



## राष्ट्रीय विज्ञान शिक्षा एवं अनुसंधान संस्थान भुवनेश्वर

परमाणु ऊर्जा विभाग, भारत सरकार का एक स्वयं शासित संस्थान

**NATIONAL INSTITUTE OF SCIENCE EDUCATION AND RESEARCH BHUBANESWAR**

(An autonomous research institution under Department of Atomic Energy, Govt. of India)

Jatni, Khurda, Odisha - 752050

**( School of Biological Sciences )**

Postdoctoral/Research Associate-1 positions are available in the School of Biological Sciences-NISER in the following research laboratories. The application in the prescribed format is available on the website ([https://www.niser.ac.in/notices/2021/recruitments/PDF\\_Advt\\_10052021.pdf](https://www.niser.ac.in/notices/2021/recruitments/PDF_Advt_10052021.pdf)).

### Fellowship and Benefits:

Sl. No.	Category	Monthly Fellowship	Other Benefits
1	<b>RA – I:</b> Candidates successfully defended their thesis or having less than 1 year experience after award of Ph.D. Degree	₹47,000/-	<ul style="list-style-type: none"> <li>HRA would be paid as per applicable rates if no official accommodation is provided / occupied.</li> <li>Contingency grant of ₹40,000/- per year is available to be spent as per rules.</li> <li>Medical facility as per institute rules.</li> <li>Leaves provision is available as per Institute rules for PDFs.</li> </ul>
2	<b>RA – II:</b> Candidates with 1 or less than 2 years of experience after award of Ph.D. Degree	₹49,000/-	
3	<b>RA – III:</b> Candidates with 2 - 3 years of experience after award of Ph.D. Degree	₹54,000/-	

**Research Groups:** (*click to see details, in this document*)

1	<a href="#">Translation control research group</a> Dr. Pankaj V. Alone <a href="mailto:pankaj@niser.ac.in">pankaj@niser.ac.in</a>	6	<a href="#">Neural circuits and behavior</a> Dr. Praful Singru <a href="mailto:pssingru@niser.ac.in">pssingru@niser.ac.in</a>
2	<a href="#">Cellular Immunology Lab</a> Dr. Subhasis Chattopadhyay <a href="mailto:subho@niser.ac.in">subho@niser.ac.in</a>	7	<a href="#">Molecular Medical Bacteriology Lab</a> Dr. Harapriya Mohapatra <a href="mailto:hm@niser.ac.in">hm@niser.ac.in</a>
3	<a href="#">Cancer Genomics and Genetics Lab</a> Dr. Manjusha Dixit <a href="mailto:manjusha@niser.ac.in">manjusha@niser.ac.in</a>	8	<a href="#">Aich Lab</a> Professor Palok Aich <a href="mailto:palok.aich@niser.ac.in">palok.aich@niser.ac.in</a>
4	<a href="#">Cancer and Molecular Signalling Lab</a> Dr. Asima Bhattacharyya <a href="mailto:asima@niser.ac.in">asima@niser.ac.in</a>	9	<a href="#">Molecular Genetics &amp; Epigenetics Lab</a> Dr. Debasmita P. Alone <a href="mailto:debasmita@niser.ac.in">debasmita@niser.ac.in</a>
5	<a href="#">Pharmaceutical Biology</a> Dr. V Badireenath Konkimalla <a href="mailto:badireenath@niser.ac.in">badireenath@niser.ac.in</a>	-	-

The positions are purely temporary basis and appointments may be made initially for a period of one year, extendable to a maximum tenure of two years upon satisfactory academic performance. Candidates should send in their applications and arrange for the recommendation letters to reach the Chairperson of the School of Biological Sciences through email: [cpsbs@niser.ac.in](mailto:cpsbs@niser.ac.in) with a copy to the email of the interested faculty with whom he/she intends to work.

The applications should have the following documents:

- (a) A cover letter that mentions the specific research area outlined below they would like to be considered.
- (b) A detailed academic CV, list of publications, and names of two academic referees.
- (c) A statement of research interests
- (d) A brief project proposal relevant to the PI's lab interest.

The candidate should arrange for the letters of reference to reach the chairperson of the school by email and the concerned faculty member within a week of the date of application. The candidates who are shortlisted based on their CV, research statement, and letters of recommendation would be interviewed either in person or through video/internet conferencing before the final selection is made.

