Roshonda Barner Jones, Ph.D.
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EDUCATION

Postdoctoral Research Fellow 2016 – 2020
University Of Southern California/ Children's Hospital Los Angeles – Los Angeles, CA
Mentor/PI: Michael Goran, PhD

PhD, Bioinformatics and Computational Biology 2016
University of North Carolina at Charlotte – Charlotte, NC
Thesis: Next-generation Sequencing Based Quantification of Microbial Communities and Gene Pathways

Bachelor of Science (BS), Applied Mathematics 2011
North Carolina Agricultural and Technical State University – Greensboro, NC

PROFESSIONAL POSITIONS

Founder/Lead Consultant July 2022 – Present
Nucromics – Charlotte, NC

Senior Bioinformatics Scientist November 2020 – December 2023
Nom Nom (A Mars Company) – Nashville, TN

Bioinformatics Intern June 2015 – September 2015
Genentech – South San Francisco, CA

Doctoral Researcher August 2012 – August 2016
University of North Carolina at Charlotte – Charlotte, NC

Ph.D. Rotation Student January 2012 – June 2012
University of North Carolina at Charlotte – Kannapolis, NC

Ph.D. Rotation Student August 2011 – December 2011
University of North Carolina at Charlotte – Charlotte, NC

Summer Undergraduate Research Fellow June 2008 – August 2011
University of North Carolina at Charlotte – Charlotte, NC

HONORS AND AWARDS

Best Poster Presenter 2019
The Saban Research Institute 24th Annual Poster Session

Provost's Postdoctoral Scholars Program for Faculty Diversity 2017 – 2019
University of Southern California

"The Graduate Source" Student Spotlight 2012
University of North Carolina At Charlotte

National Science and Mathematics Access to Retain Talent (SMART) Grant recipient 2008 – 2011
North Carolina A&T State University

interactive Biomathematical Learning & Engagement Network for Diversity (iBLEND) Scholar 2008 – 2011
North Carolina A&T State University

Bill and Melinda Gates Millennium Scholar 2006 – 2016
Bill and Melinda Gates Foundation

GRANTS AND FELLOWSHIPS

Saban Research Institute Travel Award ($1,000) 2019
Children's Hospital Los Angeles, Los Angeles, CA

NIH Research Supplements to Promote Diversity in Health-Related Research ($106,684) 2018-2019
University of Southern California, Los Angeles, CA

Saban Research Institute Travel Award ($1,000) 2018
Children's Hospital Los Angeles, Los Angeles, CA

USC Provost's Postdoctoral Program for Faculty Diversity ($55,000) 2017
University of Southern California, Los Angeles, CA

PROFESSIONAL MEMBERSHIP

International Society for Computational Biology (ISCB) 2023 – present

The Black Women In Computational Biology Network (BWCB) (Secretary) 2022 – present

Black Microbiologists Association (BMA) 2021 – present

American Society for Nutrition (ASN) 2018 – present

PEER-REVIEWED PUBLICATIONS (*Citations: 1,461; h-index: 18; i10-index: 22)*

1. Tate DE, Tanprasertsuk J, **Jones RB**, Maughan H, Chakrabarti A, Khafipour E, Norton SA, Shmalberg J, Honaker RW. A Randomized Controlled Trial to Evaluate the Impact of a Novel Probiotic and Nutraceutical Supplement on Pruritic Dermatitis and the Gut Microbiota in Privately Owned Dogs. *Animals*. 2024 Jan 30;14(3):453.
2. Kittson MA, Tanprasertsuk J, Burnham CM, Honaker RW, Jones RB, Trivedi S, Strong S, Ange-van Heugten K. Fecal microbiome associations with age, body condition score, and stool consistency in domestic cats (*Felis catus*) living in an animal shelter. Pre-print. 2023
3. Tanprasertsuk J, **Jones RB**, Tate D, Oba P, Belchik S, Swanson K, Shmalberg J, Honaker R. Beagle dogs living in household or controlled environments show different gut microbiome profiles when fed an identical diet or diet type. Pre-print. 2023
4. Schmidt KA, **Jones RB**, Rios C, Corona Y, Berger PK, Plows JF, Alderete TL, Fogel J, Hampson H, Hartiala JA, Cai Z, Allayee H, Nayak KS, Sinatra FR, Harlan G, Pickering TA, Salvy SJ, Mack WJ, Kohli R, Goran MI. Clinical Intervention to Reduce Dietary Sugar Does Not Affect Liver Fat in Latino Youth, Regardless of PNPLA3 Genotype: A Randomized Controlled Trial. *Journal of Nutrition*. 2022. PubMed PMID: 35218194.

