

Ashwin Narain, PhD

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Professional Summary

- Molecular biologist and biochemist with 5+ years of experience in RNAPII transcription research
- Proficient in working with cross-functional teams to develop wide range of methods including targeted protein degradation for mechanistic studies on gene regulation and basic biology
- Well versed in written and oral scientific communication with 2 best poster prizes, 1 scientific talk, and 3 first-author peer-reviewed journal publications
- Excellent organisational skills with leadership and teamwork developed by tutoring students for 3 years, and being part of several event and 2 international conference organising teams
- Languages: English (Proficient), German (Learning A2), Hindi (Native)

Research Experience

Genentech, Roche, South San Francisco, CA, USA: Postdoctoral researcher

Discovery Oncology, gRED

- Part of the biology group in a cross-functional team of 40+ members. Leading a project to characterise a novel cancer dependency, currently part of an early stage drug pipeline
- ExploGenerated endogenous knock-in cell lines, conducted high-throughput and confocal imaging, proteomics, cell biology, flow-cytometry, and biochemical assays
- Collaborating on a project about PROTABS. Elucidating the mechanisms with imaging, flow-cytometry and biochemical methods

Julius Maximilian University of Wuerzburg, Germany: Graduate researcher

Jan 2018 - Dec 2023

Department of Molecular Biology and Biochemistry, Lab of Dr. Elmar Wolf

- Led a project to study transcription in mice supported by an *in vivo* expert. Planned timelines, delegated tasks, shared resources, and generated cell lines for *in vivo* engraftment
- Implemented *in vivo* RNA metabolic labelling, sequenced RNA from engrafted tumours and analysed NGS data with tools on Bioconductor, using 'R' for statistics and visualisation
- Studied direct roles of a protein in tumour cell gene regulation using genomics, transcriptomics, proteomics, cell proliferation, flow-cytometry, and biochemical assays
- Established endogenous cell line manipulation protocols with CRISPR-Cas9 genome editing. Generated 5 cell lines and advised 8 colleagues to obtain 15+ cell lines.
- Used lentiviral transfection to evaluate and compared the efficacy of dFKBP12, dTAG, aTAG PROTACs and auxin-inducible degron system in 5 cell lines for 4 proteins

University of Tokyo, Japan: Undergraduate research intern

May 2016 - Jul 2016

Biotech Research Centre, Lab of Prof. Makoto Nishiyama

- Trained in primer designing, PCR and cloning to obtain repair-template vectors. Generated knockout clones and used HPLC-Mass Spectrometry to study *Streptomyces* gene clusters

University of Allahabad, India: Undergraduate research intern

May 2015 - Jul 2015

Department of Botany, Lab of Prof. Anupam Dikshit and Dr. H.K. Kehri

- Assessed antimicrobial and antioxidant effects of plant and lichen secondary metabolites
- Characterized Silver Nanoparticles biosynthesized using fungal secondary metabolites

Relevant Technical skills

Molecular Biology: RNA/DNA handling (cell/tissue) • NGS libraries • qPCR and RT-qPCR • RNA dot blot
• Molecular cloning • Genomics: ChIP-seq • Cell/Tissue transcriptomics: RNA-seq; 4TU-seq; SLAM-seq

Cell Biology: CRISPR/Cas9 • RNAi • Human/murine tumour cells (adherent and suspension) • Lentivirus production/handling • Transduction and transfection • Flow cytometry • Cell viability assays • Incucyte

Biochemistry: Mass-Spectrometry (SILAC and immunoprecipitation) • SDS-PAGE/Western blot • HPLC
• Co-Immunoprecipitation pulldown • Cellular fractionation and protein purification

Computational skills: R and Shell scripting • Bioinformatic tools on Bioconductor and Galaxy • GSEA
• Data management on Linux/HPC • Snapgene viewer • ApE software • Genome browser

