathan Price", Anti-Aging Hacks Podcast hosted by Faraz Khan, recorded March 9, 2023, released April 6, 2023 https://antiaginghacks.libsyn.com/sneak-peak-into-the-future-of-medicine-personalized-predictive-data-rich-and-in-the-palm-of-your-hands-dr-lee-hood-and-nathan-price

20. "Scientific Wellness and Modernizing Healthcare Through Data and AI", Interviewed for Nasdaq Trade Talks, March 1, 2023, https://www.nasdaq.com/videos/scientific-wellness-and-modernizing-healthcare-through-data-and-ai

19. "The Age Of Scientific Wellness: Bringing In More Precision And Scientific Rigor To Modern Medicine", Beyond Publications Podcast hosted by Scott Wagers, recorded January 13, 2023, released March 31, 2023, https://www.biosciconsulting.com/interviews/the-age-of-scientific-wellness-bringing-in-more-precision-and-scientific-rigor-to-modern-medicine-with-dr-nathan-price-thorne-healthtech-8yO1l

18. "January 2023 Forum: Kicking off Year of Connection", Functional Forum presented by Evolution of Medicine, hosted by James Maskell, January 9, 2023, https://www.functionalforum.com/articles/january-2022-forum-kicking-off-a-year-of-connection

17. "Dangers of Taking Health Advice From TikTok", Cheddar News Live Interview, November 4, 2022, https://cheddar.com/media/dangers-of-taking-health-advice-from-tiktok

16. "Nathan Price: Chronic Diseases, Preventative Care & Polygenic Risk Scores", The Joe Cohen Show, Episode 08, November 11, 2022, https://anchor.fm/joe-cohen9/episodes/Nathan-Price-Chronic-Diseases--Preventative-Care--Polygenic-Risk-Scores--Episode-08-e1qjbtj/a-a8ri0nd

15. "Thorne Health Tech – Gut Health Tests and the Microbiome", Health Professional Radio, hosted by Neal Howard, August 2, 2022, https://healthprofessionalradio.com.au/thorne-health-tech-gut-health-tests-and-the-microbiome/

14. Interviewed for, "#Guttok has over 500 million views on TikTok: Why gut health keeps trending and why it's important" article by Renée Onque, CNBC Make It, July 30, 2022, https://www.cnbc.com/2022/07/30/guttok-4-ways-to-support-or-improve-your-gut-health.html

13. "Thorne's Microbiome Wipe adds convenience to gut health testing" NutraCast , produced by NUTRAingredients-usa.com hosted by Danielle Masterson, July 15, 2022, https://www.nutraingredients-usa.com/Article/2022/07/15/nutracast-thorne-s-microbiome-wipe-adds-convenience-to-gut-health-testing#

12. "How Tech is Deepening our Understanding of Biomarkers." Reverse Disease with Personalized Nutrition hosted by Adigo Atabo, January 24, 2022, https://personalizednutrition.byhealthmeans.com/

11. "How Systemic Factors Impact Health." Reverse Disease with Personalized Nutrition hosted by Adigo Atabo, January 24, 2022, https://personalizednutrition.byhealthmeans.com/

10. “Wellness, Redefined in the Age of COVID-19.” Webinar, Inc. and Thorne HealthTech moderated by Abigail Bassett, Inc. Studio, December 16, 2021, https://www.inc.com/thorne/wellness-redefined-in-the-age-of-covid.html

9. “Metabolism, Aging, Microbiome, Blood Sugar, Diet & Personalized Medicine.” Mind & Matter Podcast with Nick Jikomes, Episode 47, December 2, 2021, Video: https://youtu.be/r_E1I8gEkIA; Audio Only: https://www.nickjikomes.com/audio-episodes/episode/4a287ebe/nathan-price-metabolism-microbiome-blood-sugar-aging-diet-digital-phenotyping-and-personalized-medicine-or-47

8. “Can your genes tell you what you should eat?” Talk To Me About Food podcast with Ali Tadlaoui, Episode 13, September 15, 2020, https://www.talktomeaboutfood.com/

7. “How to slow down or reverse your biologic age with Agebio.” Wild Health podcast with Matt Dawson and Mike Mallin, Episode 146, August 31, 2020, https://wildhealth.libsyn.com/episode-146-how-to-slow-down-or-reverse-yourbiologic-age-with-agebio

6. “Predictive Biomarkers and Biological Aging.”, Pathways To Well-Being, A Functional Medicine Podcast hosted by Dan Lukaczer, Episode 18, April 2020, https://www.ifm.org/news-insights/nathan-price-phd-predictive-biomarkers-biological-aging/

5. “Systems Biology and Human Senses.” Town Hall Seattle In The Moment podcast moderated by Steve Scher, Episode 56, February 27, 2020, https://backtracks.fm/discover/s/in-the-moment-podcast/f0c5b5cbb9379101/e/56-nathan-price-with-steve-scher-systems-biology-and-human-senses/6f0c567c7504bb24