5. Plows JF, Berger PK, **Jones RB**, Campbell E, Leibovitch E, Alderete TL, Horowitz M, Pi-Sunyer X, Gallagher D, Goran MI. Development and Validation of a Prediction Model for Infant Fat Mass. *J Pediatr*. 2022. PubMed PMID: 34971655.

6. Hampson HE, **Jones RB**, Berger PK, Plows JF, Schmidt KA, Alderete TL, Goran MI. Adverse Effects of Infant Formula Made with Corn-Syrup Solids on the Development of Eating Behaviors in Hispanic Children. *Nutrients*. 2022. PubMed PMID: 35268090.

7. Tanprasertsuk J, Jha AR, Shmalberg J, **Jones RB**, Perry LM, Maughan H, Honaker RW. The microbiota of healthy dogs demonstrates individualized responses to synbiotic supplementation in a randomized controlled trial. *Animal microbiome*. 2021 Dec;3(1):1-9.

8. Wild LE, Patterson WB, **Jones RB**, Plows JF, Berger PK, Rios C, Fogel JL, Goran MI, Alderete TL. Risk of Micronutrient Inadequacy among Hispanic, Lactating Mothers: Preliminary Evidence from the Southern California Mother's Milk Study. *Nutrients*. 2021. PubMed PMID: 34579129.

9. Vidmar AP, **Jones RB**, Wee CP, Berger PK, Plows JF, Claudia Rios RD, Raymond JK, Goran MI. Timing of food consumption in Hispanic adolescents with obesity. *Pediatric Obesity.* 2021. PubMed PMID: 33370849.

10. Patterson WB, Glasson J, Naik N, **Jones RB**, Berger PK, Plows JF, Minor HA, Lurmann F, Goran MI, Alderete TL. Prenatal exposure to ambient air pollutants and early infant growth and adiposity in the Southern California Mother's Milk Study. *Environ Health*. 2021. PubMed PMID: 34090448.

11. **Jones RB**, Arenaza L, Rios C, Plows JF, Berger PK, Alderete TL, Fogel JL, Nayak K, Mohamed P, Hwang D, Palmer S, Sinatra F, Allayee H, Kohli R, Goran MI. *PNPLA3* Genotype, Arachidonic Acid Intake, and Unsaturated Fat Intake Influences Liver Fibrosis in Hispanic Youth with Obesity. *Nutrients*. 2021. PubMed PMID: 34065978.

12. Wild LE, Alderete TL, Naik NC, Patterson WB, Berger PK, **Jones RB,** Plows JF, Goran MI. Specific amino acids but not total protein attenuate postpartum weight gain among Hispanic women from Southern California. *Food Science & Nutrition*. 2021 Apr;9(4):1842-50.

13. Plows JF, Berger PK, **Jones RB**, Alderete TL, Yonemitsu C, Najera JA, Khwajazada S, Bode L, Goran MI. Longitudinal Changes in Human Milk Oligosaccharides (HMOs) Over the Course of 24 Months of Lactation. *Journal of Nutrition*. 2021. PubMed PMID: 33693851.

14. Noble EE, Olson CA, Davis E, Tsan L, Chen YW, Schade R, Liu C, Suarez A, **Jones RB**, de La Serre C, Yang X, Hsiao EY, Kanoski SE. Gut microbial taxa elevated by dietary sugar disrupt memory function. *Transl Psychiatry*. 2021. PubMed PMID: 33790226.

15. Wild LE, Patterson WB, **Jones RB,** Plows JF, Berger PK, Rios C, Fogel JL, Goran MI, Alderete TL. Risk of Micronutrient Inadequacy among Hispanic, Lactating Mothers: Preliminary Evidence from the Southern California Mother's Milk Study. *Nutrients*. 2021 Sep 18;13(9):3252.