List of Publications and Presentations

Peer-reviewed publications, *co-first

- **Narain A**, Dudvarski NS, Bhandare P, Garcia YC, Erhard F, Wolf E. Analysing transcription dynamics in mice using 4TU-TALK-seq. (*In preparation*).
- Bhandare P, **Narain A**, [et al], Wolf E. Phenotypic screens identify SCAF1 as critical activator of RNAPII elongation and global transcription. *Nucleic Acids Res.* **2025**.
- Reissland M, Hartmann O, [et al, including **Narain A**], Diefenbacher M.E. USP10 drives cancer stemness and enables super-competitor signalling in Colorectal Cancer. *Oncogene.* **2024**.
- **Narain A***, Bhandare P*, [et al], Wolf E. Targeted protein degradation reveals a direct role of SPT6 in RNAPII elongation and termination. *Mol Cell.* **2021**.
- Adhikari B*, **Narain A***, Wolf E. Generation of auxin inducible degron (AID) knock-in cell lines for targeted protein degradation in mammalian cells. *STAR Protocol.* **2021**.
- Adhikari B*, Bozilovic J*, [et al, including **Narain A**], Wolf E. PROTAC-mediated degradation reveals a non-catalytic function of AURORA-A kinase. *Nat Chem Biol.* **2020**.
- Baluapuri A*, Hofstetter J*, [et al, including **Narain A**], Wolf E. MYC Recruits SPT5 to RNA Polymerase II to Promote Processive Transcription Elongation. *Mol Cell.* **2019**.
- **Narain A**, Asawa S, Chhabria V, Patil-Sen Y. Cell membrane coated nanoparticles: next-generation therapeutics. *Nanomedicine (Lond).* **2017**.

Abstracts for talks and poster presentations (3 of 8)

- **Best Poster Award:** Targeted protein degradation reveals a direct role of SPT6 in RNAPII elongation and termination. At *Eureka symposium -2022*; University of Wuerzburg, Germany
- **Invited talk:** 'Targeted protein degradation reveals a direct role of SPT6 in RNAPII elongation and termination'. At [Fragile Nucleosome Seminar](#) on 6th Oct 2021; Virtual
- **Narain A**, Adhikari B, Wolf E. Using Auxin degron system for acute depletion of SPT5 in mammalian cells to study its role in transcription. Poster at: *EMBL Functional Genomics to Systems Biology - 2018*; EMBL Heidelberg, Germany

Project Management and Teamwork experience

Project Management

- Supervised 2 and co-supervised 2 graduate students for their Master thesis project
- Mentored 3 students and 1 technical assistant in NGS based techniques, cell line generation, genome editing, and molecular cloning
- Guided 100+ students distributed over 3 years for the course 'Methods and Topics in Life Sciences' as Academic tutor. Resolved subject doubts, critiqued mock exams, presented exam-preparation tactics, and advised on career plans. Awarded [Best Tutor](#).
- Raised 1000 EUR in crowdfunding at [The Lakshya Foundation](#) for the summer internship in 2016

Teamwork and Leadership

- Established a team, assigned responsibilities, initiated networks, and compiled resources as co-founder of [Reticulum](#) - connecting STEM undergraduates with STEM-professionals
- Co-led a team of 18 people to conduct 1st virtual [NIT Warangal Biotechnology Alumni meet 2021](#)
- Organised international [EUREKA-symposium](#) 2019 and 2020 with a team of 10-12 people. Introduced the Twitter handle, invited speakers and moderated the career session.
- Coordinated with a team of 12-15-member at Technical Association of Biotechnology NIT Warangal. Designed events, arranged guests, managed audience, and mentored junior teammates at different levels for 4 years

Education

Julius Maximilian University of Wuerzburg, Germany

Doctor of Philosophy (PhD), *Summa Cum Laude*

Jan 2019 - Sep 2023

Thesis: *Direct roles of SPT6 in RNAPII transcription revealed by targeted protein degradation*

Master of Science (MSc), FOKUS Life Science, 1.0 (1-Excellent, 5-Pass)

Oct 2017 - Feb 2020

Thesis: *Optimisation of auxin inducible degron system for functional analysis of SPT5*

National Institute of Technology, Warangal, India

Jul 2013 - May 2017

Bachelor of Technology (B.Tech) Biotechnology, 7.79/10.0 (10-Excellent, 5-Pass)

Thesis: *Studies on bio-ethanol production using fermentation by free and immobilised yeast*

List of References

Prof. Dr. Elmar Wolf
Chair of Biochemistry and
Molecular Biology, Biozentrum
University of Wuerzburg
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Elmar was my PhD supervisor.

Dr. Stephan Schröder-Köhne
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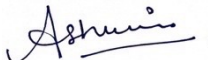
Stephan was the course co-ordinator of my fast-track MSc program: FOKUS Life Sciences.

Prof. Dr. Florian Erhard
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Florian was the bioinformatic supervisor for my projects.

13th February 2024

San Bruno, CA, USA,


Ashwin Narain