4. “‘Scientific Wellness’ as Dominant Paradigm of 21st Century Healthcare.”, Hyper Wellbeing Podcast with Lee S Dryburgh, Episode 07, December 11, 2018, https://blog.hyperwellbeing.com/007-nathan-price-scientific-wellness-paradigm-of-21st-century-healthcare/

3. Interview with Nathan Price, Interviewed by Mark Hyman for The Institute for Functional Medicine, April 10, 2018, https://www.youtube.com/watch?v=dW5c7Y0bR7I

2. “The ‘Omics’ Of Alzheimer's & The Emergence Of ‘Scientific Wellness’." Evolving Past Alzheimer’s with Nate Bergman, Episode 4, November 5, 2017, https://evolvingpast.com/podcast/episode-4-omics-alzheimers-emergence-scientific-wellness/

1. “Big Data Drives Scientific Wellness.” Empowered Patient Podcast with Karen Jagoda, September 5, 2017, https://empoweredpatientradio.com/big-data-drives-scientific-wellness-with-nathan-price-institute-for-systems-biology

# SERVICE ACTIVITIES

Graduate Students and Postdoctoral Researchers Supervised:

Graduate Students (all in PhD programs unless otherwise noted)
Daniel Baker, Biophysics and Computational Biology (MS), 2010-2013
Matthew Benedict, Chemical & Biomolecular Engineering, Supervised 2009-2014
Nicklas Bohmann, Molecular Engineering, Supervised 4/2020-11/2020
Sriram Chandrasekaran, Biophysics, Supervised 12/2008 – 2013
John Earls, Computer Science, 8/2010-11/2020
James Eddy, Bioengineering, Supervised 8/2007-2012
Matthew Gonnerman, Chemical & Biomolecular Eng., Supervised 10/2008-2012
Swati Gupta, Biophysics and Computational Biology, Supervised 8/2007-12/2010
Shu-Wen Huang, Bioinformatics Program of GSLIS, Supervised 5/2008-8/2009
Yeon Mi Hwang, Molecular Engineering, Supervised 2019-11/2020
James Johnson, Bioengineering, Supervised 3/2020-11/2020
Younhee Ko, Computer Science, Supervised 6/2009-12/2010
Piyush Labhsetwar, Biophysics & Computational Biology, Supervised 12/2009-2017
Shuyi Ma, Chemical & Biomolecular Engineering, Supervised 10/2009-2015
Andrew Magis, Biophysics & Computational Biology, 2010-2014
Caroline Milne, Chemical & Biomolecular Engineering, Supervised 10/2007-2012
Jocelynn Pearl, Molecular & Cellular Biology, Supervised 4/2014-2018
Ravali Raju, Chemical & Biomolecular Engineering, Supervised 10/2007-12/2009
Matthew Richards, Chemical & Biomolecular Engineering, Supervised 10/2010-2016
Bozena Sawicka, Chemical & Biomolecular Engineering (MS), Supervised 2010-2011
Jaeyun Sung, Chemical & Biomolecular Engineering, Supervised 2007-2012
Chunjing Wang, Chemical & Biomolecular Engineering, Supervised 2007-2013
Yuliang Wang, Chemical & Biomolecular Engineering, Supervised 10/2009-2014

Postdoctoral Researchers
Seth Ament, Supervised 2012-2016
Priyanka Baloni, 2016-2019
Nicholas Chia, Supervised 2010-2012
Cory Funk, Supervised 2010-2011
Amit Ghosh, Supervised 2009-2011
Ramkumar Hariharan, Supervised 2012-2013, 2015-2017
Laura Heath, Supervised 2017-2018
Ben Heavner, Supervised 2012-2016
Saheed Imam, Supervised 2014-2015
Amal Katrib, Supervised 2018-2019
Pan Jun Kim, Supervised 2008-2011
Younhee Ko, Supervised 2011
Alexey Kolodkin, Supervised 2012-2013
Charu Gupta Kumar, Supervised 2010-2012
Roie Levy, Supervised 2015-2016
Xiaoyu Liang, Supervised 2019
Andrew Magis, Supervised 2014-2015
Daniel McDonald, Supervised 2016
Alison Paquette, Supervised 2016-2020

Samantha Piekos, Supervised, 2020-date
Noa Rappoport, Supervised 2017-2020
Mathew Richards, Supervised 2016-2017
Areejit Samal, Supervised 2012-2013
Vineet Sangar, Supervised 2011-2014
Evangelos Simeonidis, Supervised 2011-2016
Adai Vellaichamy, Supervised 2010
Michael Wainberg, Supervised 2019-2020
Zhuo "Joy" Wang, Supervised, 2014-2016
Tomazs Wilmanski, Supervised 2018-2020
Anat Zimmer, Supervised, 2018-2020

