

CURRICULUM VITAE

Khyati Girdhar PhD

Assistant Professor
Department of Pediatrics
Division of Pediatrics Endocrinology

OFFICE ADDRESS:

8701 West Watertown Plank Road

Milwaukee, WI 53226

Phone: +1 (414) 9556745

EDUCATION:

07/2010 - 05/2013 BSc, HansRaj College, University of Delhi, Delhi, India

07/2013 - 06/2015 MSc, B. R. Ambedkar National Institute of Technology, Jalandhar, India

07/2015 - 08/2019 PhD, Indian Institute of Technology (IIT) Mandi, Mandi, India

POSTGRADUATE TRAINING AND FELLOWSHIP APPOINTMENTS:

09/2019 - 12/2019 Project Scientist, Biology, Indian Institute of Technology Mandi, Mandi, India

01/2020 - 10/2020 Postdoctoral Research Fellow, Internal Medicine, Endocrinology, University of Michigan, Ann Arbor, MI 48109

10/2020 - 12/2025 Postdoctoral Research Fellow, Biology, Boston College, Chestnut Hill, MA 02467

AWARDS AND HONORS:

2010 - 2015 Scholarship for Higher Education, Innovation in Science Pursuit for Inspired Research (INSPIRE)

2015 - 2019 Junior Research Fellowship, Council of Scientific & Industrial Research, India

2022 - 2023 D-Challenge Award, Sugar Science

2023 Boston College Postdoctoral Association Conference Travel Award, Boston College Postdoctoral Association

10/2024 - Present Boston College Travel Grant, Boston College

2024 Boston College Postdoctoral Association Conference Travel Award, Boston College Postdoctoral Association

MEMBERSHIPS IN HONORARY AND PROFESSIONAL SOCIETIES:

2011 - 2012 DSKC Internship Program, India (Volunteer)

2017 Salter's Chemistry Camp (Volunteer)

2020 - 2022 Boston Postdoctoral Association (Volunteer)

2023 - 2024 Boston Postdoctoral Association (Co-Chair)

EDITORSHIPS/EDITORIAL BOARDS/JOURNAL REVIEWS:

Editorial Board

2022 - 2024 Frontiers in Clinical Diabetes and Healthcare

2023 - Present Frontiers in Endocrinology

RESEARCH GRANTS/AWARDS/CONTRACTS/PROJECTS:

Prior

Peer Review

Title:

D-Challenge Award

Source: Sugar Science
Role & Effort: 33%
PI: Emrah Altindis
Dates: 2022 - 2023
Direct Funds: \$30,000

Title: Type-1 diabetes Research Grant
Source: Diabetes Research Connection
Role & Effort: 100%
PI: Khyati Girdhar
Dates: 2024 - 2025
Direct Funds: \$50,000

INVITED LECTURES/WORKSHOPS/PRESENTATIONS:

National

- A Gut Microbial Peptide and Molecular Mimicry in the Pathogenesis of Type 1 Diabetes, MIT Microbiome Symposium, Cambridge, MA, 2022
- A Gut Microbial Peptide and Molecular Mimicry in the Pathogenesis of Type 1 Diabetes, Boston College Biology Retreat, Portsmouth, NH, 2022
- A human gut commensal, Parabacteroides distasonis, stimulates an inflammatory response specific to the pancreas but not to the intestines and induces Type 1 diabetes in NOD mice, American Diabetes Association Meeting, San Diego, CA, 2023
- The impact of Parabacteroides distasonis colonization on hosts' microbiome, metabolome, immune responses, and diabetes onset, Boston College, Biology Retreat, Waltham, MA, 2024

PEER REVIEWED WORKSHOPS/PRESENTATIONS:

International

- Rational Drug Design, Indo-Australia, Workshop, INDIA, 2019
- High Content Screening, Workshop, IIT Mandi, India, 2019