16. Alderete TL, **Jones RB**, Shaffer JP, Holzhausen EA, Patterson WB, Kazemian E, Chatzi L, Knight R, Plows JF, Berger PK, Goran MI. Early life gut microbiota is associated with rapid infant growth in Hispanics from Southern California. *Gut Microbes*. 2021. PubMed PMID: 34424832.

17. Berger PK, Plows JF, **Jones RB**, Alderete TL, Yonemitsu C, Poulsen M, Ryoo JH, Peterson BS, Bode L, Goran MI. Human milk oligosaccharide 2'-fucosyllactose links feedings at 1 month to cognitive development at 24 months in infants of normal and overweight mothers. *PloS one*. 2020 Feb 12;15(2):e0228323.

18. **Jones RB**, Berger PK, Plows JF, Alderete TL, Millstein J, Fogel J, Iablokov SN, Rodionov DA, Osterman AL, Bode L, Goran MI. Lactose-reduced infant formula with added corn syrup solids is associated with a distinct gut microbiota in Hispanic infants. *Gut Microbes*. 2020. PubMed PMID: 32887539.

19. Berger PK, Plows JF, **Jones RB**, Alderete TL, Rios C, Pickering TA, Fields DA, Bode L, Peterson BS, Goran MI. Associations of maternal fructose and sugar-sweetened beverage and juice intake during

lactation with infant neurodevelopmental outcomes at 24 months. *Am J Clin Nutr*. 2020. PubMed PMID: 33020800.

20. Berger PK, Plows JF, **Jones RB**, Alderete TL, Yonemitsu C, Ryoo JH, Bode L, Goran MI. Human Milk Oligosaccharides and Hispanic Infant Weight Gain in the First 6 Months. *Obesity.* 2020. PubMed PMID: 32935530.
21. Alderete TL, Wild LE, Mierau SM, Bailey MJ, Patterson WB, Berger PK, **Jones RB**, Plows JF, Goran MI. Added sugar and sugar-sweetened beverages are associated with increased postpartum weight gain and soluble fiber intake is associated with postpartum weight loss in Hispanic women from Southern California. *The American Journal of Clinical Nutrition*. 2020 Sep 1;112(3):519-26.
22. Fouladi F, Bailey MJ, Patterson WB, Sioda M, Blakley IC, Fodor AA, **Jones RB,** Chen Z, Kim JS, Lurmann F, Martino C, Knight R, Gilliland FD, Alderete TL. Air pollution exposure is associated with the gut microbiome as revealed by shotgun metagenomic sequencing. *Environ Int*. 2020. PubMed PMID: 32135388.
23. Plows JF, Berger PK, **Jones RB**, Yonemitsu C, Ryoo JH, Alderete TL, Bode L, Goran MI. Associations between human milk oligosaccharides (HMOs) and eating behaviour in Hispanic infants at 1 and 6 months of age. *Pediatric Obesity.* 2020. PubMed PMID: 32621402.
24. Sun S, **Jones RB**, Fodor AA. Inference-based accuracy of metagenome prediction tools varies across sample types and functional categories. *Microbiome*. 2020. PubMed PMID: 32241293
25. Plows JF, Rios C, Berger PK, **Jones RB**, Alderete TL, Steinberg S, Bangao T, Beale E, Goran MI. Effects of a sugar-reduction intervention on diet and continuous blood glucose in adolescents on the remote Pacific island of Kiritimati: A pilot randomized controlled trial. Pre-print.2020.
26. **Jones RB**, Alderete TL, Kim JS, et al. High intake of dietary fructose in overweight/obese teenagers associated with depletion of *Eubacterium* and *Streptococcus* in gut microbiome. *Gut Microbes*. 2019. PubMed PMID: 30991877
27. Berger PK, Plows JF, **Jones RB**, Pollock NK, Alderete TL, Ryoo JH, Goran MI. Maternal blood pressure mediates the association between maternal obesity and infant weight gain in early postpartum. *Pediatric obesity*. 2019 Nov;14(11):e12560.
28. **Jones RB**, Alderete TL, Martin AA, Geary BA, Hwang DH, Palmer SL, Goran MI. Probiotic supplementation increases obesity with no detectable effects on liver fat or gut microbiota in obese Hispanic adolescents: a 16-week, randomized, placebo-controlled trial. *Pediatric Obesity*. 2018. PubMed PMID: 29493105
29. Wilson QN, Wells M, Davis AT, Sherrill C, Tsilimigras MCB, **Jones RB**, Fodor AA, Kavanagh K. Greater Microbial Translocation and Vulnerability to Metabolic Disease in Healthy Aged Female Monkeys. *Scientific Reports*. 2018. PubMed PMID: 30054517
30. **Jones RB**, Fodor AA, Peery AF, Tsilimigras MCB, Winglee K, McCoy A, Sioda M, Sandler RS, Keku TO. An Aberrant Microbiota is not Strongly Associated with Incidental Colonic Diverticulosis. *Scientific Reports*. 2018. PubMed PMID: 29563543
31. **Jones RB**, Zhu X, Moan E, Murff HJ, Ness RM, Seidner DL, Sun S, Yu C, Dai Q, Fodor AA, Azcarate-Peril MA, Shrubsole MJ. Inter-niche and inter-individual variation in gut microbial community assessment using stool, rectal swab, and mucosal samples**.** *Scientific Reports*. 2018. PubMed PMID: 29515151
32. Alderete TL, **Jones RB**, Chen Z, Kim JS, Habre R, Lurmann F, Gilliland FD, Goran MI. Exposure to traffic-related air pollution and the composition of the gut microbiota in overweight and obese adolescents. *Environmental Research*. 2018. PubMed PMID: 29220800
33. Noble EE, Hsu TM, **Jones RB**, Fodor AA, Goran MI, Kanoski SE. Early-Life Sugar Consumption Affects the Rat Microbiome Independently of Obesity. *Journal of Nutrition*. 2017. PubMed PMID: 27903830

