Dr. Dipika Ramdas Kalambhe, Ph.D.

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Professor Dipesh Chaudhury and Professor Justin Blau
Division of Science — Biology
New York University Abu Dhabi
Abu Dhabi, United Arab Emirates

Dear Professor Chaudhury and Professor Blau,

I am applying for the Research Scientist position investigating gene expression in circadian neural networks.

Let me be direct about the two requirements I do not meet, because you will find them in the first minute and I would rather you had my account of them than your own inference. **I do not have six years of post-PhD experience in circadian biology** — I completed my doctorate in 2025, and my field is cancer biology and drug delivery, not chronobiology. **I do not have electrophysiology.** I have never run a slice recording or used Clampfit. If either is genuinely non-negotiable, this application should stop here, and I would rather you spent your time on candidates who have them.

What I offer instead is that a substantial part of your responsibilities list is work I have already done independently, over eight years, at the Shanghai Institute of Materia Medica, Chinese Academy of Sciences.

Gene and protein expression, and the interpretation of it. My doctoral project was fundamentally a mechanism question: why does a particular intervention change how cells behave? I answered it by measuring expression — RT-qPCR, Western blot, ELISA, flow cytometry, immunofluorescence and immunohistochemistry — across four independent axes: apoptosis, epithelial–mesenchymal transition, vasculogenic mimicry, and remodelling of the tumour immune microenvironment. The finding was that suppression of tumour growth and lung metastasis came from coordinated expression changes closing three separate escape routes, not from cytotoxicity. It is published in *Acta Pharmacologica Sinica* 46(12):3314–3326, where I am **joint first author with equal contribution formally recorded**.

In vivo murine work, run end to end. I designed and executed complete animal programmes alone: protocol and endpoint definition, institutional ethics approval, dosing and route selection, longitudinal monitoring across multi-arm cohorts, biodistribution, terminal tissue collection, histopathology and organ-toxicity assessment. I am comfortable with the operational reality of animal work — the scheduling, the record-keeping, the welfare obligations — which is often what slows a new arrival down far more than technique does.

Immunohistochemistry and microscopy on tissue sections, including confocal laser scanning and fluorescence imaging to localise labelled material within cells and tissue. Your list includes mouse brain immunohistochemistry; my sections have been tumour and organ rather than brain, but the preparation, staining, imaging and reading are the same craft applied to different anatomy.

I should be equally plain about what this post would require me to learn. Stereotaxic surgery, slice electrophysiology, single-cell and bulk RNA sequencing with their analysis, and spatial genomics would all be new. Surgery and electrophysiology are manual skills that take months of supervised practice, and I will not pretend otherwise. The sequencing and analysis side I would expect to come faster, because the experimental logic is one I already work in — I have designed the expression experiments; I have simply not run them at that scale or on that platform.

Why I am applying despite the gap. My whole research training has been about what happens when the expression of specific genes changes in living tissue, and how to prove the consequence rigorously rather than correlatively. How gene expression produces rhythms in the excitability and plasticity of clock neurons is a question I find genuinely compelling, and it is close enough to how I already think that I would be learning techniques rather than learning how to do science. I would also note that I have built an analytical toolkit from nothing once already: nothing I use today was taught to me before my doctorate began.

I hold seven peer-reviewed publications attracting 324 citations (h-index 3, Google Scholar, July 2026), three as first or joint first author, and one filed Indian patent. My doctorate was funded throughout by two competitive international fellowships, the ANSO Young Talent Fellowship and the Belt and Road Government Fellowship. I have mentored Master's and undergraduate researchers and worked across a large multidisciplinary institute alongside molecular biologists, oncologists and immunologists.

I would welcome the chance to discuss whether the overlap is enough, and I am available for interview at short notice.

Yours sincerely,

Dr. Dipika Ramdas Kalambhe
Ph.D. Pharmaceutics, Shanghai Institute of Materia Medica, Chinese Academy of Sciences