

September 2021

A postdoctoral position funded by NIH is open in the laboratory of Dr. Marxa Figueiredo at Purdue. The ideal candidate would have a PhD in molecular and cell biology and an interest in drug discovery for arthritis and reversing bone erosion or therapeutics for bone-metastatic tumors.

Desired experience includes basic molecular biology techniques, cell culture, and especially drug discovery and/or in vivo mouse models.

Candidates from backgrounds underrepresented in STEM are encouraged to apply.

We study the interactions between bone and the immune system to develop new therapies for cancer and arthritis. Our therapeutic toolbox includes osteo-immune cytokines, small molecules (drug discovery), and mesenchymal stem cells (MSC)

<http://vet.purdue.edu/discovery/figueiredo/index.php>

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The Research Technician will provide support with managing a mouse colony and performing molecular/biochemical analyses. The individual will be expected to perform procedures on rodents, purify nucleic acids, as well as run PCR and other assays.

Bachelors or masters degree in life sciences (e.g., Biology, Biochemistry, Nutrition Science, or related field) is required. Strong experience with at least one of the following is also required: Rodent handling, qPCR, gel electrophoresis. Experience with 2 or more is preferred, and experience operating thermal cyclers and performing PCR-based genotyping would be useful.

Willingness to learn new skills to carry out the technician role is required, and applicants with strong experience in one of the required skill will be seriously considered, with the intention that the applicant could quickly learn the other required skills while on the job.

Options exist for either part time or full time work hours. Purdue University (West Lafayette, IN) is the work location, and the individual would be employed as a temp through Knowledge Services.

Interested applicants should submit a brief cover letter, CV, and contact information of 3 references.

<https://www.indeed.com/jobs?q=Purdue%20technician%20qpcr&l&vjk=ffa649530dd66882>

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Postdoctoral position in the area of drug discovery exploring adenylyl cyclases as novel drug targets. The Watts Laboratory at Purdue University is searching for a postdoctoral fellow for several recently funded projects studying the molecular pharmacology of adenylyl cyclase and GPCR signaling in the areas of pain, drug abuse, and metabolism. Required qualifications: relevant experience in pharmacology, molecular biology, cell culture, 2<sup>nd</sup> messenger assay development, and working in a team environment. Experience working with mice would be preferred but not required for consideration. The position will be highly collaborative with medicinal chemists and behavioral pharmacologists. See website:

<https://www.mcmp.purdue.edu/faculty/wattsv>

If you are interested please submit your CV and a brief description of your research interests to: [wattsv@purdue.edu](mailto:wattsv@purdue.edu).

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<b>Position Title</b>	Internship in Molecular and Cellular Biology
<b>Employer</b>	Purdue University/ Molecular Evolution, Protein Engineering and Production Lab (MEPEP) <a href="https://www.purdue.edu/discoverypark/pi4d/facilities/mepep/index.php">https://www.purdue.edu/discoverypark/pi4d/facilities/mepep/index.php</a>
<b>Location</b>	Hall for Discovery and Learning Research, Room 431 207 S. Martin Jischke Dr., West Lafayette, IN 47907
<b>Discipline</b>	Life Sciences, Biotechnology, Biochemistry
<b>Position Type</b>	Full time
<b>Duration</b>	1 year
<b>Job Type</b>	Internship
<b>Project description</b>	We are looking for a highly motivated intern to join MEPEP and work on the projects available in the lab in the fields of directed evolution, microfluidic development, immunology and vaccines. The student would be expected to follow the given protocols, take proper notes and observations regarding the outcome of experiments and modify the protocols as needed. We look forward to working together with young scientists to provide unique opportunities to enhance their professional skills. We want your internship to be rewarding and a fun learning experience. Consider joining our R&D group for your internship
<b>Work responsibilities and activities</b>	Responsibilities <ul style="list-style-type: none"> <li>Under the guidance of senior laboratory staff, perform laboratory experiments potentially including protein expression in bacterial, yeast and mammalian expression systems as well as protein purification and protein analysis (e.g. SDS-PAGE, Western Blot, analytical SEC).</li> </ul>