National

- Diversity, Equity, and Inclusion, Workshop, Boston College, MA, 2022
- The Academic Life, Workshop, Boston College, MA, 2023
- Biological Data Science Summer, Workshop, Virtual, 2023
- Scientific Writing Retreat, Workshop, Cold Spring Harbor Laboratory, NY, USA, 2024

EXTRAMURAL STUDENTS, FACULTY, RESIDENTS, AND CLINICAL/RESEARCH FELLOWS

MENTORED:

Undergraduate Students

- 2020 - 2021 David Kim, Boston College
- 2020 - 2021 Tu Tran, Boston College
- 2020 - 2021 Scott Hsu, Boston College
- 2020 - 2022 Kaan Sevgi, Boston College
- 2020 - 2022 Maximilian Figura, Boston College
- 2020 - 2022 Amol Raisingani, Boston College
- 2022 - 2025 Alessandro Pezzella, Boston College
- 2022 Typhania Zanou, Boston College
- 2022 - 2023 Jaewon Oh, Boston College
- 2022 - 2025 Clarrisa Howard, Boston College
- 2023 - 2025 Maria Jove, Boston College
- 2023 - 2025 Lukas Rhodes, Boston College

Graduate Students

- MS Students Advised

2017 - 2018 Swarnim Pandey, Synthesis of non-invasive dye for pancreatic beta cell imaging, Indian Institute of Technology Mandi,

2018 - 2019 Kriti Kochar, A mega stokes dye for detection of lipid droplets in live cells., Indian Institute of Technology (IIT) Mandi