### **1. Laboratory: Translation control research group. (01 position)**

*Date of posting: 20<sup>th</sup> October 2022.*

**Principal Investigator:** Dr. Pankaj V. Alone ([pankaj@niser.ac.in](mailto:pankaj@niser.ac.in))

**Laboratory Description:** The translation control research group headed by Dr. Pankaj V. Alone uses state-of-the-art biochemical, biophysical, and molecular genetics techniques to understand the mechanisms of the non-AUG base translation initiation process and how they regulate gene expression in the eukaryotes. We use yeast genetics, protein purifications, and biochemical/biophysical techniques to characterize the in-vitro reconstitution of the translation system comprising purified 40S ribosome, initiation factors, mRNA, and tRNA. (<http://www.niser.ac.in/~pankaj/index.html>) (<https://www.niser.ac.in/users/pankaj>)

**Qualifications requirements:** A highly motivated candidate with a Ph.D. awarded or thesis submitted in the area of molecular biology/biochemistry/biophysics/computational biology/genomics should apply. The candidate should have a proven track record of publications. Candidates having expertise in protein purification, fluorescent polarization spectroscopy, and genomics data analysis are encouraged to apply.

### **2. Laboratory: Cellular Immunology Lab (01 position)**

*Date of posting: 20<sup>th</sup> October 2022.*

**Principal Investigator:** Dr. Subhasis Chattopadhyay (Email: [subho@niser.ac.in](mailto:subho@niser.ac.in))

**Laboratory outline:** The Cellular Immunology Research lab headed by Dr. Subhasis Chattopadhyay, is pursuing investigations towards unraveling the role of Cell Mediated Immunity(CMI) and its regulation associated to Infection Immunity, Cancer Immunity and Inflammation. Research with cell lines, primary cells, human blood samples and mice models are the prime components for our ongoing experimental studies. Such understanding will be helpful towards designing future immuno-therapeutic strategies to control various diseases. Laboratory website: <https://www.niser.ac.in/users/subho>

**Qualifications requirements:** A highly self-motivated candidate with Ph.D. (submitted or awarded) and relevant publications in the field of Cellular Immunology may apply for the potential PDF position. The candidate(s) should submit an updated CV including expertise, experience and a brief project proposal relevant to the lab work to ensure the candidature.

**3. Laboratory: Cancer Genomics and Genetics Lab (01 position)***Date of posting: 20<sup>th</sup> October 2022.***Principal Investigator:** Dr. Manjusha Dixit (Email: [manjusha@niser.ac.in](mailto:manjusha@niser.ac.in))

**Laboratory Description:** Dr. Manjusha Dixit's group works in the area of Cancer Genomics and Genetics. Her research interests include identification of novel tumorigenic and angiogenic regulators, and determination of genetic predisposition for Gallbladder cancer. Her research focuses on establishing the role and molecular mechanism of tumorigenesis and angiogenesis regulation. Her group has established FRG1 as tumor suppressor, and identified the anti-angiogenic role of IQGAP2 in breast cancer. Her group uses human cell lines, animal models, and human samples as model systems for the research. List of the publications can be found at [https://scholar.google.co.in/citations?hl=en&user=euLUU34AAAAJ&view\\_op=list\\_works&sortby=pubdate](https://scholar.google.co.in/citations?hl=en&user=euLUU34AAAAJ&view_op=list_works&sortby=pubdate)

Lab Website: <https://www.niser.ac.in/users/manjusha>, <https://nisersbs.wixsite.com/manjushadixit>

**Required qualifications:** Dr. Dixit's Laboratory is seeking a highly motivated and innovative Postdoctoral Fellow to carry out the research in the area of Cancer Genomics. Candidates with a PhD degree in cancer biology/ molecular biology/ cell biology/ any other area in life sciences are eligible for the application. Candidates having experience in the animal cell culture, molecular and cell biology techniques, animal handling will be preferred. Interested candidate(s) can submit CV showing the expertise, details of experience, and a brief project proposal.

**4. Laboratory: Cancer and Molecular Signalling Lab (01 position)***Date of posting: 20<sup>th</sup> October 2022.***Principal Investigator:** Dr. Asima Bhattacharyya (Email: [asima@niser.ac.in](mailto:asima@niser.ac.in))

**Laboratory description:** Dr. Asima's lab focuses on understanding the molecular mechanisms of gastric cancer (GC) development, progression and metastasis. To study the *Helicobacter pylori*-mediated and hypoxia-induced events in GC, her lab employs various cell culture techniques, biochemical and molecular biology experiments, animal experiments and patient GC tissue sample analyses. Her research has identified crucial roles of SIAH proteins (E3 ubiquitin ligases) and their posttranslational modifications in GC progression and metastasis. Her study on hypoxia-mediated GC progression has unraveled various pathways leading to GC cell invasiveness and also ascertained the effectiveness of a curcumin-derived histone acetyltransferase inhibitor CTK7A in selective killing of metastatic GC cells experiencing hypoxia. Moreover, her group has identified the mechanisms by which *H. pylori*-infected GC cells avoid apoptosis and regulate oxidative stress. Laboratory website: <https://www.niser.ac.in/users/asima>

