Postdoctoral Positions at Cincinnati Children's

Positions Available in various areas (Click to review details):

- **Anesthesia**

- **Bioinformatics/ Computational Biology/ Biostatistics/ Epidemiology**

- **Cancer & Blood Diseases**

- **Cardiovascular Research**

- **Clinical Pharmacology**

- **Genetics, Development, Physiology, and Disease**

- **Imaging Research Center**

- **Immunology/ Inflammation**

Click here to apply online and use the relevant job number.

Questions?

Please contact:
Tamiika Hurst, PhD or
Uma Sivaprasad, PhD, Scientist
**Recruiters: research@cchmc.org**

Cincinnati Children's Research Foundation

Cincinnati Children's Research and Training at a Glance:
- Among the top in NIH funding for pediatric research institutions
- Over **1.4 million square feet** of research laboratory space
- **900+ scientists** conducting basic, translational, and clinical research
- Over **2000 publications** annually in top-tier journals
- Access to Employee Resource Groups and **Mentorship** programs
- Postdocs have gone on to careers in academia, biotech, pharma, teaching etc.

Learn more about the Postdoctoral Fellowship Program
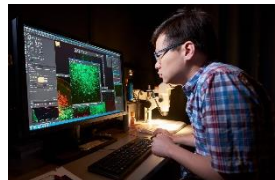
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Compensation and Benefits:
Postdoctoral Research Fellows and Associates are eligible for:
- Group Health, Dental, and Vision Insurance Plans
- Paid Time Off
- Retirement Plan
- Tuition Reimbursement
- Relocation benefits for eligible hires

Living in Cincinnati:
Learn more about Cincinnati, living here and get to know the neighborhoods!!

Please review our current openings described in the subsequent pages (the links on the left will take you to the sections of interest).

Please submit a cover letter describing your research interest, CV, and contact information for 3 references to the email address at the end of the position for which you would like to be considered.

Cincinnati Children's Hospital Medical Center is an Affirmative Action/ Equal Opportunity Institution

Cincinnati Children's
changing the outcome together

Anesthesia

Research Fellow Job Number: 117915. The Department of Anesthesia, Division of Pain Management at Cincinnati Children's Hospital Medical Center is seeking to recruit several enthusiastic and highly motivated Postdoctoral Research Fellows to join the innovative laboratory of Dr. Michael Jankowski. The Jankowski laboratory is investigating the molecular mechanisms of sensory neuron plasticity after peripheral injuries. Recently, our exciting novel research has found that a number of distinct non-neuronal cells have unique properties that are crucial for the detection and transmission of noxious stimuli across the lifespan under normal and pathological conditions. As part of our growing team, these Research Fellows will execute multifaceted studies designed to understand the mechanisms by which peripheral glia and circulating immune cells modulate sensory perception in the periphery to influence multiple biological processes including nociception, cardiovascular reflexes and myofiber repair. Results are expected to lead to the development of novel pain treatments for numerous injury and/or disease-related conditions.
Contact: Michael Jankowski, PhD   **Email Address: Michael.Jankowski@cchmc.org**

Research Fellow Job Number: 128643. The Danzer laboratory in the Center for Pediatric Neuroscience is seeking a postdoctoral researcher to investigate basic mechanisms of temporal lobe epileptogenesis. The principal goal of this research is to determine the mechanisms by which altered mechanistic target of rapamycin (mTOR) signaling disrupt hippocampal circuit function and lead to the development of epilepsy. The research has the potential to lead to new therapies to treat epilepsy, which will be tested in preclinical studies. The fellowship will provide training opportunities in EEG/ECoG acquisition and analysis, confocal and two-photon live imaging, hippocampal circuitry, calcium imaging, optogenetics, DREADDs, transgenic models of epilepsy and grant writing/manuscript preparation. The ideal candidate will have a doctoral degree in a relevant field along with experience in basic wet lab techniques and animal handling. The CCHMC campus sits adjacent to the affiliated University of Cincinnati Medical Center, and combined faculty at the two institutions includes more than 60 basic neuroscience labs as well as active graduate student and postdoctoral programs.
Contact: Steve Danzer, PhD   **Email Address: Steve.Danzer@cchmc.org**

Bioinformatics/ Computational Biology/ Biostatistics/ Epidemiology

Research Associate Job Number: 122598. The division of Emergency Medicine in collaboration with the division of Biostatistics & Epidemiology has an immediate opening for a postdoctoral Research Associate. The Research Associate will engage in emergency based clinical research with divisional Faculty and Fellows, including retrospective cohorts, cross-sectional, case control studies and prospective trials as well as quality improvement and implementation studies. This individual will split his/her time between supporting emergency medicine Fellows' projects, teaching research methods, as well as developing his/her own line of research.
The division of Emergency Medicine has over 40 faculty and 13 fellows who provide emergency medical care in one of the busiest pediatric emergency departments in the country. The division has robust research infrastructure including approximately 20 clinical research coordinators, as well as data and financial analysts, a research supervisor, financial and a research manager. The division belongs to the PECARN Network, a federally funded network of 18 US pediatric hospitals. There are approximately 50 ongoing studies in the division, including 15 studies directly recruiting patients in the ED. The division receives ~ 4 million dollars/year in grant funding and produces ~ 100-120 publications per year, most of them in high impact journals. 3 or more years of relevant postdoctoral research experience is required. A PhD in Epidemiology with a minor in Occupational Health, Systems Engineering, Human Factors Engineering, Occupational Health Nursing, or related discipline is preferred. Experience in research/quality improvement is a plus.
Contact: Mekibib Altaye, PhD   **Email Address: Mekibib.Altaye@cchmc.org**

