

Advertisement No.: IISERBPR/R&D/PDRF/2021**February 11, 2021****ADVERTISEMENT FOR RECRUITMENT OF PDRF**

IISER Berhampur is a Premier Autonomous Institution of National Importance funded by Ministry of Education (MoE), Govt. of India for promoting high quality Science Education and Research. IISER Berhampur invites applications for **Post-Doctoral Research Fellowship (PDRF)** in the Department of **Biological Sciences**.

The application for PDRF shall be submitted online by filling in the form available at: https://psrecruit.iiserbpr.ac.in:8090/iiserbpr_recruit_pdf_proj/

The last date for submission of online application is **Friday, February 19, 2021**

Minimum Qualifications for PDRF:

Ph.D. degree in respective discipline, with a consistently good academic record throughout. Candidates who have submitted the thesis and awaiting award of degree may also apply. These positions are open for candidates with 0-5 years of experience after obtaining PhD degree.

Minimum Qualifications for Project Assistant:

B. Sc. In Biological Science

Sl. No.	Category	Experience	Fellowship (₹)
1	Research Associate#	NA	Rs. 40000/- plus HRA*
2	PDRF	Upto 1 Year	Rs. 47,000/- plus HRA*
3	PDRF	More than 1-year upto 2 Years	Rs. 49,000/- plus HRA*
4	PDRF	More than 2-year upto 3 Years	Rs. 54,000/- plus HRA*

*As applicable to the city of Berhampur.

Candidate has to produce a letter from competent authority stating that the thesis has been submitted and the final viva/defense is pending. (For candidates who have submitted thesis but PhD degree is awaited)

The appointees will be called as Postdoctoral Research Fellow (PDRF) and the initial award will be for 1 year which can be extended for maximum of 3 years. The extension after each year will be after thorough review of the candidate's performance. Those who do not have PhD degree will be called as Research Associate (RA).

Age: The upper age limit is preferably less than 35 years for PDRF as on the date of apply.

Accommodation: Suitable residential accommodation as per the Institute rules shall be provided on the campus on joining the Institute (subject to availability). In case of non-availability of residential accommodation, HRA as per GoI rules shall be admissible.

Leave Rules: Each PDRF fellow will be entitled for 8 days of casual leave in a calendar year. He/she will be entitled for an annual leave up to a maximum of 30 days. Leave on medical grounds can be granted for a maximum period of 15 days in a semester on production of a valid medical certificate.

Medical Facilities: Only OPD medical consultation will be provided to the Post-Doctoral Fellows as per the Institute norms. However, candidates joining the Institute should have medical insurance of at least **One lakh** for the period of their stay at the Institute.

Notes:

- These fellowships are open for foreign nationals and overseas citizens of India too.
- Please see respective Departmental website for detailed research areas.
- The minimum requirement of qualifications and/or experience may be relaxed in case of exceptionally outstanding candidates in certain areas.
- A mere fulfilment of required minimum qualifications and experience does not entitle a candidate to be called for discussion.
- Reservation will be as per Govt. of India norms.
- The foreign residents and overseas citizens of India can attend the interview via ONLINE.
- Campus facilities for postdoctoral fellows will be the same as those of UG and PG students.

The selected PDRF shall be engaged in the following discipline in the department of Biological Sciences of research based on the relevant education and work experience:

Behaviour and Evolution lab (BEL):

We are interested in broader issues in Behavioural Ecology and Evolutionary Ecology. Much of the research involves experiments using laboratory adapted populations of *Drosophila melanogaster*. We are one of the very few groups in India carrying out Experimental evolution in the lab. An interested postdoc candidate should be trained in any subdomains of Ecological Sciences, not necessarily using *Drosophila*. However, experience in handling large experiments using fruit flies or beetles is desirable. The candidate should be ready to work in a group because most work involves large scale experiments where many experimenters collaborate. Documented evidence (for example, published paper) in handling statistical analysis of large data sets is essential.

A candidate should have published at least two papers in quality journal(s) as first-author. Fresh Ph.D. graduates are welcome.

Plant Developmental Biology:

A significant portion of plant's adaptive adjustments with the environment occur in the root system- the hidden half of the plants. And these may be at the cellular, organ, and organismal levels and are key to a plant's survival and growth. We employ various classic and next-generation developmental- genetic- cytological tools to investigate the questions of interest. Among the multitude of environmental factors influencing plant growth, water is of paramount significance.

The postdoc will be expected to work on investigating how water modulate root system development using the recently developed monocot model system *Setaria viridis* (green millet) and *Arabidopsis thaliana*.

Cellular Biochemistry:

While there is some understanding on the organisation and regulation of biochemical networks in cellular ensembles, there is limited knowledge on how these networks operate at the single cell level. To understand this, tools to study biochemistry at the cellular scale are needed. As an example, we have previously reported the development of a genetically encoded FRET sensor for pyruvate, which showed the presence of a glycolytic activity gradient in the developing mouse embryo (Bulusu et al., 2017 Dev cell.40: 331-341). The current project will involve development and characterisation of novel genetically encoded fluorescence-based sensors to understand biochemistry at the sub-cellular and cellular scales.

The candidate should ideally have expertise in recombinant protein expression and purification, fluorescence-based assays, site directed mutagenesis and protein structure-function analysis. Experience in mammalian cell culture is desirable but not essential.

Stem Cell Biology:

The postdoctoral fellow will be expected to develop nephrogenic stem cell reporter lines to understand the post transcriptional regulatory networks through cellular and molecular imaging approaches. Experience in BSL2 facility is a must and BSL3 facility is preferable. The candidate should have experience in working with advanced imaging methodologies.

RNP Biology Lab is interested in understanding the post transcriptional regulatory events in developmental pathways. The group is involved in identifying the Systems Biology of RNA-protein networks in nephrogenesis through in vitro and in vivo interaction studies, followed by bioinformatic studies to prioritize these networks.

These are then functionally characterized using cellular and biochemical tools in primary and stem/progenitor cell models.

Comparative and Evolutionary Genomics Lab:

My research group broadly focuses on comparative and evolutionary genomics approaches to reconstruct major evolutionary scenarios and trends that shaped the evolution of uniquely eukaryotic and animal systems. To mention a few, the group is interested in the expansion of molecular toolkit underpinning chemosensation in early branching animals, and molecular armaments that diversified post vertebrate genome doubling events to combat vertebrate viruses. An interested postdoc candidate should have prior experience in genome mining, phylogenetic analysis, sequence analysis and ability to handle large-scale datasets.

The candidate must possess at least two first-author articles preferentially related to evolutionary genomics analysis.

Circadian rhythms and innate immunity:

A position for a motivated postdoctoral fellow to use the model genetic system *Drosophila melanogaster* as well as other *Drosophila* species to explore the link between innate immunity and circadian rhythms is sought. Motivation and independence would key requirements. The candidate will have the opportunity to design and implement a research question of his/her interest. He/she will be expected to help in writing grant proposals as well as regularly submit progress reports associated with the research being done.

A background in fly genetics would help, but is not essential.

Dean, Faculty Affairs

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