	<ul style="list-style-type: none"> <li>• Work independently in the laboratory once on the job training has been provided by senior laboratory staff.</li> <li>• Document experimental data using internal systems such as electronic lab-books.</li> <li>• Contribute to scientific discussions and present data at internal meetings.</li> <li>• Contribute to the maintenance of a safe and effective working environment by setting high personal standards and complying with all Purdue codes of practice.</li> </ul>
<b>Qualifications/ requirements</b>	B.S student with a degree in biology, immunology, microbiology, molecular biology, cellular biology, or biochemistry. Experience with standard cell culturing techniques and analytical procedures (cell counting, cell seeding, viability, sterility sampling etc.) is generally a requirement. Other laboratory techniques such as cloning, PCR, enzyme kinetics, SDS PAGE, ELISA, are highly appreciated. We are looking for proactive individuals, good team-players, organized, accurate and precise in performing the experiments.
<b>Start date</b>	ASAP
<b>Contact</b>	<a href="mailto:rostafe@purdue.edu">rostafe@purdue.edu</a>

## POSTDOC POSITIONS IN DIRECTED EVOLUTION AND PROTEIN ENGINEERING FOR ENZYMES

**Field of study:** Biochemical engineering and molecular biology

**Key words:** Directed protein evolution, enzymes, antibodies, flow cytometry, microfluidic devices, high-throughput screening, emulsion technology, enzymatic assays, display technologies

### Area of research

We are looking for highly motivated researcher to join Molecular Evolution, Protein Engineering and Production lab and work on cutting edge projects in the innovating field of directed evolution.

The successful candidate will work during his post-doctoral studies on advancing the directed evolution of enzymes and display technologies and developing high-throughput screening systems based on flow cytometry, microfluidic devices, mass spectrometry and selection systems.

### Your tasks

The successful candidate will work on developing mutant libraries starting from different genes by various molecular evolution techniques using random, semi-rational or completely rational approaches. He/she will have to optimize the expression systems by using either in vivo or in vitro systems and optimize the flow cytometry high throughput screening systems for gene libraries. In additions she/he will on the development and advancement of microfluidic

screening platforms. Finally, he/she will have to screen the libraries and characterize the improved mutants.

**Your requirements**

The candidate should hold a PhD in biochemistry, molecular biology or a related field. She/he should be familiar with standard molecular biology and cell biology techniques. He/ She should have a good understanding and expertise in protein expression, purification and biochemical characterization. Hands on experience with flow cytometry and/or microfluidic devices would be a plus.

**Applications**

Please submit a cover letter that describes your interests and fit with the position, CV and names and contact information of three references.

Questions can be directed to Dr. Raluca Ostafe (rostafe@purdue.edu).

Start date is as soon as possible

Purdue University is an EOE/AA employer. All individuals, including minorities, women, individuals with disabilities, and veterans are encouraged to apply. A background check will be required for employment in this position.

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Seeking Postdoctoral Scholars to work on a funded research project to explore the role of chronic neuroinflammation in the context of environmental exposures and neurological and neurodegenerative disease. Expertise in neurobiology and/or neuroinflammation is preferred, and interest in working with human stem cell based neuronal model systems. For more information please [contact Dr. Aaron Bowman](#), School of Health Sciences, Purdue University. Competitive salary and benefits commensurate with experience will be provided.

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***Postdoctoral Research Associate***