Research Fellow Job Number: 120831. The Division of Biomedical Informatics at Cincinnati Children's Hospital Medical Center (CCHMC) invites a postdoctoral Research Fellow to join our digital health initiative: the Design, Analytics, Integration (dAIn) program. The fellow will work closely with clinical investigators across the CCHMC and the University of Cincinnati to co-develop computational and technology solutions for improving the lives of children and adults. They will collaborate with other research staff, application developers, and IT technicians within a dynamic, fast paced research environment. Candidates should expect to conduct multiple machine learning and NLP-focused projects and contribute to decision tools, applied patient safety and health care quality improvement efforts.
Contact: Judith Dexheimer, PhD   **Email Address: Judith.Dexheimer@cchmc.org**

Research Fellow Job Number: 130719. The Dexheimer Lab is a Data Science Laboratory at Cincinnati Children's. The emphasis of our research program is to employ predictive analytics and deep approaches to study the clinical and biological determinants of outcomes in children. Candidates should anticipate developing computationally efficient and scalable algorithms, using clinical data from multiple modalities, primarily electronic Health Record (EHR) data. This is an opportunity to contribute to decision tools, applied patient safety and health care quality improvement efforts. The position will be supervised by Dr. Judith Dexheimer and Stacey Liddy-Hicks. We welcome applicants who enjoy working in a diverse collaborative team.
Contact: Judith Dexheimer, PhD   **Email Address: Judith.Dexheimer@cchmc.org**

Research Fellow Job Number: 118554. Dr. Alex Miethke's Autoimmune Liver Disease Laboratory (CALD) seeks a research fellow to perform and analyze single cell genomics studies on liver tissue samples from patients and from animal models of primary sclerosing cholangitis, autoimmune hepatitis, or biliary atresia. These studies will involve cutting-edge, high-dimensional, immune-system measurements (e.g., single-cell RNAseq, scATAC seq, and spatial transcriptomics) and will be analyzed in collaboration with Dr. Miraldi providing expertise in computational and systems biology. Studies will be performed in partnership with other investigators of the Division of Pediatric Gastroenterology focusing on single cell genomics and organoid studies to unravel disease mechanisms of inflammatory liver and gut diseases (including inflammatory bowel disease) to develop novel and targeted therapies. The mathematical modeling frameworks utilized between the Miethke and Miraldi labs span mechanistic (e.g., dynamic gene regulatory networks) to deep learning (e.g., prediction of cellular epigenomes from DNA sequence). Situated at Cincinnati Children's Hospital, we are dedicated to studies that will ultimately improve the health of children. The ideal candidate will collaborate closely with other computational biologists in the Divisions of Immunobiology and Bioinformatics, with physicians, and with clinical research coordinators of the CALD. The Miethke investigative team is dedicated to compassionate translational research for and with patients with autoimmune liver disease and their family members.
Contact: Alexander Miethke, MD   **Email Address: Alexander.Miethke@cchmc.org**

Research Fellow/Associate Job Number 123780. The Chen lab is looking for a passionate postdoctoral fellow (recent PhD) or research associate (PhD & 3+ years postdoc experience) with a doctoral degree in bioinformatics, computational biology or statistical genetics, who will be involved in the analysis and method development for high-throughput omics (genomics, transcriptomics, epigenomics) and clinical data generated from patients and biological labs focusing on genetic diseases. Besides data analysis and method development, the applicant will communicate scientific ideas and results in terms of oral presentations, research manuscripts and proposals. The ideal candidate will have Ph.D. in bioinformatics, computational biology or statistical genetics or a related discipline. A strong background in genomics, computational biology, and/or statistics, familiarity with high-throughput NGS data, extensive programming, and data visualization experience is required. The ideal candidate will have: an interdisciplinary background in bioinformatics and computational biology and genomics; experience with the analysis and interpretation of multi-omics data; good programming skills; and knowledge of statistics, network analysis and machine learning.
Contact: Jing Chen, PhD   **Email Address: Jing.Chen2@cchmc.org**

Research Fellow Job Number: 116939. Dr. Miraldi's Immuno-Engineering Laboratory seeks a computational research fellow to build mathematical models of the immune system in vivo. These models will be constructed from cutting-edge, high-dimensional, immune-system measurements (e.g., single-cell genomics, chromatin state, proteomics). Our mathematical modeling frameworks span mechanistic (e.g., dynamic gene regulatory networks) to deep learning (e.g., prediction of cellular epigenomes from DNA sequence). Situated at Cincinnati Children's Hospital, we are dedicated to the design of computational methods and systems-immunology studies that will ultimately improve the health of children. Through close collaboration with our physician and experimental colleagues, we iteratively test and refine our models, so that the models yield novel insights into immune-cell function and ultimately guide new therapeutic strategies in the context of autoimmunity, infectious disease, and cancer. The ideal candidate will collaborate closely with experimental immunologists, physicians, and other computational biologists. The team will design and execute hybrid computational-experimental strategies that push the boundaries of both immunology and computational biology. The ideal candidate will have a quantitative background in computational/systems biology, engineering, computer science, statistics, math, or a related field. He or she will also (1) be a fluent programmer in at least one language (e.g., Python, R, MATLAB) and be willing to develop fluency in other languages, as needed, (2) have research experience in machine learning, bioinformatics and/or mathematical modeling, and (3) a trackable publication record. An enthusiasm and willingness to develop immunology expertise on the job is also necessary.
Contact: Emily Miraldi, PhD   **Email Address: Emily.Miraldi@cchmc.org**

Research Fellow Job Number: 97786/130732. Dr. Theresa Alenghat's Lab has openings for two highly motivated postdoctoral research fellows interested in epigenetics, intestinal epithelial biology, and host-microbe interactions. We explore pathways that regulate how intestinal microbiota impact immune and metabolic homeostasis, infection, and inflammatory bowel disease. Candidates with publications reflecting expertise in epigenetics, immunology, and/or bioinformatics analyses are encouraged to apply.
Contact: Theresa Alenghat, VMD, PhD   **Email Address: Theresa.Alenghat@cchmc.org**

