Johan Ajnabi

PhD Candidate

johanajnabi@gmail.com Google Scholar johanajnabi https://johanajnabi.github.io/

WORK EXPERIENCE

Institute for Stem Cell Science and Regenerative Medicine, India

Research Scholar . . . . . *Aug 2019 – Present*

■**Epigenetic and mechanical regulation of wound response:** Understanding the regulation of subcellular localization of *de novo* DNA methyltransferase, DNMT3a, an epigenetic regulator upon wound-induced mechanical cues (bioRxiv: Ajnabi *et al.,* 2026).

■**Endocytosis-linked integrin signaling in keratinocyte stemness maintenance:** Uncovering a Mindin-integrin-STAT3 signaling axis that sustains keratinocyte stemness through integrin endocytosis and downstream transcriptional activation (bioRxiv: Dam *et al.,* 2025).

■**Spatial transcriptomic analysis of the immune landscape of vitiligo skin** Profiled immune cell behaviour in patient skin before and after narrow band UV-B treatment. (In Press: Dutta *et al.,* 2026).

■**Study of a matricellular protein in cutaneous fibrogenesis:** Understanding the role of Mindin as a critical regulator of dermal fibrogenesis in a mouse model of systemic sclerosis (Published article: Rana *et al.,* 2023).

■**Role of antimicrobial peptides (AMPs) in combating different variants of SARS-CoV2:** Studying how niacinamide potentiates cathelicidin-mediated antiviral activity by enhancing membrane disruption of SARS-CoV-2 (Published article: Bhatt *et al.,* 2023).

■**Maintenance of stem/progenitor state of skin epithelial cells and carcinomas:** This study identifies an autocrine Snail-Mindin signaling loop that sustains epithelial stemness in both normal skin and carcinoma contexts (Published article: Badarinath *et al.,* 2022).

ICAR-National Institute for Plant Biotechnology, India

AIEEA PG Scholar . . . . . *Jul 2017 – Jul 2019*

■**Identification of *cis*-regulatory region of a promoter:** Identifying *cis*-regulatory elements controlling PM19 gene expression in wheat, contributing to understanding of stress-responsive transcriptional regulation. (Masters' Thesis: Ajnabi, 2019)

FEATURED PUBLICATIONS (8 IN TOTAL)

■**Ajnabi, J.**, Dam, B., Gupta, E., Saha, T., Dutta, A., Kumar, S., Gupta, A., Palakodeti, D. and Jamora, C., 2026. Actin-dependent mechanotransduction controls nucleocytoplasmic partitioning of DNMT3a through ERK1/2 signaling during cutaneous wound healing. *bioRxiv*, pp.2026-01.

FEATURED PRESENTATIONS (5 IN TOTAL)

■Presented poster on "Epigenetic and mechanical regulation of the cutaneous wound healing" (MBI Conference 2023: Mechanobiology in Health and Disease, Singapore, September 26-29, 2023)

FEATURED ACHIEVEMENTS

■Paeonia Travel Award for attending and presenting my work at the MBI Conference 2023: Mechanobiology in Health and Disease, NUS, Singapore

SUMMARY

I am a life science researcher working at the interface of mechanobiology, cell biology, and epigenetics. My research examines how mechanical cues at wounds regulate cytoskeletal dynamics and epigenetic programs to control epidermal cell-state transitions during tissue repair and regeneration.

SKILLS

Wet lab: Handling and managing of mouse colonies and experimentation, primary cell culture, confocal and multiphoton microscopy, flow cytometry, genetic engineering, protein purification, BLSII practices, generation of pseudovirus, qPCR, western blots

Software: Basics of R, Python, MATLAB, MS Office, GraphPad Prism, Adobe Illustrator

OS: Linux, Windows

Soft skills: Responsible, organized, critical thinker, flexible, communicative, team player, patient

EDUCATION

BRIC-inStem . . . . . **Bengaluru, India**

PhD *August 2019 – Present*

Thesis: Regulation of DNMT3a localization in the cutaneous wound healing response.
Advisor: Dr. Colin Jamora

ICAR-IARI . . . . . **New Delhi, India**

MSc in Molecular Biology and Biotechnology *July 2017 – July 2019*

Thesis: Identification of cis-regulatory regions regulating the expression of PM19 gene in wheat.
Advisor: Dr. Monika Dalal GPA: 8.51/10

BCKV . . . . . **Mohanpur, India**

BSc in Agriculture *July 2013 – July 2017*

GPA: 7.92/10 (with honours).

LANGUAGES

■Bengali (Native) ■English (Advanced)

INTERESTS

Coffee, Wildlife Photography, Piano, Hiking, Traveling