

Stanford



Debarun Patra

Postdoctoral Scholar, Cardiovascular Institute

Bio

BIO

Debarun Patra is a postdoctoral researcher at Stanford Medicine, with a background in inflammation research. His research focuses on bridging cellular disease mechanisms with in vivo pathophysiology to identify novel therapeutic targets. His current work integrates advanced multi-omics tools, induced pluripotent stem cell (iPSC) technology, and animal models to investigate inflammatory and metabolic diseases (inflammatory bowel disease and MASH).

Debarun's doctoral research at IIT Ropar under Dr. Durba Pal was focused on exploring role of obese adipose tissue microenvironment in chronic inflammation and insulin resistance, particularly evaluating the interactions between adipocytes and macrophages. His findings revealed the critical roles of microRNA-210, cyclophilin-A, and Fetuin-A in adipose tissue inflammation and insulin resistance.

HONORS AND AWARDS

- Institute Medal for Best Thesis Award, Indian Institute of Technology Ropar (07-15-2024)
- Future of Science Fund Scholarship Award, Keystone Symposia Hypoxia Conference, Ireland (05-28-2023)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Member, American Heart Association (2024 - present)

PROFESSIONAL EDUCATION

- Ph.D., Indian Institute of Technology Ropar , Biomedical Engineering (2024)
- M.Sc., Tezpur University , Molecular Biology and Biotechnology (2017)
- B.Sc., Midnapore College , Zoology, Human Physiology and Botany (2015)

STANFORD ADVISORS

- Joseph Wu, Postdoctoral Faculty Sponsor

LINKS

- Google Scholar: <https://scholar.google.com/citations?user=F-gIEqYAAAAJ&hl=en>
- Researchgate: <https://www.researchgate.net/profile/Debarun-Patra-3>
- LinkedIn: <https://www.linkedin.com/in/debarun-patra-544327132/>

Research & Scholarship

LAB AFFILIATIONS

- Joseph Wu (5/1/2024)

Publications

PUBLICATIONS

- **Hypoxia-induced miR-210-3p expression in lung adenocarcinoma potentiates tumor development by regulating CCL2 mediated monocyte infiltration.** *Molecular oncology*
Arora, L., Patra, D., Roy, S., Nanda, S., Singh, N., Verma, A. K., Chakraborti, A., Dasgupta, S., Pal, D.
2024; 18 (5): 1278-1300
- **Adipose tissue macrophage-derived microRNA-210-3p disrupts systemic insulin sensitivity by silencing GLUT4 in obesity.** *The Journal of biological chemistry*
Patra, D., Ramprasad, P., Sharma, S., Dey, U., Kumar, V., Singh, S., Dasgupta, S., Kumar, A., Tikoo, K., Pal, D.
2024: 107328
- **Pharmacological inhibition of DNMT1 restores macrophage autophagy and M2 polarization in Western diet-induced nonalcoholic fatty liver disease.** *The Journal of biological chemistry*
Pant, R., Kabeer, S. W., Sharma, S., Kumar, V., Patra, D., Pal, D., Tikoo, K.
2023; 299 (6): 104779
- **A small molecule potent IRAK4 inhibitor abrogates lipopolysaccharide-induced macrophage inflammation in-vitro and in-vivo.** *European journal of pharmacology*
Choudhary, S. A., Patra, D., Sinha, A., Mazumder, S., Pant, R., Chouhan, R., Jha, A. N., Prusty, B. M., Manna, D., Das, S. K., Tikoo, K., Pal, D., Dasgupta, et al
2023; 944: 175593
- **miR-210-3p Promotes Obesity-Induced Adipose Tissue Inflammation and Insulin Resistance by Targeting SOCS1-Mediated NF-κB Pathway.** *Diabetes*
Patra, D., Roy, S., Arora, L., Kabeer, S. W., Singh, S., Dey, U., Banerjee, D., Sinha, A., Dasgupta, S., Tikoo, K., Kumar, A., Pal, D.
2023; 72 (3): 375-388
- **Lipid-induced monokine cyclophilin-A promotes adipose tissue dysfunction implementing insulin resistance and type 2 diabetes in zebrafish and mice models of obesity.** *Cellular and molecular life sciences : CMLS*
Banerjee, D., Patra, D., Sinha, A., Roy, S., Pant, R., Sarmah, R., Dutta, R., Kanta Bhagabati, S., Tikoo, K., Pal, D., Dasgupta, S.
2022; 79 (5): 282