Research Fellow Job Number: 129833. The Brugmann Lab is looking for a postdoctoral fellow interested in combining developmental and computational biology to further our understanding of craniofacial development and disease. Craniofacial abnormalities (CFAs) are associated with approximately one-third of all birth defects. The laboratory focuses on understanding the molecular, cellular, and genetic factors that guide craniofacial development. To do so, we have focused on the function of the primary cilium, a ubiquitous, microtubule-based organelle used by all cells to integrate and transduce molecular signals. We aim to elucidate how primary cilia function during facial development and uncover how basic cellular processes are impacted when cilia are impaired. To achieve this goal, we generate and analyze large data sets (RNA-seq, ChIP-seq, CUT&RUN) from animal (murine and avian) and human (iPSC) ciliopathic models. Interested candidates must have a PhD and have a strong record of accomplishments and experience in 1) Developmental biology, Molecular biology, Craniofacial biology, Ciliary biology; OR 2) Bioinformatics, computational biology. We are looking for a colleague who is highly motivated and independent. Relevant publications: eLife 2020 PMID: 33006313.
Contact: Samantha Brugmann, PhD   **Email Address: Samantha.Brugmann@cchmc.org**

Cancer and Blood Diseases

Research Fellow Job Number: 134831. A post-doctoral fellow is sought to work on projects related to complications of bone marrow transplantation. The successful candidate will work on projects conducted jointly by Drs. Davies and Ziady, investigating protein regulation of graft versus host disease and other complications of transplantation. Broad experience in laboratory techniques including protein chemistry, tissue culture, multi-omics, and other big data techniques will be valuable.
Contact: Stella Davies, MBBS, PhD   **Email Address: Stella.Davies@cchmc.org**

Research Fellow Job Number: 131846. A postdoctoral Research Fellow position is available in the Kalfa Lab to work on studying novel candidate gene mutations identified in patients with untypable congenital dyserythropoietic anemia (CDA) and the corresponding genes and pathways critical for normal erythropoiesis. The candidate will use cell biology and molecular biology approaches and utilize erythropoiesis cultures in vitro with patient-derived iPSCs and erythroid cell lines after introduction of the mutation(s) in question. We seek a candidate with a doctoral degree who is enthusiastic about driving projects from experiments to analysis to manuscript preparation and submission. Some experience in designing CRISPR-based genome editing approaches is preferred.
Contact: Theodosia Kalfa, MD, PhD   **Email Address: Theodosia.Kalfa@cchmc.org**

Research Fellow Job Number: 129141. The Filippi lab is recruiting a motivated postdoctoral fellow with interest and expertise in Hematopoiesis and Hematopoietic Stem Cell functions. Our laboratory has several exiting projects focusing on the regulation of hematopoietic stem cell (HSC) self-renewal under regenerative conditions and during aging. We are addressing fundamental and important questions about the role of stress signaling pathways, mitochondrial metabolism and innate immune signaling on HSC functions, how these pathways contribute to the functional decline of the hematopoietic system after regenerative stress and how these stress-related pathways contribute to secondary neoplasms, including bone marrow failure and myelodysplastic syndromes. The lab uses state-

of-the-art imaging technologies, multi-omics approaches, extensive mouse models and patient specimen. Candidates must hold a Ph.D. and/or M.D. degree and should possess strong laboratory and analytical skills, and record of peer-reviewed publications. Applicants with prior experience in hematopoiesis and stem cell biology are particularly encouraged to apply, but we will also consider candidates with strong backgrounds in immunology, cellular biology, imaging and cancer biology.
Contact: Marie-Dominique Filippi, PhD   **Email Address: Marie-Dominique.Filippi@cchmc.org**

Research Fellow Job Number: 128215. A Research Fellow position is available immediately to work with Dr. Elisa Boscolo. The Boscolo lab studies vascular malformations and vascular tumors, endothelial cell biology and the role of TIE2 and Gαq signaling. In addition, the lab focuses on translational studies to identify new therapeutic targeted drugs for vascular anomalies affecting children.
Contact: Elisa Boscolo, PhD   **Email Address: Elisa.Boscolo@cchmc.org**

Research Fellow Job Number: 134454. The Lucas lab is actively recruiting a Research Fellow to understand the biology of hematopoiesis in the bone marrow and other tissues. The Research fellow will drive hypothesis generation, experimental design, assay development/optimization, experimental execution, data analysis, and manuscript preparation and revisions. There will also be opportunities to mentor and train graduate students and research assistants in the laboratory. Minimum qualifications are a PhD or MD in basic or health sciences or bioinformatics and at least one first author publication from their graduate studies. Experience in flow cytometry, confocal microscopy, or bioinformatics will be a plus.
Contact: Daniel Lucas, PhD   **Email Address: Daniel.Lucas@cchmc.org**

Research Fellow Job Number: 114655. The Ware Lab has an immediate opening for a postdoctoral research fellow to study erythroid differentiation. The fellow will work to understand the effects of hydroxyurea on fetal hemoglobin induction and genetic variants that affect the treatment response. Applicants must have completed a PhD in a related field, display critical and independent thinking skills, and have experience with molecular biology.
Contact: Russell Ware MD, PhD   **Email Address: Russell.Ware@cchmc.org**