Publications and other details: <http://asimabhattacharyya.weebly.com>

**Required qualifications:** Dr. Asima's lab is looking for a motivated and passionate candidate with a PhD (thesis submitted/ degree awarded) to carry out a project on the role of extracellular vesicles in GC/ a study of GC stage-specific events. The applicant must have published in internationally-reputed society journals during his/her PhD. The candidate should have done a PhD in the field of Cell Biology/Cancer Biology/Molecular Biology/Biochemistry/Immunology along with experience in Bioinformatics. Expertise in cell culture techniques, animal studies, TEM, confocal imaging and bioinformatic analysis are essential. The candidate should also have a good command in scientific paper writing. The candidate has to apply in the prescribed format with a recent CV (detailing the expertise and work-experience) and a brief project proposal relevant to the lab interests. Three referees should be informed to send recommendation letters to [asima@niser.ac.in](mailto:asima@niser.ac.in) before the closure of the application window.

**5. Laboratory: Pharmaceutical Biology (01 position)***Date of posting: 20<sup>th</sup> October 2022.*

**Principal Investigator :** Dr. V Badireenath Konkimalla ([badireenath@niser.ac.in](mailto:badireenath@niser.ac.in))  
<https://www.niser.ac.in/users/badireenath>

**Laboratory Description:** The lab works in an interdisciplinary area of pharmaceutical biology (computational and experimental approaches) that can address problems related to drug development and delivery.

**Required Qualifications:** We look for suitable candidates well-experienced in the area of drug research who can complement and extend their expertise in achieving the objectives. Candidates well-versed in the areas related to Pharmacology, Pharmaceutical technology, Bioinformatics, Data science, Biotechnology are encouraged to apply. The qualifications of the candidate for the advertised position can be

- PhD (submitted/awarded) in Pharmacy/life sciences/biotechnology  
OR
- M.Pharm or M.Tech with a minimum 3 years of experience and one publication.

Interested candidates are requested to send their CV with details of research experience, publications or any relevant experience to [badireenath@niser.ac.in](mailto:badireenath@niser.ac.in)

**6. Laboratory: Neural circuits and behavior***Date of posting: 20<sup>th</sup> October 2022.*

Principal Investigator: Dr. Praful Singru (email: [pssingru@niser.ac.in](mailto:pssingru@niser.ac.in))

Dr. Singru' s lab is interested in understanding the neural circuitry and central mechanism regulating energy balance and reward. The lab employ rodents and zebra finch as model systems, and neuroanatomical tools including the neuronal tract tracing, immunofluorescence, microscopy, stereotactic surgeries, intracerebroventricular and intra-nuclear drug administration, brain microdialysis, expression of neuropeptides, and analysis of behavior.

For the list of publications, please visit: <https://niser.irins.org/profile/235255> or <https://pubmed.ncbi.nlm.nih.gov/?term=Praful+Singru&sort=date&size=100>

Qualification requirements: Highly motivated candidates with Ph.D. (awarded/submitted) in Pharmacology or any other areas in life sciences with experience in cell and molecular biology techniques, bioinformatics, and animal handling are encouraged to apply. Candidates should email their applications in the prescribed format along with their CV, list of publications, a research proposal relevant to the research interest of the lab, and three reference letters to [pssingru@niser.ac.in](mailto:pssingru@niser.ac.in)

**7. Laboratory: Molecular Medical Bacteriology Lab (01 position)***Date of posting: 20<sup>th</sup> October 2022.*

**Principal Investigator:** Dr. Harapriya Mohapatra (email: [hm@niser.ac.in](mailto:hm@niser.ac.in))

**Laboratory description:** Dr. Mohapatra's lab's research interest is in studying antibiotic resistance, persistence and membrane proteins of ESKAPE pathogens. The lab resorts to various microbiological, cell culture, microscopic, biochemical and molecular biology experiments to address these questions. Investigation on membrane proteins have unveiled association of outer membrane proteins in resistance and virulence. Further investigations are on to elucidate the regulation of expression of these proteins.

Laboratory website: <https://www.niser.ac.in/users/hm>

Publications and other details: <https://harapriyamohapatra.wixsite.com/lary>

**Required qualifications:** The lab is looking for a motivated, self-driven and passionate candidate with a PhD (thesis submitted/ degree awarded) in Microbiology/ Life Sciences/ Biotechnology/ Genetics/ Molecular Biology or similar areas. Experience in Bioinformatics, microscopic imaging of bacterial cells, is desirable. The applicant must have published in internationally-reputed society journals during his/her PhD. The candidate should also have good scientific communication skills, should be capable of working in a team and capable of establishing cordial interpersonal interactions. The candidate has to apply in the prescribed format with a recent CV (detailing the expertise and work-experience) and a brief project proposal relevant to the lab interests. Three referees should be informed to send recommendation letters to **hm@niser.ac.in** within the stipulated window as prescribed in the advertisement.