Purdue University, a leading research and education institute based in Indiana, is seeking applicants for a Postdoctoral Research Associate position in the fields of neurotrauma and neurodegenerative diseases research. The position will involve working on research projects seeking to understand the pathological mechanisms of motor and sensory deficits. This includes motor dysfunction result from ionic channel abnormalities, and pathological behavior stemming from local physical and chemical disturbances. The electrophysiological expression of various channels of interest will be assessed at levels of dorsal root ganglion, spinal cord, and brain, using both in vitro and in vivo rodent models. The technologies involved will be mainly extracellular or intracellular potential recording and imaging isolated tissues and neurons. The ideal candidate will possess significant knowledge related to fundamental electrophysiological techniques in neuroscience and quantitative data analysis. In addition, solid experiences with rodent surgery on brain and spinal cord would be preferred. Prior experiences with single cell and/or live animal field potential recording would be a plus. This person will join an active multidisciplinary research team in the laboratory of translational neurosciences. There will also be opportunity for collaboration with the large neuroscience community at Purdue University, West Lafayette campus. The successful applicant should be able to work well with groups in a team setting. Good command of written and spoken English is preferred. Minimum requirement for the position: PhD or equivalent degree in neuroscience,

engineering or a related discipline. A highly competitive salary commensurate with qualifications and experience will be offered, in addition to annual leave and medical benefits.

Applicants should send an up-to-date CV and example of published work to Prof. Riya Shi ([riya@purdue.edu](mailto:riya@purdue.edu)). Application screening will begin immediately and close when the position is filled. Start date is negotiable. Only candidates shortlisted for interviews will be notified of the application result. Purdue University is an EEO/AA employer fully committed to achieving a diverse workforce. All individuals, including minorities, women, individuals with disabilities, and protected veterans are encouraged to apply.

Riya Shi, M.D., Ph.D.,

Mari Hulman George Endowed Professor of Applied Neuroscience

Professor of Biomedical Engineering

Director, Center for Paralysis Research

Department of Basic Medical Sciences

College of Veterinary Medicine

Weldon School of Biomedical Engineering

Purdue University

West Lafayette, IN 47907-1244

Tel: 765-494-6446

E-mail: [riya@purdue.edu](mailto:riya@purdue.edu)

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### ***Postdoctoral Research Associate***

Purdue University, a leading research and education institute based in Indiana, is seeking applicants for a Postdoctoral Research Associate position in the fields of neurotrauma and neurodegenerative diseases research. The position will involve working on research projects seeking to understand the pathological mechanisms of motor, sensory, and cognitive deficits. The structural, biochemical, functional and behavioral analysis will be employed to elucidate the related pathogenesis and devise effective pharmacological interventions.

The ideal candidate will possess significant knowledge in at least one of the aforementioned areas. In addition, solid experiences with rodent surgery on brain and spinal cord would be preferred. This person will join an active and well-funded multidisciplinary research team in the Purdue Center for Paralysis Research. There will also be ample opportunity for collaboration with the large neuroscience community at Purdue University, West Lafayette campus. The successful applicant should be able to work well with groups in a team setting. Good command of written and spoken English is preferred. Minimum requirement for the position: PhD or equivalent degree in neuroscience, engineering or a related discipline. A highly competitive salary commensurate with qualifications and experience will be offered, in addition to annual leave and medical benefits.

Applicants should send an up-to-date CV and example of published work to Professor Riya Shi ([riya@purdue.edu](mailto:riya@purdue.edu)). Application screening will begin immediately and close when the position is filled. Start date is negotiable. Only candidates shortlisted for interviews will be notified of the application result. Purdue University is an EEO/AA employer fully committed to achieving a diverse workforce. All individuals, including minorities, women, individuals with disabilities, and protected veterans are encouraged to apply.

Riya Shi, MD, PhD,

Mari Hulman George Endowed Professor of Applied Neuroscience

Professor of Biomedical Engineering

Director, Center for Paralysis Research

Department of Basic Medical Sciences  
College of Veterinary Medicine  
Weldon School of Biomedical Engineering  
Purdue University  
West Lafayette, IN 47907-1244  
Tel: 765-494-6446  
E-mail: [riyi@purdue.edu](mailto:riyi@purdue.edu)

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*The Chan Lab (PI: Deva Chan) in the Weldon School of Biomedical Engineering is looking for a postdoc to start this fall. Research projects will be focused on the gut-joint axis and its role in modulating musculoskeletal injury risk and orthopaedic disease and are funded by startup funds and recently awarded Department of Defense funding. More information is available at <https://engineering.purdue.edu/ChanLab/news/were-hiring-a-postdoc>*