Research Fellow Job Number: 126637. Dr. Jose Cancelas' lab studies the molecular and cellular basis of normal and malignant hematopoiesis and blood/cell therapies. We are looking for a research fellow with an interest in one or more of the following: signal transduction, hematopoietic stem cells, pluripotent stem cell-based disease modeling in hematopoiesis, mouse cancer genetic models, inflammation in hematopoiesis and hierarchical organization of hematopoiesis in health and disease. The applicant should have a doctoral degree in Biology, Molecular Biology, Genetics, Immunology, or related field, and a strong interest in blood/cancer research. The applicant should also be highly self-motivated and have a track record of publications (first-authored publications in respected journals). Applicants with experience in hematology, immunology, mouse genetics, flow cytometry and/or bioinformatics analyses are a plus.
Contact: Jose Cancelas, MD, PhD   **Email Address: Jose.Cancelas@cchmc.org**

Research Fellow Job Number: 130600. The Robinson Lab is recruiting a postdoctoral fellow to participate in a Gilbert Family Foundation-funded research project that aims to develop adeno-associated viral vectors targeting tumors of the peripheral nervous system in mouse models of neurofibromatosis type 1. Ideal candidates will have experience with tissue culture and molecular biology techniques needed to assay the response of tumor cells to viral therapies, including Western blot, ELISA, RNA-seq, etc. Experience with cloning, recombinant DNA technology, and in vivo assessment of tumor biology is a plus. We are committed to improving equity in neuroscience and strongly encourage applicants from diverse backgrounds to apply.
Contact: J. Elliott Robinson, MD, PhD   **Email Address: Elliott.Robinson@cchmc.org**

Research Fellow Job Number: 122327. A postdoctoral Research Fellow position available in the Volk laboratory in Cincinnati Ohio (an affordable metro area of more than 2 million people, with access to the arts, great restaurants, excellent schools, and parks). The Volk Lab uses cutting-edge –omics technologies to fundamentally understand how the process of chromatin assembly affects cell state. We specialize in studying healthy and malignant development in the hematopoietic system. Fellows can expect in-depth mentoring and training at the interface of epigenetics and cell biology in a highly collaborative environment. At least one high impact publication and a PhD in a related field are desired. Mouse handling experience and/or experience analyzing -omics datasets is a plus.
Contact: Andrew Volk, PhD   **Email Address: Andrew.Volk@cchmc.org**

Cardiovascular Research

Research Fellow Job Number: 134308. A postdoctoral Research Fellow position is available immediately in Dr. Mattia Quattrocelli's laboratory in the Division of Molecular Cardiovascular Biology in the Heart Institute. The Quattrocelli lab investigates the interplay between metabolic, circadian, and epigenetic mechanisms to govern pharmacology and physiology of cardiovascular disease and skeletal muscle disorders and are expanding our research interest to complex disease contexts like aging, diabetes, heart failure and muscle wasting. We are interested in linking functional outcomes to the crosstalk between striated muscle cells and other cells or tissues of relevance, such as adipose tissue, liver, immune cells, etc… The studies in our lab routinely use multidisciplinary combinations of transgenic mice, omics datasets, metabolic assays, circadian modulation, in vitro/ex vivo isotope tracing, primary cell lines and human induced pluripotent stem cells. Recent Ph.D. candidates with research experience in molecular/cellular biology, biochemistry and/or physiology are encouraged to apply. Previous experience with mouse physiology and/or primary/pluripotent cell culture is preferred but not required. The ideal candidate should work well in teams as well as independently, and be organized, self-motivated and hardworking. The laboratory is committed to support postdoctoral fellows in any career aspirations (academia, industry, etc…).
Contact: Mattia Quattrocelli, PhD   **Email Address: Mattia.Quattrocelli@cchmc.org**

Research Fellow Job Number: 128409. The Ikegami lab at Cincinnati Children's Hospital Medical Center is recruiting highly motivated postdocs interested in developing a new tool to study chromatin biology at single cell levels. The lab has an ongoing project aiming to develop a transformative technique for mapping chromatin proteins in the genome in single cells. Candidates interested in genomics, chromatin biology, epigenetics, single cell techniques, or translational research using genomic techniques are highly encouraged to apply. A prior experience in experimental and computational genomics is a plus, but not required. Cincinnati Children's Hospital Medical Center

is a home to world-class investigators working on chromatin biology and genomics. This postdoctoral position will enjoy a highly collaborative environment within and outside the medical center.

Contact: Kohta Ikegami, PhD   **Email Address: Kohta.Ikegami@cchmc.org**

Research Associate Job Number: 130279. The Ikegami lab at Cincinnati Children's Hospital Medical Center is recruiting highly motivated postdocs interested in studying molecular mechanisms of heart, skeletal muscle, and vascular diseases. The current research focus of the lab is the molecular pathogenesis of diseases caused by nuclear lamin mutations ("laminopathies"), including dilated cardiomyopathies, muscular dystrophies, lipodystrophies, and premature aging disorders. We are recruiting postdocs interesting in studying laminopathies using molecular, genetic, genomic, proteomic, lipidomic, pharmacologic, or biophysical approaches. Candidates interested in studying how the immune system contributes to laminopathies are also encouraged to apply. The postdoc will enjoy a fantastic research environment within the Division of Molecular Cardiovascular Biology, a home to world-class laboratories studying heart and skeletal muscle biology and disease.

Contact: Kohta Ikegami, PhD   **Email Address: Kohta.Ikegami@cchmc.org**

Research Fellow Job Number: 126493. The Millay lab has an opening for a postdoctoral fellow with experience in cell biology, biochemistry, or structural biology to work on exciting projects related to the mechanisms of muscle cell fusion. Our lab discovered the muscle-specific fusogens (Myomaker and Myomerger) that control the membrane fusion reaction in muscle cells, and we utilize cutting-edge technologies to understand how these proteins work. Applicants should have completed a PhD in a related field, possess independent thinking skills, and an excitement for science.