PRESENTATIONS

1. Direct-to-Consumer Microbiome Testing Combined with Extensive Validated Surveys Allow for Determination of Key Health and Lifestyle Drivers of Gut Microbial Communities in Household Dogs. *8th Annual Translational Microbiome Conference.* April 2023. Washington, DC (**oral presentation**)
2. Direct-to-Consumer Microbiome Testing Combined with Extensive Validated Surveys Allow for Determination of Key Health and Lifestyle Drivers of Gut Microbial Diversity in Household Dogs. *Microbiome Interactions in Health and Disease.* October 2022. Wellcome Genome Campus, UK (**oral presentation**)
3. Formula with Added Sugars Significantly Alters Gut Microbiota and Cognitive Development in Hispanic Infants. *USC Diabetes and Obesity Research Institute 7th Annual Research Symposium*. February 2020. University of Southern California. Los Angeles, CA (**oral presentation**)
4. Association Between Maternal Macronutrient Intake with Human Milk Oligosaccharides in Hispanic Mothers. *Nutrition 2019*. June 2019. Baltimore, MD. (**poster presentation**)
5. High Dietary Fructose Is Associated With Decreased Eubacterium And Streptococcus In Adolescent Gut, *TOS ObesityWeek*. November 2018. Nashville, TN (**poster presentation**)
6. High Dietary Fructose Is Associated With Decreased *Eubacterium* And *Streptococcus* In Adolescent Gut. *Nutritional Immunology and the Microbiota: Rules of Engagement in Health and Disease*. June 2018. Leesburg, VA (**oral presentation**)
7. Efficacy of Probiotic Supplementation on Obesity, Liver Fat and Gut Microbiota in Obese Hispanic Adolescents. *USC 2nd Annual Postdoc Scholar Research Symposium*. May 2017. University of Southern California. Los Angeles, CA (**oral presentation**)
8. Gene Expression Profiling of Colorectal Cancer Patients with KRAS mutation. *Genentech Poster Day*. August 2015. Genentech, South San Francisco, CA (**poster presentation**)
9. Comparison of 16S Sequences and Whole- Genome Metagenome Sequences in a Non-Human Primate System. *UCLA Lake Arrowhead Microbial Genomics (LAMG) 2014 Symposium*, September 2014. Lake Arrowhead, CA (**poster presentation**)
10. Fisher's Exact Test and Its Applications. *UNCG Regional Mathematics and Statistics Conference*. November 2010. UNC-Greensboro, Greensboro, NC (**oral presentation**)
11. Intron Retention in Arabidopsis thaliana. *Plant Molecular Biology Retreat*. October, 2010. NC Arboretum, Asheville, NC. (**chalk talk presentation**)
12. Correlated Expression Analysis of Genes Using Regression. *SIAM Student Conference*. February 2009. Virginia Tech, Blacksburg, VA. (**oral presentation**)
13. Entropy Distance Method and Applications. *TIMBER Mathematical Biology Conference*. November 2008. Appalachian State University, Boone, NC. (**oral presentation**)
14. The Jukes-Cantor Correction in Comparative Genomics. *Annual Math Awareness Day*, April 2008. North Carolina A&T State University, Greensboro, NC. (**oral presentation**)

