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WORK/ RESEARCH EXPERIENCE

Corvus pharmaceuticals, Inc., South San Francisco, CA, US **August 2022-Present**
Scientist II

- Drove target validation and mechanism-of-action studies for small-molecule therapeutics in T-cell lymphoma, solid tumors, and allergy (asthma, atopic dermatitis).
- Developed and implemented screening assays for next-gen autoimmune disease drug candidates.
- Led cross-functional projects, coordinated with CROs, and authored regulatory documents for IND applications.
- Contributed strategic insights for pipeline advancement and innovation.

Dr. Kathryn O'Donnell Lab, UT Southwestern Medical Center, Dallas, TX, US **June 2020- July 2022**
Postdoctoral Researcher

- Identified and characterized a novel monoclonal antibody for lung cancer treatment; evaluated therapeutic efficacy and MOA in vivo.
- Engineered transgenic and conditional knockout mouse models to study oncogenic pathways.
- Co-inventor on a patent for anti-PCDH7 monoclonal antibodies (lung cancer therapy).

Dr. Li Zhang Lab, Department of Biological Sciences, UT Dallas, Richardson, TX, US **March 2015-May 2020**
Graduate Student researcher

- Discovered and evaluated heme-targeting peptide-based strategies for lung cancer therapy.
- Conducted in vivo imaging using optoacoustic tomography to study tumor oxygenation.
- Designed and tested novel therapeutics affecting oxidative metabolism and vascularization.
- Assessed the role of heme flux and function in lung cancer progression using firefly luciferase expressing *Kras* ^{G12D} *Lkb1*$^{-/-}$ mice.

Department of Biological Sciences, UT Dallas, TX, US **August 2013- May 2018, August 2019-May 2020**
Teaching assistant

- Served as graduate teaching assistant for undergraduate courses - Introduction to biology, biochemistry, molecular and cell biology labs.

H.P.T Arts and R.Y.K Science college, Nashik, India **July 2012-May 2013**
Lecturer

- Taught undergraduate level biochemistry, molecular biology, and conducted lab courses for the same.

SKILLS

- **In Vivo Models**: Mouse models of Oncology (Xenograft, GEMMs, PDXs, CRISPR-KO, Humanized models), Mouse models of Allergy (Asthma, Atopic dermatitis, psoriasis)
- **Molecular Biology**: CRISPR, shRNA, qPCR, cloning
- **Immunology techniques**- Flow cytometry, MSD, ELISA, T cell in vitro assays to evaluate function, including cytotoxicity, cytokine release, and exhaustion assays, depletion of immune populations in mice
- **Immunostaining techniques** - Multiplex fluorescence Immunohistochemistry, western blotting, and immune cytometry.
- **Imaging and Histology**: Multiplex IHC, Confocal microscopy, Bioluminescence
- **Data Analysis**: cBioPortal, DepMap, GraphPad, FlowJo, MSD Workbench
- **Advanced multimodal imaging** – Bio-luminescence imaging Fluorescence imaging, optoacoustic tomography (small animals)
- **Preparation of documents in compliance with regulations** (IACUC protocols, study reports for IND applications, etc.)

LEADERSHIP/ORGANIZATION SKILLS

- Member-IACUC committee (Corvus Pharmaceuticals, Inc.)
- Collaborated with members of the biology and formulation teams at Corvus to investigate efficacy and mechanism of action of two independent drug candidates.
- Headed and completed analysis as well as validation of drug candidates for two independent IND-enabling

studies.

- Presented research in the form of oral and poster presentations in meetings and conferences.
- Mentored, trained, and supervised graduate and undergraduate students in their research involving molecular techniques, small animal handling, and imaging.