Contact: Douglas Millay, PhD   **Email Address: Douglas.Millay@cchmc.org**

Research Fellow Job Number: 131036. Postdoctoral positions are available in the Waxman lab at Cincinnati Children's Hospital Medical Center. Congenital heart defects are very common within newborns. The Waxman Lab uses zebrafish as its primary model to elucidate mechanisms underlying normal and improper vertebrate heart development. Current research in the lab employs genetic, cellular, and molecular tools to elucidate signaling pathways and transcriptional determinants of vertebrate cardiac chamber size and regeneration. Ideal applicants are motived, creative individuals that have recently obtained a PhD or will obtain a PhD in the near future with a desire to perform research in a fun, collaborative, and supportive lab environment. Candidates ideally will have experience with some molecular biology, genetic, and imaging techniques from their graduate work. However, experience using zebrafish or studying cardiovascular development is not a requirement.

Contact: Joshua Waxman, PhD   **Email Address: Joshua.Waxman@cchmc.org**

Research Associate Job Number: 133672. Drs. Morales and Zafar in the Division of Cardiothoracic Surgery are seeking a Research Associate who will have numerous important responsibilities in the day-to-day operations of our many clinical research studies as well as preclinical studies involving murine, porcine and ovine models. Specific duties in the lab will include conducting experiments, data collection, organization, and ensuring the health and wellbeing of study animals. For these studies, the employee will also conduct analysis of the data, prepare abstracts, presentations, and publication of results. Employee will have additional responsibility of managing the personnel and logistics of the lab and facilitate experiments for all faculty and trainees in the lab. The ideal candidate will have a doctoral degree and 3-5 years of related experience. Experience with animal models and surgery preferred

Contact: Farhan Zafar, MBBS   **Email Address: Farhan.Zafar@cchmc.org**

Clinical Pharmacology

Research Fellow Job Number: 116903. There is an immediate opening for a postdoctoral Research Fellow in the Division of Clinical Pharmacology. The research focuses on the application of pharmacokinetic/ pharmacodynamic/ pharmacogenetic and disease modeling and clinical trial simulation to facilitate pediatric drug study design and improve individualized patient care. The Fellow will work with faculty across divisions on population pharmacokinetic –pharmacodynamics (PK/PD) and pharmacogenetic modeling as well as mechanistic physiologically –based pharmacokinetic (PBPK) modeling of drugs in pediatric patients participating in ongoing research studies. Emphasis will also be on the design of informative studies using modeling and simulation in neonates and infants including patients on ECMO and cardiopulmonary bypass. The Research Fellow will help develop and evaluate novel advanced numerical and computation approaches for disease progression/improvement modeling. Candidates must have a PhD, PharmD, or MD in Pharmacokinetics, Pharmaceutical sciences, Pharmacy, Biostatistics, or related discipline at the time of appointment. The ideal candidate should have working knowledge of PK/PD modelling and simulation, including some statistical principles (nonlinear mixed effects modelling, Bayesian statistics, and clinical trial simulation). Strong programming skills in R language are desired. Prior experience and knowledge related to PBPK software such as Simcyp and to biologics and therapeutic proteins would be a plus. The candidate is expected to have the capability of working with a multi-disciplinary team and to learn and integrate knowledge across different therapeutic areas. Good communication skills including oral and written English language skills are required.

Contact: Holly Ward (on behalf of Dr. Sander Vinks)   **Email Address: Holly.Ward@cchmc.org**

Development, Genetics, Reproduction, Physiology, and Disease

Research Fellow Job Number: 126640. Dr. SK Dey is looking for a postdoctoral Research Fellow to join the research team whose interests fall into two broad categories: embryonic implantation and pregnancy, and reproductive cancers. Using genetically engineered mouse models, we work to define the uterine characteristics and circumstances necessary for successful embryo implantation, the implications of uterine ageing and the origins of reproductive carcinomas. The ideal candidate will have received a very recent PhD, MD/PhD, or equivalent degree in biomedical research & demonstrate high enthusiasm for research in basic reproductive sciences in female reproduction. Familiarity with contemporary techniques in molecular/cellular biology & mouse handling/ reproduction, breeding and surgeries in small animals along with experience in common laboratory techniques is a must.

Contact: SK Dey, PhD   **Email Address: sk.dey@cchmc.org**

Research Fellow Job Number: 121573. There is an immediate opening for two Postdoctoral Research Fellows in the Laboratory of Dr. Joo-Seop Park in the Division of Pediatric Urology and the Division of Developmental Biology. The long-term goal of research in the Park Laboratory is to understand how signaling pathways and transcription factors regulate cell fate determination in the kidney and bladder during development, homeostasis, and disease. Candidates with research experience in Developmental Biology or Cell Biology are encouraged to apply. Experience with animal models, particularly mouse models, is a plus, but not required.
Contact: Joo-Seop Park, PhD   **Email Address: Joo-Seop.Park@cchmc.org**

Research Fellow Job Number 124706. The Özbudak Lab is looking for a postdoctoral fellow interested in combining interdisciplinary approaches to discover systems-level mechanisms governing spatiotemporal pattern formation during embryonic development. Embryos develop spatiotemporal patterns by encoding and interpreting biological signals in real time. Despite unavoidable fluctuations in gene expression, embryonic development is robust and reproducible, which necessitates several mechanisms buffering stochastic gene expression. A striking example of robust spatiotemporal patterning is the rhythmic segmentation of somites, which are precursors of the vertebral column. Segmentation of somites is controlled by 1) oscillatory expression of Hes/Her gene family, known as the vertebrate segmentation clock, 2) short-distance Notch signaling, 3) long-distance Fgf, Wnt, and Retinoic Acid signaling gradients and 4) a network of transcription factors integrating outputs of the segmentation clock and the signaling pathways. Errors in this regulatory cascade result in various birth defects, including congenital scoliosis. We combine single-cell microscopy measurements, time-resolved perturbation experiments, biophysical modeling, and computational simulations to decipher the mechanism underlying robust spatiotemporal pattern formation and cell fate determination.
Contact: Ertugrul Özbudak, PhD   **Email Address: Ertugrul.Ozbudak@cchmc.org**