#### **8. Laboratory: Aich Lab (01 position)**

*Date of posting: 20<sup>th</sup> October 2022.*

**Principal Investigator:** Professor Palok Aich (Email: [palok.aich@niser.ac.in](mailto:palok.aich@niser.ac.in))

**Laboratory description:** The [Aich Lab](https://www.niser.ac.in/users/palokaich) (<https://www.niser.ac.in/users/palokaich>) focuses on understanding the role of the intestinal microbiome on the gut-adipocyte-brain axis. For this industry-funded project, we plan to establish host metabolome markers to identify individuals' metagenome profiles.

The work would also involve the identification of novel probiotics and their prophylactic or therapeutic roles. Knowledge of essential bioinformatics would be a plus. People with experience and interest in these areas with a strong desire for innovative research are preferred. The job involves but not limited to a) collection of clinical samples under the supervision of Clinical collaborators from AIIMS Bhubaneswar, b) processing of samples for downstream experiments and analysis. For more details on the laboratory please visit .

Laboratory website: <https://www.niser.ac.in/users/palokaich>

Publications and other details: <https://www.niser.ac.in/users/palokaich>

**Required qualifications: PhD degree in Bioinformatics or related areas.**

**Preference will be given to the candidate with**

- Interests in applying knowledge to high-impact translatable biological research
- Interests in solving advanced biological problems and networking, is required
- Hands-on experience on AI-ML, python, and R, knowledge and expertise in CSS is desirable
- Understanding of univariate and multivariate statistics and statistical packages is essential,
- Knowledge in handling and dealing with data for correlation and regression would be a plus
- Prior knowledge in handling various omics (transcriptomics, metagenomics, metabolomics) and image processing would be an asset

Interests in crunching a lot of data and being able to make quick prototypes. Candidates should send in their applications and arrange for the recommendation letters directly send to [recruit\\_bio2201@niser.ac.in](mailto:recruit_bio2201@niser.ac.in) with the subject **PDF position at AichLab by the deadline as mentioned elsewhere**. Only qualified shortlisted candidates will be contacted and no further queries by the applicants is encouraged.

#### **9. Laboratory: Molecular Genetics and Epigenetics Laboratory (01 position)**

*Date of posting: 20<sup>th</sup> October 2022.*

**Principal Investigator:** Dr. Debasmita P. Alone (Email: [debasmita@niser.ac.in](mailto:debasmita@niser.ac.in))

**Laboratory description:** With the shifting demographics towards older age, there is a major concern for age-related disorders. 90% of individuals dying each year are due to age-related causes. Understanding the genome, epigenome, proteome and metabolome between healthy and diseased state of these individuals pave a way for unravelling bio-markers for early diagnosis and/or

therapeutics for various diseases. Our goal is to find these underlying players that change the micro-environmental niche differently in a diseased state during the developmental process of aging and hence are responsible for these age related-disorders. We are currently focusing on understanding the pathomechanism of two neurodegenerative eye disorders (Glaucoma, the leading cause of irreversible World Blindness and Corneal Endothelial Dystrophies) as well as Cancer using a plethora of cellular, biochemical, genetics, genomics and molecular biology techniques involving human samples, animal models as well as *in vitro* cell lines.

More details can be found at <https://www.niser.ac.in/users/debasmita> and <https://debasmitau.wixsite.com/debasmitalab>

**Required qualifications:** The lab is looking for a highly-interested, and self-motivated candidate with a PhD (thesis submitted/ degree awarded) in Molecular Biology / Genetics / Genomics / Proteomics / Bioinformatics / Biotechnology / Life Sciences or related areas. Prior experience with cell culture, animal handling, cell and molecular biology techniques: Cloning, Expression studies, Recombinant DNA technology, and genomics is desirable.

The applicant must have published in internationally-reputed journals during his/her PhD. The candidate should also have good scientific communication skills, should be capable of working independently, as well as in a team, and capable of establishing cordial interpersonal interactions. The candidate has to apply in the prescribed format with a recent detailed CV and a brief project proposal relevant to the PI's lab interest. Two referees should be informed to send recommendation letters to [cpsbs@niser.ac.in](mailto:cpsbs@niser.ac.in) with a copy to [debasmita@niser.ac.in](mailto:debasmita@niser.ac.in) within week of submission of the application by the interested candidate.

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