*Candidates with experience or interest in inflammation, microbiome, rodent models, and/or orthopedics are particularly encouraged to apply. Contact Dr. Chan [devachan@purdue.edu](mailto:devachan@purdue.edu) with questions or with the materials described in the job posting to apply.*

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<https://vet.purdue.edu/cpb/employment.php#3>

1-year Post-doctoral Associate position in Infectious Diseases Epidemiology, Purdue University  
Applications are invited for a Post-doctoral Associate position in the **Infectious Diseases Epidemiology Laboratory** at Purdue Veterinary Medicine. The group is headed by **Dr. Wendy Beauvais**, who collaborates in this project with Dr. Darryl Ragland at Purdue Veterinary Medicine and Dr. Max Moreno from Indiana University Fairbanks School of Public Health. This team is seeking a self-motivated individual to support a funded strongly quantitative project to address swine industry concerns about influenza transmission between swine and the workforce. Applicants are invited to nurture a diverse, collaborative, supportive, and productive research environment. Salary and health insurance benefits will be provided. The position is available to start as soon as possible.

The Post-doctoral Associate will work on the following funded project:

**Risk assessment model to reduce bi-directional interspecies influenza transmission in an indoor hog grower unit.** This project is a collaboration between the Department of Comparative Pathobiology and Department of Veterinary Clinical Sciences at Purdue Veterinary Medicine and the Department of Global Health, Indiana University Fairbanks School of Public Health. Applicants must be able to demonstrate previous success using mathematical modeling methods and/or risk assessment and demonstrate excellent scientific writing. Previous training or experience in the US swine industry would be an advantage.

#### **Department of Comparative Pathobiology, Purdue Veterinary Medicine**

The successful candidate will work within the department of Comparative Pathobiology (<https://vet.purdue.edu/cpb/teaching.php>) at Purdue's West Lafayette campus, which is home to more than 10,000 postgraduates ([www.purdue.edu](http://www.purdue.edu)). Purdue University is the land-grant University of the

State of Indiana. As the only College of Veterinary Medicine in the State, the College is in the unique position of conducting education, research, and outreach to fulfill the veterinary needs of the State and improve the health and well-being of animals and people. The Department of Comparative Pathobiology (CPB), housed within the Veterinary College, has a long tradition of excellence. The CPB department is dedicated to the study of disease processes at the molecular, cellular, individual, population and ecosystem levels, its impact and specific diagnosis. Various areas of expertise within the Department include infectious diseases and vaccinology, pathology, cancer biology, drug development, toxicology, animal welfare, disease diagnostics and surveillance, and human-animal interactions.

**To apply:**

Interested candidates should submit a CV and covering letter to Dr. Wendy Beauvais, **Department of Comparative Pathobiology** ([wbeauvai@purdue.edu](mailto:wbeauvai@purdue.edu)).

Short-listed candidates will be invited to participate in a video-conference interview consisting of a 5-minute research presentation and a standardized set of interview questions. Provisional interview dates are 20th and 21st September 2021. Applications will continue to be accepted until 10/12/2021, but those received after the review date will only be considered if the position has not yet been filled.

**Diversity Statement**

Purdue University College of Veterinary Medicine values, nurtures, and respects all members of its community and ensures an environment of inclusive excellence where all students, faculty, and staff are inspired and empowered to achieve their full potential. In order to be better informed about issues of climate, diversity and inclusion, Purdue University and Purdue Veterinary Medicine provide the opportunity for all its faculty and staff to participate in various diversity-training activities.

Purdue University is an EOE/AA employer. All individuals, including minorities, women, individuals with disabilities, and veterans are encouraged to apply.