Research Fellow Job Number: 123227. An NIH-funded postdoctoral fellow position is available in the Barske lab in the Divisions of Human Genetics and Developmental Biology. The project investigates molecular mechanisms controlling growth plate patterning in the developing zebrafish skeleton. Techniques will include zebrafish transgenesis and lineage-tracing, confocal imaging of cleared specimens, and analysis of enhancer candidates. We are seeking a motivated and productive individual who has experience working with zebrafish models as well as in developmental biology, molecular biology, and genomics. Please visit the Barske Lab website for additional information on our other current research projects and our team. A recent PhD with experience in zebrafish research and knowledge of/experience in developmental biology, molecular biology and/or genetics is preferred.
Contact: Lindsey Barske, PhD   **Email Address: Lindsey.Barske@cchmc.org**

Research Fellow Job Number: 121911. A postdoctoral position is available in the Wells lab in the Center for Stem Cell & Organoid Medicine (CuSTOM) at Cincinnati Children's Hospital. CuSTOM is a multi-disciplinary center of excellence integrating developmental and stem cell biologists, clinicians, bioengineers, and entrepreneurs with the common goal of accelerating discovery and facilitating bench-to-bedside translation of stem cell and organoid technology. CuSTOM labs study a diversity of topics ranging from the basic biology of stem cells and organoids to the development of new cell-based therapies in our state-of-the-art GMP facility. We invite applications from motivated postdoctoral fellows. Successful candidates must hold the PhD, MD, or MD/PhD degrees with an outstanding publication record and a demonstrated passion for biomedical research.
Contact: James Wells, PhD   **Email Address: CuSTOM@cchmc.org**

Research Fellow Job Number: 119257. Drs. Kenneth Campbell and Brian Gebelein have an immediate opening for an NIH-funded postdoctoral Research Fellow. The labs study the development of the brain and in particular the basal ganglia. The focus of the project is on the transcriptional control of basal ganglia neuronal specification/differentiation and specifically, the role of the homeobox protein Gsx2 in this process (see e.g. Roychoudhury et al., (2020) 147: dev185348 and Salomone et al., (2021) 35: 157-174). The main goal of the project is to uncover the gene regulatory networks underlying basal ganglia neurogenesis using mouse and human molecular genetics coupled with genomics, transcriptomics and phenotype analyses. Our research group has been instrumental in characterizing the embryonic neural progenitor sources of basal ganglia neuronal subtypes together with the current understanding of how these progenitor domains are established in the developing brain. A PhD in Developmental Biology, Molecular and Cellular Biology, Neuroscience, Genetics, or related field is desired. Experience with animal models and genomics are a plus.
Contact: Kenneth Campbell, PhD   **Email Address: Kenneth.Campbell@cchmc.org**

Research Fellow Job Number: 123042. The Takebe Lab is seeking to recruit a highly motivated research fellow to lead a stem cell and organoid research investigating their potential for understanding human hepato-biliary-pancreatic development and pathogenesis towards therapy. Dr Takebe's lab proposes to take a "reverse reductionism approach" for a holistic mechanistic understanding of the dynamic nature of a self-developing system. The Takebe lab is also leading newly established Center for Stem Cell and Organoid Medicine (CuSTOM) to facilitate transformative application of organoids for the patients with no cure thru multi-industrial collaboration. Qualified applicants will have MD and/or PhD with peer reviewed research publications. Experience in molecular and cell biology, surgery, neurology, mathematics and/or bioinformatics is a plus.
Contact: Takanori Takebe, PhD   **Email Address: Takanori.Takebe@cchmc.org**

Research Fellow/Associate Job Number: 108979. A postdoctoral research fellow or research associate (staff scientist) position is available in Dr. Assem Ziady's laboratory for PhD graduates with outstanding writing skills to write/edit grant proposals, manuscripts for publication, Institutional Review Board protocols, conference presentations, and/or other documents as needed. The Ziady lab studies Cystic Fibrosis (CF). Focus areas are 1) development of biomarkers of lung function decline in chronic lung disease; 2) understanding the regulation of Nrf2 activity and identify various interventions as therapy for Nrf2 dysfunction; and 3) examine and further develop non-viral DNA delivery vectors for CF gene therapy. The ideal candidate will have a PhD in a relevant field, a strong publication record with demonstrable ability to prepare manuscripts and grants, as well as data analysis and interpretation. A background in research relevant to the work done in the lab would be beneficial.
Contact: Assem Ziady, PhD   **Email Address: Assem.Ziady@cchmc.org**

Research Fellow Job Number: 112135. A postdoctoral research fellow position is available in Dr. Assem Ziady's laboratory to study Cystic Fibrosis (CF). Focus areas are 1) understanding the regulation of Nrf2 activity and identify various interventions as therapy for Nrf2

dysfunction; and 2) examine and further develop non-viral DNA delivery vectors for CF gene therapy. These studies will use CF primary epithelial cells, CF animal models, and tissues from CF patients. The ideal candidates for the position will be recent PhDs with a strong background in one or more of the following: protein-protein interaction studies, redox biology, biochemistry, transcription factor activity, protein biomarker identification, animal models of disease. Experience with proteomics and mass spectrometry would be ideal. Evidence of strength in experiment design, data analysis, and a strong publication record are strongly desired. Background knowledge in other areas where this inflammatory pathway is relevant (cardiac, pulmonary, and neurological disease) is beneficial.

