



**POSITION:** Postdoctoral Appointee – Computational Biologist

**JOB ID:** 62448

**MANAGER:** Anup Singh

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### DEPARTMENT DESCRIPTION

The Biosystems Research department at Sandia National Laboratories in Livermore, California, performs biological research pertinent to national security, health security, and energy security. We are a highly interdisciplinary research group with a focus on both basic and applied biological research. Our department has ongoing projects in the areas of biofuels, infectious disease research, medical diagnostics, therapeutics screening, metabolic engineering, and protein engineering, as well as basic research studies in biomaterials design, protein structure/function determination, proteomics, computational chemistry, computational biology, and microfluidics.

### JOB DESCRIPTION

We have two postdoctoral positions open for computational biologists. We are seeking structural biologists who are experienced in modeling and simulations and who can apply their experience to studies of protein structure/function and to studies of molecular recognition and protein–ligand interactions. The scientists will be required to work independently within the framework of a team of computational and experimental biologists. Successful candidates must be able to engage colleagues in crossdisciplinary scientific discussions, write about their own research, and collaborate within and across multidisciplinary teams; thus, strong written- and verbal-communication skills are essential.

### QUALIFICATIONS

Qualified candidates will possess a recent PhD (conferred within the past five years) in the biological sciences, biophysics, chemistry, computational biology, or a related discipline. Candidates must be highly motivated and must have a strong publication record. In addition, candidates should have significant experience in molecular modeling simulations, including molecular dynamics and/or molecular docking. Other required qualifications consist of the following: (1) familiarity with Unix/Linux; (2) familiarity with a scripting language, such as Python or PERL; and (3) excellent communication and collaborative skills, including the ability to communicate across domains with biologists and chemists.

Desired qualifications include C or C++ programming experience, as well as experience in ab initio quantum chemistry; homology modeling; cheminformatics; machine learning; and statistical packages, such as SAS/R/Matlab. Hands-on experience with molecular mechanics packages, such as AMBER and CHARMM, in normal mode analysis and experience in developing force field parameters for these programs are also highly desirable. In addition, having a background and experience in the analysis of mass spectrometry data is a definite plus.

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