

Curriculum Vitae

Shyamchand(Shyam) MAYENGBAM, Ph.D.,
Nutrition, Metabolomics, and Gut Microbiota
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EDUCATION

2015 Ph.D., Food and Nutritional Sciences, University of Manitoba, Winnipeg, Canada
2008 M.Sc., Food Technology, Central Food Technological Research Institute, Mysore, India
2006 B.Sc., Agriculture, University of Agricultural Sciences, Bangalore, India

RESEARCH EXPERIENCE

2020- Current Assistant Professor, Department of Biochemistry, Memorial University, St. John's, Canada
2016- 2020 Postdoctoral Scholar, **Metabolomics and Gut Microbiota**. Faculty of Kinesiology, University of Calgary, Calgary, Canada
2008 – 2009 Quality Assurance Executive, Coca Cola India, Hyderabad, India

HONOURS AND DISTINCTIONS

2019 Metabolomics Association of North America Early-Career Travel Award, Atlanta, US
2019 Human Performance Lab Postdoctoral Award, The University of Calgary, Canada
2017 Alberta Innovates-Health Solutions Postdoctoral Fellowship, Canada
2017 Canadian Institute of Health Research (CIHR) Travel award: the 2017 Microbiome Summer School, Canada
2016 Eyes High Postdoctoral Fellowship, Canada
2014 Best poster award, Functional Foods and Natural Health Products Symposium, Canada
2013 Graduate students travel award, University of Manitoba, Canada
2014 NSERC-CREATE scholarship, Canada

PROFESSIONAL CREDENTIALS AND COURSES

2019 Foundation of Project Management I & II, Mitacs, Canada
2020 Exploratory Data Analysis using 'R', Canadian Bioinformatics Workshop
2019 Certificate course in '**Metabolomics data processing and data analysis**', University of Birmingham, UK (online)
2018 Certificate course in '**Informatics and Statistics for Metabolomics**', Canadiana Bioinformatics Workshop, McGill University, Montreal, Canada
2018 **Statistics and Getting it Right**: A one-day workshop conducted by American Physiological Society during Experimental Biology Conference 2018, San Diego
2017 Microbiome Summer School: **Big Data Analytics for Omics Sciences**, Quebec city , Canada
2017 **R Boothcamp**: A month long course on hands-on 'R' platform
2014 Certificate in Higher Education Teaching (C.H.E.T.), University of Manitoba, Winnipeg, Canada

PUBLICATIONS

1. **Mayengbam S**, Chleilat F, Reimer AR. Vitamin B6 deficiency impairs gut microbiota and its metabolites in rats. *Int. J. Mol. Sci.*, 2020 (Submitted).
2. Kumar K, Coria AL, Cornick S, Petri1 B, **Mayengbam S**, Moreau SF, Shearer J, Chadee K. Increased intestinal permeability exacerbates sepsis through reduced hepatic SCD-1 activity and dysregulated iron recycling. *Nature Communication*, 2020 Jan 24;11(1):483.
3. **Mayengbam S**, Mickiewicz B, Mu C, Wright DC, Reimer RA, Vogel HJ, Shearer J. Distinct gut microbiota and serum metabolites in response to weight loss induced by either dairy and exercise in a rodent model of obesity. *J Proteome Res*, 2019,1:18(11): 3867-3875.
4. Reimer AR, Soto-Vaca A, Nicolucci AC, **Mayengbam S**, Park H, Madsen KL, Menon R, Vaugham EE. Effect of chicory inulin-type fructan-containing snack bars on the human gut microbiota in low dietary fiber consumers in a randomized crossover trial. *Am. J. Clin. Nutr.*, 2019.
5. Nettleton JE, Klancic T, Cho NA, Alana S, Choo AC, Shearer J, Borgland SL, Chleilat F, **Mayengbam S**, Reimer RA. Low dose stevia consumption perturbs gut microbiota and the mesolimbic dopamine reward system. *Nutrients*, 2019, doi: 10.3390/nu11061248.
6. Nettleton JE, Cho NA, Klancic T, Nicolucci AC, Shearer J, Borgland SL, Johnston LA, Ramay HR, **Mayengbam S**, Reimer RA. Maternal low-dose aspartame and stevia consumption alters metabolism, gut microbiota, and mesolimbic reward system in rat dams and their offspring. *Gut*, 2019, doi: 10.1136/gutjnl-2018-317505.
7. **Mayengbam S**, Lambert JE, Parnell JA, Tunnicliffe JM, Nicolucci AC, Han J, Sturzenegger T, Shearer J, Mickiewicz B, Vogel HJ, Madsen KL, Reimer RA. Impact of dietary fiber supplementation on modulating microbiome-host-metabolic axes in obesity. *Journal of Nutritional Biochemistry*, 2019, 64: 228-236.
8. **Mayengbam S**, Virtanen H, Hittel DS, Elliott C, Reimer RA, Vogel HJ, Shearer J. Metabolic consequences of discretionary fortified beverage consumption containing excessive vitamin B levels in adolescents. *Plos One*, 2019, <https://doi.org/10.1371/journal.pone.0209913>.
9. Tamanna N, **Mayengbam S**, House JD, Treberg JR. Methionine restriction leads to hyperhomocysteinemia and alters hepatic H2S production capacity in Fischer-344 rats. *Mechanism of Ageing and Development*, 2018 (176): 9-19.
10. Nicolucci AC, Hume MP, Martinez I, **Mayengbam S**, Walter J, Reimer RA. Prebiotic Reduces Body Fat and Alters Intestinal Microbiota in Children With Overweight or Obesity. *Gastroenterology*, 2017, 153:711-722.
11. **Mayengbam S**, Raposo S, Aliani M, and House JD. A vitamin B-6 antagonist from flaxseed perturbs amino acid metabolism in moderately vitamin B-6-deficient male rats. *Journal of Nutrition*, 2016,146 (1):14-20.
12. **Mayengbam S**, House JD and Aliani M. Investigation of vitamin B6 inadequacy, induced by exposure to the anti- B6 factor 1-amino D-proline, on plasma lipophilic-metabolites of rats: a metabolomics approach. *European Journal of Nutrition*, 2016, 55(3): 1213-23.
13. **Mayengbam S**, Raposo S, Aliani M and House, JD. Oral exposure of the anti-pyridoxine compound 1-amino D-proline further perturbs homocysteine metabolism in moderately vitamin B6-deficient rats. *Journal of Nutritional Biochemistry*. 2015, 3:241-249.
14. Devassy JG, Caligiuri SPB, **Mayengbam S**, Ibrahim NHM, Zaradka P, Talor CG, House JD and Aukema HM. Dietary restriction in moderately obese rats improves body size and glucose handling without the renal and hepatic alterations observed with a high protein diet. *Applied Physiology, Nutrition, and Metabolism*. 2015, 40:334-342.

15. **Mayengbam S**, Yang H, Barthet V, Aliani M and House JD. Identification, characterization and quantification of an anti-pyridoxine factor from flaxseed using ultrahigh-performance liquid chromatography-mass spectrometry. *Journal of agricultural and food chemistry*. 2014, 62:419-426.
16. **Mayengbam S**, Achary A and thiyam-Hollander U. Endogenous phenolics in hulls and cotyledons of mustard and canola: A comparative study on its quality and antioxidant capacity. *Antioxidants*. 2014, 3:544-558.
17. **Mayengbam S**, Khattab R and Thiyam-Hollander U. Effect of conventional and microwave toasting on sinapic acid derivatives and canolol content of canola. *Current Nutrition and Food Sciences*, 2013, 9(4): 321-327.