EDUCATION

University of Texas at Dallas
PhD in Molecular and Cell Biology — May 2020

University of Texas at Dallas
M.S in Molecular and Cell Biology — July 2016

Savitribai Phule Pune University, India — May 2011
Master of Science in Biotechnology

Savitribai Phule Pune University, India — May 2009
Bachelor of Science in Biotechnology

PUBLICATIONS & PATENTS:

1. Hsu, LY., Rosenbaum, J.T., Verner, E. Jones W.B, Hill C.M, Janc J.W., Buggy J.B, Pawar R.D, **Ghosh P**., Li D, Ding N., Reneau J.C , Khodadoust M.S, Kim Y.H., Wilcox R.A.,& Miller R.A,. Synthesis and characterization of soquelitinib, a selective ITK inhibitor that modulates tumor immunity. *npj Drug Discov.* **1**, 2 (2024).
2. Ningyan Zhang, Zhiqiang An, Hui Deng, Zhiqiang Ku, Wei Xiong, **Poorva Ghosh**, Nicole Novaresi, Kathryn O'Donnell,2023. MONOCLONAL ANTIBODIES AGAINST PCDH7 FOR LUNG CANCER THERAPY, US patent Serial no. 63/515,000 filed July 21, 2023, *Patent pending.*
3. **Ghosh P**, Mason RP, Liu L, and Zhang L. Modulation of heme and tumor vascular oxygenation – a novel strategy for lung cancer therapy. *Oncoscience*, 2022 10.18632/oncoscience.569
4. Dey S, Ashrafi A, Vidal C, Jain N, Kalainayakan S, **Ghosh P**, Alemi P, Konduri P, Jung-Whan Kim, and Li Zhang. Heme sequestration effectively suppresses the development and progression of both lung adenocarcinoma and squamous cell carcinoma *Mol Cancer Res* 2021 DOI: 10.1158/1541-7786.MCR-21-0385
5. Wang T, Ashrafi A, Konduri PC, **Ghosh P**, Dey D, Modareszadeh P, Salamat N, Alemi PS, Berisha E and Zhang L. Heme sequestration as an effective strategy for the suppression of tumor growth and progression. *Mol Cancer Ther* 2021 DOI: 10.1158/1535-7163.MCT-21-0033
6. **Ghosh P**, Guo Y, Ashrafi A, Chen J, Dey S, Zhong S, Liu J, Campbell J, Konduri P, Gerberich J, Garrossian M, Mason RP, Zhang L, and Liu L Oxygen-enhanced optoacoustic tomography reveals the effectiveness of targeting heme and oxidative phosphorylation at normalizing tumor vascular oxygenation. *Cancer Res*; 2020 (80) (17) 3542-3555.
7. **Ghosh P**., Vidal C., Dey S., and Zhang L. Mitochondria Targeting as an Effective Strategy for Cancer Therapy. *Int. J. Mol. Sci*. 2020, 21, 3363; doi:10.3390/ijms21093363
8. Sohoni S*, **Ghosh P***, Wang T, Kalainayakan SP, Vidal C, Dey S and Zhang L. Elevated heme synthesis and uptake underpin intensified oxidative metabolism and tumorigenic functions in non-small cell lung cancer cells. *Cancer Res*; 2019; 79:2511-2525 **(* Equal contribution towards first author**)
9. Kalainayakan SP, **Ghosh P**, Dey S, Fitzgerald K, Konduri P, Sohoni S, Garrossian M Liu.L and Zhang L. Cyclopamine tartrate, a modulator of hedgehog signaling and mitochondrial respiration, effectively arrests lung tumor growth and progression. *Scientific Reports* volume 9, Article number: 1405 (2019)
10. Dey S, Kumari S, Kalainayakan, SP, Campbell J, **Ghosh P**, Zhou H, FitzGerald KE, Mason RP, Zhang L, and Liu L, The vascular disrupting agent combretastatin A-4 phosphate causes prolonged elevation of proteins involved in heme flux and function in resistant tumor cells. *Oncotarget* 9, 4090-4101 (2018).
11. **Ghosh P**, Sawant N, Patil SN, and Aglave B. Microbial degradation of organophosphate pesticides, *International Journal of Biotechnology and Biochemistry* 0973-2691 volume 6 number 6(2010) pp. (871-876)