Contact: Assem Ziady, PhD　　　　　　　　　　　　**Email Address: Assem.Ziady@cchmc.org**

Imaging Research

Research Fellow & Research Associate Job Number: 127383 & 129270. Dr. Nehal Parikh, Director of the Center for Prevention of Neurodevelopmental Disorders (CPND), is looking to hire a motivated Research Fellow (recent PhD) and a Research Associate (3+ years postdoc experience) to join a research team focused on understanding, early identification, and prevention of brain abnormalities and neurodevelopmental disorders in high-risk newborns. This NIH-funded research crosses multiple disciplines including computational neuroscience, multimodal neuroimaging, prognostication, and neurodevelopmental rehabilitation. The focus is on integrating multimodal neuroimaging with advanced computational and engineering techniques to enable early diagnosis and prevention of neurodevelopmental disorders. The ongoing longitudinal cohort (largest of its kind) is employing connectometric approaches to the over 500 advanced MRI scans collected in preterm infants soon after birth. These children are currently undergoing neurodevelopmental testing at 3 and 5 years of age and repeat neuroimaging at 5 years of age. This is a great opportunity to contribute to additional high-quality neuroimage processing, data analysis, mentoring, and manuscript/grant writing. Applicants should have a PhD in Computer Science, Biomedical Engineering, Neuroscience, Psychology, Statistics, Physics, Machine Learning, or a related field. Experience with multimodal data analysis, prognostic modeling, scripting/programming languages (MATLAB, Python, R, etc.) and familiarity with neuroimaging data analysis (fMRI, dMRI, qMRI, NIRS, etc.) is a must.

Contact: Uma Sivaprasad, PhD for Nehal Parikh, DO, MS)　　　**Email Address: research@cchmc.org**

Research Fellow Job Number: 128818. Dr. Lili He's laboratory of Artificial Intelligence for Computer Aided Diagnosis (AI-CAD) at Imaging Research Center (IRC) is committed to lending the group's interdisciplinary expertise in computer science, medical imaging, biomedical engineering and biostatistics to facilitate major breakthroughs in the medical AI field by developing and validating robust clinically effective AI diagnostic tools for clinicians to use at the bedside to improve diagnosis, prediction, and prevention of patient outcomes for high-risk infants and children. We are now looking for talented and highly motivated AI post-doctoral research fellows to join us. Candidates with a PhD degree in computer science, biomedical engineering, bioinformatics, electrical engineering, or related field, along with extensive experience in machine learning and deep learning development using Scikit-learn, deep learning package (e.g., Tensorflow, Keras, PyTorch) are invited to apply. Experience with medical image research, biomedical statistical analysis, strong programming skills with Linux-based Python, familiarity with containerization and multiprocessing experience using GPUs for training and inference preferred.

Contact: Hailong Li, PhD (for Lili He, PhD)　　　　　　**Email Address: research@cchmc.org**

Research Fellow Job Number: 133715. Dr. Laura Walkup's laboratory within the Center for Pulmonary Imaging Research (CPIR) is seeking a motivated and enthusiastic postdoctoral fellow to develop magnetic-resonance imaging (MRI) techniques for quantitative lung imaging. The fellow will collaborate with a multidisciplinary team of clinicians and scientists to develop and translate novel proton and hyperpolarized-gas MRI techniques to understand regional lung structure-function relationships in clinical studies of children and adults. Currently-funded projects focus on rare-lung diseases including pulmonary complications of bone-marrow transplantation and cancer treatment, cystic fibrosis, and the childhood interstitial lung diseases. CCHMC has rich infrastructure to support research and translational science, and our imaging-research instrumentation includes three Philips 3T MRI scanners and three xenon gas polarizers. The ideal candidate will have a quantitative background in physical sciences (e.g., physics, chemistry, or engineering) with training in magnetic resonance (EPR, NMR, or MRI). Candidates with expertise in hyperpolarized media, image reconstruction or analysis, *in vivo* imaging or spectroscopy, and/or programming languages such as MATLAB, Python, C++, are encouraged to apply.

Contact: Laura Walkup, PhD　　　　　　　　　　**Email Address**: Laura.Walkup@cchmc.org

Immunology/Inflammation

Research Fellow Job Number: 123228. A post-doctoral research position is available in the Pasare Laboratory to study inflammatory responses downstream of pattern recognition receptors and the cross-talk between innate and adaptive immune systems. We are currently focused on the following projects: 1. Innate control of adaptive immunity with a particular focus on IL-1 family of cytokines: The work focuses on understanding how different pathogens activate the innate immune system to induce tailored immune responses and the molecular pathways involved in pathogen recognition. 2. Role of inflammasome independent IL-1beta in systemic inflammation, auto-immunity, and anti-tumor responses: The work focuses on understanding how Effector and memory T cells induce pattern recognition receptor independent inflammation and identification of the molecules and receptors that induce T cell driven innate inflammation. The work has implications for several inflammatory diseases. Highly motivated candidates with a PhD in biomedical sciences and experience in, Biochemistry, Cell biology and Molecular Biology that are interested in doing research in Immunology are encouraged to apply.

Contact: Chandrashekhar Pasare, PhD　　　　　　**Email Address: Chandrashekhar.Pasare@cchmc.org**

Research Fellow/Associate Job Number: 119533. A postdoctoral Research Fellow position is available in Dr. Khurana Hershey's Lab. The Hershey Lab's research focuses on dissecting the mechanisms of allergic disease progression with the overall goal of improving the health of children with asthma and allergic disorders. Her laboratory integrates clinical, epidemiologic, translational, and basic research approaches in order to identify and delineate the mechanistic basis of the development, progression, and persistence of asthma using innovative human cohorts that they have built over the last 2 decades. There is a strong focus on the microbiome and integrating multi-omics approaches. Experience in microbiome, immunology, human keratinocytes, and omics approaches is preferred.

