

Postdoctoral Fellow in the laboratory of Prof. David Gorin

Position Summary:

Conduct research under the mentorship of Prof. David Gorin into the use of modified DNA molecules as chemical reagents to selectively modify one compound in a complex mixture.

Duties and Responsibilities:

Conduct research within the framework of the NSF grant "CAREER: DNA-Catalyst Conjugates for Site-Selective Transformations in Biological Contexts," which provides stipend, fringe benefits, and professional development funds for this position.

The goal of the proposed research is to develop DNA-based reagents for the selective chemical modification of one target molecule in a complex biological mixture (for recent progress, see: DOI 10.1039/C7SC04554A). Specific experimental goals include the synthesis of hybrid molecules containing DNA and small molecule catalyst domains, the development of fluorogenic assays for chemical reactions of interest, and the discovery of functional DNA molecules by SELEX.

Other responsibilities include participation in weekly lab meetings and mentoring of undergraduate researchers in the laboratory. Participation in undergraduate courses is possible.

Qualifications:

Education/Experience: Ph.D. in chemical biology, organic chemistry, or related discipline.

Skills: Qualified applications will have experience working with biomolecules (nucleic acids or proteins) or in multistep organic synthesis. Technical expertise in the evolution of functional nucleic acid (SELEX) is desirable as is familiarity with HPLC, ESI-MS, DNA-linked chemical libraries, and/or fluorescence assays.

Additional Information:

This is a full-time, 1 year, grant-funded position with the possibility of renewal.

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