Selected awards won by trainees:
Shuyi Ma, NIAID New Innovator Award, 2021
Sriram Chandrasekaran, MIT's Technology Review 35 Innovators Under 35 List, Humanitarian category, 2021
Sriram Chandrasekaran, COBRA Distinguished Young Investigator Award, 2018
Seth Ament, NARSAD Young Investigator Award from the Brain and Behavior Research Society, 2014
Seth Ament, World Congress of Psychiatric Genetics Travel Award, 2014
Jocelynn Pearl, NSF Graduate Research Fellowship, 2013-2016
Sriram Chandrasekaran, Harvard Junior Fellow, 2013
Sofie Bluvstein, HHMI Summer Research Fellowship, 2013
Sriram Chandrasekaran, Finalist, Lemelson MIT-Illinois Student Prize, 2012
Sriram Chandrasekaran, HHMI Graduate Fellowship, 2011-2014
Sriram Chandrasekaran, Best Presentation Award, Cell and Molecular Biology Symposium, University of Illinois, 2010 (across all biology related departments in the college)
Shuyi Ma, NSF Graduate Research Fellowship, 2009-2012
Lucas Edelman, Harvey Jordan Award as most outstanding undergraduate student in College of Engineering graduating class, Univ. of Illinois, 2009
Caroline Milne, Chemistry-Biology Training Grant Fellow, 2009-2010
James Eddy, Graduate Student Research Award (1 of 8 nationally), Annual Meeting of Biomedical Engineering Society, 2008 & 2009 (won twice in a row)
Lucas Edelman, Thomas J. Bardos Undergraduate Research Award, American Association for Cancer Research, 2008-2009
Jaeyun Sung and Seth Hanson, 3rd Place, 2nd Annual Midwest Symposium on Computational Biology and Bioinformatics Poster Competition (over 40 entrants), 2008

Trainees in independent academic positions:
Seth Ament, Associate Professor, University of Maryland
Priyanka Baloni, Assistant Professor, School of Health Sciences, Purdue University
Sriram Chandrasekaran, Associate Professor, University of Michigan
Nicholas Chia, Associate Professor, Mayo Clinic, Rochester, MN
Amit Ghosh, Assistant Professor, Indian Institute of Technology Kharagpur
Ramkumar Hariharan, Program Director and Associate Teaching Professor, Northeastern University
Laura Heath, Senior Scientist, Sage Bionetworks
Pan-Jun Kim, Assistant Professor, POSTECH & Asia Pacific Institute for Theoretical Physics
Hongdong Li, Associate Professor, Computer Science and Engineering, Central South University (China)
Andrew Magis, Director of Data Science, Institute for Systems Biology
Alison Paquette, Assistant Professor, Seattle Children's Research Institute

Areejit Samal, Professor, Institute of Mathematical Sciences, Chennai, India
Jaeyun Sung, Associate Professor, Mayo Clinic, Rochester, MN
Adai Vellaichamy, Professor, Anna University, India
Yuliang Wang, Research Assistant Professor, University of Washington
Zhuo (Joy) Wang, Associate Professor, Shanghai Jiao Tong University

Reviewer for Journals (not comprehensive): *Science*, *New England Journal of Medicine*, *Nature Medicine*, *Nature Biotechnology*, *Nature Genetics*, *Nature Methods*, *Nature Communications*, *PNAS*, *Science Translational Medicine*, *Cell Metabolism*, *Cell Host and Microbe*, *Cell Reports*, *Molecular Systems Biology*, *Molecular and Cellular Biology*, *Cancer Research*, *Clinical Cancer Research*, *Nucleic Acids Research, PLOS Computational Biology*, *PLOS Genetics*, *Bioinformatics, Biophysical Journal, Genome Biology, PLoS ONE, Biotechnology Progress, BMC Systems Biology, BMC Medicine, BMC Bioinformatics, BMC Genomics, Biotechnology and Bioengineering, AIChE Journal, Interface: A Journal of the Royal Society, Technology in Cancer Research and Treatment, Journal of Biological Systems, Journal of Theoretical Biology, Computer Methods and Programs in Biomedicine, FEBS Journal, Microbial Biotechnology*, *IET Systems Biology* and others.

Reviewer for funding agencies and universities (incomplete list):

- Chair, NIH Study Section, Modeling and Analysis of Biological Systems (MABS), 2018-2020
- Tenure and full professor promotion evaluation letter writer for various universities and institutes, including Harvard, UCSD, UCLA, Mt. Sinai, Rice, U of Illinois, U of Connecticut, U Arizona, Case Western Reserve U, Oregon State U, etc.
- Chair, NIH Special Topics Study Section, Drug Repositioning in Alzheimer's Disease, 2017-2018
- National Institutes of Health, Permanent Study Section Member, Modeling and Analysis of Biological Systems (MABS), 2015-date
- National Institutes of Health, Ad hoc reviewer, 2012-date (many panels, not enumerated)
- Department of Energy, Advanced Scientific Computing Research (ASCR), Unsolicited Proposals Panel, Biology Panel, 2008; Early Career Awards Panel, 2012
- Nederlands Instituut voor Zuivelonderzoek Voeding (Dutch Science Academy), 2008
- National Science Foundation, Energy for Sustainability Panel, 2010; Biotechnology, Biochemical and Biomass Engineering Panel, 2010
- Ad hoc reviews for panels in Israel and Canada