BIBLIOGRAPHY

Refereed Journal Publications/Original Papers

1. Girdhar, K., Mine, K., DaCosta, M.J., Atkinson, M., Ludvigsson, J., and Altindis, E., 2024. Sexspecific cytokine, chemokine, and growth factor signatures in T1D patients and progressors, *The FASEB Journal*, 38(24), p.e70270.
2. Girdhar, K., Randall, A.I., Dogru, Y.D., Howard, C., Pezzella, A., Henao, J., Gautam, U.K., Šašinková, P., Hudcovic, T., Schwarzer, M., Kiebish, M., and Altindis, E., 2024. The Impact of Parabacteroides distasonis Colonization on Hosts' Microbiome, Metabolome, Immune Responses, and Diabetes Onset, *bioRxiv*, pp.2024-06.
3. Girdhar, K., Huang, Q., Dogru, Y.D., Yang, Y., Tolstikov, V., Chrudinova, M., Raisingani, A., Ludvigsson, J.F., Kiebish, M.A., Palm, N.W. and Ludvigsson, J., 2023. Dynamics of Gut Microbiome, IgA Response and Plasma Metabolome in Development of Pediatric Celiac Disease, *Microbiome*, 11(1), pp.1-20.
4. Girdhar, K., Huang, Q., Chow, I.T., Vatanen, T., Brady, C., Raisingani, A., Autissier, P., Atkinson, M.A., Kwok, W.W., Kahn, C.R. and Altindis, E., 2022. A gut microbial peptide and molecular mimicry in the pathogenesis of type 1 diabetes, *Proceedings of the National Academy of Sciences*, 119(31), p.e2120028119.
5. Girdhar, K., Thakur, S., Gaur, P., Choubey, A., Dogra, S., Dehury, B., Kumar, S., Biswas, B., Dwivedi, D.K., Ghosh, S. and Mondal, P., 2022. Design, synthesis, and biological evaluation of a small molecule oral agonist of the glucagonlike-peptide-1 receptor, *Journal of Biological Chemistry*, 298(5), p.101889.
6. Girdhar, K., Soto, M., Huang, Q., Orliaguet, L., Cederquist, C., Sundaresh, B., Hu, J., Figura, M., Raisingani, A., Canfora, E.E. and Dirice, E., Fujisaka, S., Goossens, G.H., Blaak, E.E., Kulkarni, R.N., Kahn, C.R., Altindis, E., 2022. Gut Microbiota Regulate Pancreatic Growth, Exocrine Function, and Gut Hormones, *Diabetes*, 116919.
7. Girdhar, K., Dehury, B., Singh, M., Daniel, P., Choubey, A., Dogra, S., Kumar, S., Mondal, P., 2018. Novel insights into the dynamics behavior of Glucagon-Like Peptide-1 Receptor with its small molecule Agonists, *Journal of Biomolecular Structure and Dynamics*, 37(15), pp.3976-3986.
8. Sharma, R., Kumar, H., Singla, M., Kumar, V., Ansar, S. and Girdhar, K., 2022. Evolution of solute-solvent interactions for aqueous 1-decyl-3-methylimidazolium bromide, [C10mim][Br] solutions containing glycine/glycylglycine through volumetric and acoustic studies. *Chemical Data Collections*, 42, p.100963.
9. Mondal, I.C., Galkin, M., Sharma, S., Murugan, N.A., Yushchenko, D.A., Girdhar, K., Karmakar, A., Mondal, P., Gaur, P. and Ghosh, S., 2022. Organosulfur/Selenium-Based Highly Fluorogenic Molecular Probes for Live-Cell Nucleolus Imaging, *Chemistry-An Asian Journal*, 17(7), p.e202101281.
10. Kumar, H., Kumar, V., Sharma, S., Ghfar, A.A., Katal, A., Singla, M. and Girdhar, K., 2021. Thermophysical properties of amino acids L-serine and L-leucine in aqueous diammonium hydrogen phosphate solutions: volumetric and acoustic studies. *Journal of Molecular Liquids*, 344, p.117780.
11. Choubey, A., Girdhar, K., Kar, A.K., Kushwaha, S., Yadav, M.K., Ghosh, D. and Mondal, P., 2020. Low-dose naltrexone rescues inflammation and insulin resistance associated with hyperinsulinemia, *Journal of Biological Chemistry*, 295(48), pp.16359-16369.
12. Dogra, S.*, Kar, A.K.*, Girdhar, K.*, Daniel, P.V., Chatterjee, S., Choubey, A., Ghosh, S., Patnaik, S., Ghosh, D. and Mondal, P., 2019. Zinc oxide nanoparticles attenuate hepatic steatosis development in high-fat-diet fed mice through activated AMPK signaling axis, *Nanomedicine: Nanotechnology, Biology and Medicine*, 17, pp.210-222.
13. Biswas, B., Venkateswarulu, M., Sinha, S., Girdhar, K., Ghosh, S., Chatterjee, S., Mondal, P., Ghosh, S., 2019. Long Range Emissive Water-Soluble Fluorogenic Molecular Platform for Imaging Carbon Monoxide in Live Cells, *ACS Applied Bio Materials*, 2(12), pp.5427-5433.
14. Kumar, S., Ahmad, K., Tandon, G., Singh, U., Jha, Y., Nagrale, D., Singh, M., Girdhar, K., Mondal, P., 2018. Novel insight into the molecular interaction of catalase and sucrose: A combination of in silico and in planta assays study, *Computers and Electronics in Agriculture*, 151, pp.258-263.

Books, Chapters, and Reviews

1. Mondal, P., Prasad, A., Girdhar, K., 2017. Interventions to improve β -cell mass and function, *Annales d'Endocrinologie*, 29(25), 4445-4456.
2. Girdhar, K., Powis, A., Raisingani, A., Chrudinov'a, M., Huang, R., Tran, T., Sevgi, K., Dogus Dogru, Y. and Altindis, E., 2021. Viruses and Metabolism: The Effects of Viral Infections and Viral Insulins on Host Metabolism, *Annual Review of Virology*, 8, pp.373-391.

Patents

1. Khyati Girdhar, Pankaj Gaur, and Prosenjit Mondal, A non-peptidic Glucagon-Like Peptide-1 Receptor (GLP-1R) agonist for anti-obesity and anti-diabetes therapeutics, WO2020/110152 A1.