

POSTDOCTORAL FELLOWSHIP

ENGINEERED EXTRACELLULAR VESICLES FOR DRUG DELIVERY AND GENE EDITING

Candidates are sought for postdoctoral fellows to lead a collaborative research endeavor in the laboratories of [John T. Wilson](#) and [Alissa Weaver](#) and at Vanderbilt University focused on engineering of extracellular vesicles (EVs) for intracellular delivery of nucleic acid and protein therapeutics. Prof. Weaver is an internationally recognized leader in EV biology and Prof. Wilson is an expert in intracellular drug delivery and together they are directing a new multidisciplinary effort that leverages advanced cell and molecular engineering strategies to create “designer” EVs for intracellular drug delivery with an emphasis on RNA therapeutics and gene editing strategies for cancer, neurodegenerative disease, and autoimmunity. This research is supported by a large, multi-year grant from the National Science Foundation that brings together multiple investigators with expertise in EV biology, cell engineering, nanomedicine, and biomanufacturing with the goal of advancing EVs as versatile and modular drug delivery vehicles. Postdoctoral fellows will have an opportunity to join this dynamic multidisciplinary team and to lead the development of next-generation EVs for delivery of nucleic acid therapeutics. The ideal candidate will meet the following qualifications:

- Ph.D. in Cell and Molecular Biology or a related field (e.g., Biochemistry, Biomedical Engineering)
- Advanced expertise in molecular biology, protein engineering, gene editing technologies, nanomedicine, and/or mammalian cellular engineering is required.
- Experience with stem cell culture and genetic manipulation of stem cells is highly desirable.
- Previous experience with isolation and characterization of extracellular vesicles is highly desirable.
- Previous experience with in vivo evaluation of nucleic acid therapeutics, nanoparticle delivery systems, and/or gene editing is highly desirable.

All candidates are expected to:

- Demonstrate strong oral and written communication skills.
- Be able to work well in a multidisciplinary, diverse, and collaborative research environment.
- Be highly motivated to publish rigorous and high-impact work.
- Have a genuine and infectious excitement for science, innovation, and creative thinking.

You will receive training in the cutting-edge and fast-developing field of extracellular vesicle research and therapeutics and join a dynamic and interdisciplinary research team composed of cell biologists, bioengineers, and translational scientists. You will also benefit from additional expertise and resources available on the compact and highly collaborative Vanderbilt campus, including the Vanderbilt-Ingram Cancer Center, the Vanderbilt Institute of Nanoscale Science and Engineering, and the Vanderbilt Center for Extracellular Vesicle Research. The proximity of diverse research expertise is a powerful contributor to the success of interdisciplinary and translational research at Vanderbilt and will also provide you with rich opportunities for research, funding, and career networking. We are also a diverse, supportive, and inclusive group; we care deeply about our trainees and make their success our top priority, independent of their background, experiences, preferences, or beliefs. Vanderbilt University is located in Nashville, Tennessee, a thriving and growing city with major cultural, professional, and athletic institutions. Nashville, known as “Music City USA,” offers not only a world-class music scene, but also excellent food, breweries, museums, outdoor activities, and weather.

Postdoctoral researchers will receive a competitive salary, benefits, and retirement package offered by Vanderbilt University. Flexibility to pursue research in personal areas of interest, to apply for grants and fellowships, and to develop independent research directions will be encouraged. Interested candidates should assemble an application in a single PDF file consisting of a **i)** cover letter, **ii)** curriculum vitae (including a complete list of publications), **iii)** contact information for three references, and **iv)** two first author manuscripts that have been published or accepted for publication. The cover letter should include a description of the candidate’s relevant research experience, research interest, goals and expectations for the position, and preferred start date. The application should be e-mailed to Prof. Wilson at john.t.wilson@vanderbilt.edu using the subject line “**Postdoctoral Fellowship at Vanderbilt.**”