The Graduate Research Assistant (GRA) assigned to this project will be a MS or PhD candidate in the Department of Chemistry. This individual will, in consultation with Dr. Eichhorn, design and carry out the experiments described, including the synthesis of new compounds; characterization by X-ray crystallography, spectroscopy, and electrochemistry; and performance of the superoxide decomposition assays. All of the necessary chemicals will be provided by Dr. Eichhorn or the Department of Chemistry and all necessary instrumentation is available in the Department of Chemistry.

The GRA will be supervised by Dr. Eichhorn. Thus, Dr. Eichhorn will train the GRA in all areas where training is needed. Dr. Eichhorn and the GRA will jointly design the experiments and analyze the results. Weekly meetings will be scheduled with Dr. Eichhorn and all other members of Dr. Eichhorn’s research group to discuss the results of this and other projects. Publications resulting from the research effort will be jointly authored, with the GRA responsible for writing the initial draft.

The project will be the subject of the MS thesis or PhD dissertation for the GRA. The GRA will benefit from learning the various techniques, both of synthesis and characterization, that will be involved in carrying out the experiments. Additionally, the GRA will learn the process of designing a research project and changing direction in response to potentially unexpected results. Ultimately, as the project proceeds, the GRA will be expected to become more independent in terms of project design and making decisions regarding the directions in which to proceed.