Contact: Neeru Hershey, MD　　　　　　　　　　**Email Address: Gurjit.Hershey@cchmc.org**

Research Fellow Job Number: 118972. Fukun Guo, PhD, has an immediate opening in his lab for a postdoctoral Research Fellow. Dr. Guo's lab investigates the role and mechanisms of Rho family GTPases in T lymphocyte development and function, particularly in the context of tumor immune evasion. Candidates need to have excellent skills in flow cytometry and animal handling. Experience in Molecular and Cellular biology, Immunology, and Cancer Biology is required. Expertise in T cell biology, tumor immunology/cancer immunotherapy, and/or bioinformatics is a plus.

Contact: Fukun Guo, PhD   **Email Address: Fukun.Guo@cchmc.org**

Research Fellow Job Number: 104634/129047/129048/132332. Four postdoctoral positions are available immediately in Dr. Marc Rothenberg's laboratory, which is focused on allergic responses especially in mucosal tissues such as the lung and the gastrointestinal tract, and aims to understand mechanisms, develop drug targets and identify novel therapeutic strategies and agents. The postdoctorate will be focused on genomics, genetics, molecular immunology, and/or chemistry of several novels susceptibility loci and pathways involved in allergic diseases, and the biochemistry and enzymology of proteases (particularly calpain-14). The postdoctorate will develop, synthesize and/or evaluate small molecule detectors and inhibitors of signaling pathway molecules relevant in allergic diseases. The ideal candidate will have a PhD or equivalent in Biomedical Research with strong expertise in big data analysis, molecular and cellular immunology and/or genetics, Medicinal, Synthetic or Organic Chemistry. A working knowledge of the immune system, genetics and enzymology is preferable.

Contact: Marc Rothenberg, MD, PhD   **Email Address: Marc.Rothenberg@cchmc.org**

Research Fellow Job Number: 124885 Dr. Senad Divanovic's laboratory studies the cellular and molecular basis of inflammation driven disease pathology, with focus on inflammatory, infectious, and metabolic diseases associated with obesity. We are looking for two motivated postdoctoral research fellows with an interest in contribution of innate and adaptive immune responses and immune mediators to: pathogenesis of obesity-associated sequalae and obesity-dependent transgenerational effects; adipocyte biology and obesity development; or regulation of parturition and induction of preterm birth. Creative recent PhD graduates, passionate about scientific discovery, desire to be competitive at the highest level, a track record of publications (first-authored publications in respected journals) and research experience in immunology, molecular biology, cell biology, or biochemistry are encouraged to apply. Experience with bioinformatics/genomic analyses is also desirable.

Contact: Senad Divanovic, PhD   **Email Address: Senad.Divanovic@cchmc.org**

Research Fellow Job Number: 131136. The Nakamura lab is recruiting a Postdoctoral Research Fellow who is experienced in immunological studies to support an NIH R01-funded position. The lab researches the role of extracellular vesicles (EVs) in the regulation of immunometabolism in the pathogenesis of obesity-associated metabolic and inflammatory diseases. We have been developing R01- and R21-funded projects investigating tissue-specific EVs and their RNA cargos in metabolic and inflammatory diseases, including but not limited to type-2 diabetes and non-alcoholic fatty liver disease, based on our recent findings (Cell 2010, Nature 2012, Diabetes 2014, PNAS 2015, Cell Reports 2015, Cell Reports 2018, Nature Comm 2018, Endocrinology 2021). The successful candidate will engage in immunological studies with our newly established mouse models, iPSC models, novel RNA cargo network analysis, and human clinical samples to comprehensively understand the roles of EVs in metabolic and inflammatory diseases. We are seeking an applicant with a recent PhD, MD, or equivalent, who has peer-review publications, a high capacity for independent thinking, collaborative work, and problem-solving, and shows motivation and implication for the area of research. Candidates with strong experience in RNA biology and/or immunology with mouse study, cell culture techniques, molecular biology, biochemistry, metabolism, and/or microscopy are encouraged to apply.

Contact: Takahisa Nakamura, PhD   **Email Address: Takahisa.Nakamura@cchmc.org**

Research Fellow/Associate Job Number: 126846. Dr. Sing Sing Way's Laboratory in the Division of Infectious Diseases has an immediate opening for a Research Fellow or Research Associate (3+ years of post doc experience) to perform basic research on host sensing of commensal-pathobiont microbes; and how these interacts shape host immunity systemically and in mucosal barrier tissues. Another focus of the laboratory is reproductive and developmental biology, and integration of concepts in immunological tolerance related to commensal microbes to maternal-fetal tolerance and/or developmental shifts in how commensal tolerance to achieved are areas of active investigation. Dr. Way's laboratory has been at the leading edge of these scientific areas for the past 10 years with seminar publications in Nature, Cell and Science.

Contact: Sing Sing Way, MD, PhD   **Email Address: Singsing.Way@cchmc.org**

Research Fellow Job Number: 131214. The Azouz Lab has exciting projects with clinical relevance and is looking to hire talented and motivated postdoctoral research fellows! We work in a stimulating and friendly environment with cutting edge techniques, performing basic, translational and clinical science. Research projects include: 1) Developing therapeutic peptides for the treatment of allergic diseases in collaboration with a pharmaceutical company 2) Deciphering the molecular mechanism by which SARS-CoV-2 exploit host cells and developing intervention methods to block SARS-CoV-2 infectivity 3) Understanding how environmental factors promote molecular mechanisms that elicit long-lasting adaptive immune responses. Creative recent PhD graduates, passionate about scientific discovery, desire to be competitive at the highest level, a track record of publications and research experience in immunology, molecular biology, cell biology, or biochemistry are encouraged to apply.

Contact: Nurit Azouz, PhD   **Email Address: Nurit.Azouz@cchmc.org**

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