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Postdoctoral positions in stem cells and metabolism West Lafayette, IN, USA Postdoctoral positions are available at the stem cell biology laboratory, directed by Dr. Shihuan Kuang at Purdue University (<https://web.ics.purdue.edu/~skuang/>). The candidates are expected to spearhead, with the support of 1-2 graduate students, innovative research related to one of the two areas: 1. Satellite cell biology and muscle regeneration. We use mouse models to study signaling mechanisms and metabolic pathways that regulate regenerative function of muscle satellite cells (Kuang et al, 2007, Cell; Yue et al, 2017, Nat Commun; Yue et al, 2021, Mol Ther). Recent single cell RNA-seq studies in the lab has led to the discovery of a subset of satellite cells with immune cell properties (read the News Release). Ongoing studies aim to dissect the origin and function of these immunomyoblasts (i.e. immune gene-expressing myoblasts). Additional interests of the lab are to understand the role of lipid droplets and (fatty acid) metabolism in satellite cell biology. 2. Plasticity and regulation of white, beige and brown adipocytes. We are the first group to report a key role of Notch signaling in adipocyte fate conversion, metabolism and tumorigenesis (Bi et al, 2014, Nat Med; Bi and Kuang, 2015, Trends Endocrinol Metab; Bi et al, 2016, J Exp Med). Ongoing studies combine biomaterials approach to target Notch signaling to promote browning of white adipocytes, and to combat obesity, type 2 diabetes and liposarcoma (Jiang et al, 2017, Mol Ther; Huang et al, 2019, Trends Endocrinol Metab). Additional research aims to identify novel molecular regulators of adipocyte biology (for example, Jia et al, 2020, Adv Sci). The applicants should

have a PhD or equivalent degree in the field of cell and developmental biology, biochemistry, physiology, biomedical engineering or related fields. Experiences with primary cell culture, rodent models, microscopy, (RNA-seq, metabolomics and lipidomics) data analysis, and molecular biology techniques will be essential. Strong writing skills and prior publications in relevant field are required. Successful candidates will be provided with excellent compensation and career development opportunities, as well as freedom to explore the endless frontiers of science in a non-stressful friendly working environment. Inquiries and applications (including CV, name/email address of 3 referees, and a brief description of research interests) should be directed to: [skuang@purdue.edu](mailto:skuang@purdue.edu)

Purdue University is an EEO/AA employer. Purdue does not discriminate on the basis of race, color, religion, gender, sexual orientation, national origin, genetics, disability, age, or any other basis prohibited by law.

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Applications are invited for a **Post-doctoral Research Associate** or **Research Scientist** position in Dr. Harm HogenEsch's laboratory in the Department of Comparative Pathobiology at Purdue University. The research is aimed at developing a novel infertility vaccine (immunocontraceptive) for population control of wild animals. This research project is a collaboration with Dr. Raluca Ostafe, director of the Molecular Evolution, Protein Engineering, and Production (MEPEP) facility. The research will include expression of recombinant proteins, vaccine formulation, and assessment of the immune response and vaccine efficacy. We provide:

- Salary and health insurance benefits
- An intellectually stimulating, diverse and supportive research environment
- Opportunity to collaborate across disciplines

The successful candidate:

- Has a Ph.D (for post-doc) or MS (for research scientist) in immunology or related field
- Is self-motivated and a team player
- Expertise with molecular biology techniques in particular protein expression is preferred.

Interested individuals should submit the following documents, preferably as one pdf file, to Dr. Harm HogenEsch ([hogenesc@purdue.edu](mailto:hogenesc@purdue.edu)):

- Cover letter
- Curriculum Vitae
- The names and contact information of three references.

The Department of Comparative Pathobiology is located on the West Lafayette campus of Purdue University, which is home to more than 10,000 graduate students and post-docs. Purdue University is a public land grant university and a tier 1 research institution. West Lafayette is a thriving and diverse community with excellent schools, located one hour north of Indianapolis and two hours south of Chicago. Purdue University College of Veterinary Medicine values, nurtures, and respects all members of its community and ensures an environment of inclusive excellence where all students, faculty, and staff are inspired and empowered to achieve their full potential. In order to be better informed about issues of climate, diversity and inclusion, Purdue University and Purdue Veterinary Medicine provide the opportunity for all its faculty and staff to participate in various diversity-training activities.

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