TEACHING

"Nutrition and Gut Microbiome" (Guest Lecture)
Nutrition and Health, University of Southern California 2019, 2020

"Microbiome and Health" (Guest Lecture)
SPIDOR internship program, University of Southern California 2018, 2019

"Intersectionality in the academy: African American women in science navigating the postdoctoral fellowship"
Diversity and Inclusion Awareness Week, University of Southern California 2019

"Role of Gut Microbiota in Childhood Obesity" (Guest Lecture)
Emerging Chronic & Infectious Diseases, Claremont Graduate University 2016

Teacher's Assistant
WiNGS (Workshop in Next Generation Sequencing), UNC Charlotte 2014

Supplemental Instruction leader
NSF Talent 2I Program, North Carolina A&T State University 2008 – 2010

MENTORING

Primary Mentor

Mentee: Solomon Isi 2019
Summer Program in Diabetes and Obesity Research (SPIDOR), CHLA

Mentee: Ashley Portillo 2018
Summer Program in Diabetes and Obesity Research (SPIDOR), USC

Mentee: Marisol Reveles 2018 – 2020
Research Volunteer, USC/CHLA

Mentee: Djosy Charles 2017
Research Volunteer, USC

Co-Mentor

Mentee: Emili Moan 2015
Summer Program to Increase Diversity in Undergraduate Research (SPIDUR)

SERVICE

North Academy of World Languages PTA- Treasurer 2023 – Present

Regeneron Science Talent Search Judge 2021,2022

CHLA Trainee Career Development Panel 2021, 2022

University of Alabama – Birmingham Informatics Career Seminar Panelist 2022

California Science and Engineering Fair Judge 2019 – 2021

UNC Charlotte College of Computing and Informatics Ph.D. Open House Invited Panel Speaker 2018

UNCC Graduate and Professional Student Government 2015 – 2016

UNCC Bioinformatics Assembly of Students (BIAS) Secretary 2015 – 2016

UNCC Bioinformatics Assembly of Students (BIAS) Member 2013 – 2015

Power of Girls by Girl Scouts Volunteer 2014 – 2015

EmpowHERment Summit 2014

NC OPT-ED Alliance Day Scholarship Panel Speaker 2010

SAT Math Instructor, Providence Baptist Church 2009 – 2010

SUMMARY OF KEY SKILLS

Programming Languages & Software: R (RStudio), Java, Python, Unix/Bash Shell Scripting, Git (Github), parallel computing on HPC cluster, GCP cloud computing

Bioinformatics Tools: Bioconductor; BLAT/BLAST; NCBI, KEGG, MetaCyc and COG functional databases; DESeq; DEGseq; LIMMA; Nextflow; Tuxedo Suite for RNA-Seq analysis (BowTie2, TopHat2, Cufflinks)

Statistical Competencies: General linear and nonlinear regression models; random and mixed effects models; supervised and unsupervised machine learning techniques; multifactor ANOVA

Microbiome Specific: GreenGenes and GTDB taxonomic databases, NCBI, KEGG, COG QIIME2, Phyloseq, PICRUST2, METAPHLAN2, KRAKEN, MAG generation

ADDITIONAL TRAINING

University of Southern California

Nutrigenomics	2020
Obesity and Health	2020
Translating Research into Practice in Diverse Urban Populations (Short Course)	2019
Nutrition and Health: Myths, Controversies and Science	2019
Design of Clinical Studies	2017

EDITORIAL AND PEER-REVIEW SERVICE

Ad Hoc Journal Reviewer (Selection)

BMC Pediatrics, BMC Women's Health, BMC Gastroenterology, BMC Microbiology, Frontiers in Pediatrics, Frontiers in Microbiology, Frontiers in Microbiomes, Frontiers in Endocrinology, Microbiome, Pediatric Obesity, Research and Reports in Neonatology, Scientific Reports