

Comparing Human and Emperor Penguin Enzymes via Raman Spectroscopy

Biological systems and molecules can be used as model systems for biochemical and physiological processes in humans if they are genetically/evolutionary related to similar molecules. The research team of John Hackett investigated the similarities of enzymes of emperor penguins to human enzymes using absorbance and Raman spectroscopy. They perform resonance Raman spectroscopy with excitation in the UV (406nm) close to electron transition energies of the enzyme. The Raman spectra are sensitive to small molecular and structural changes of the molecules. High resolution spectroscopy with a sensitive detector is used to acquire spectra.

Featured Paper/ Publication: [Biophysical characterization of Apterodytes forsteri cytochrome P450 aromatase](#), Journal of Inorganic Biochemistry, 2018

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Products used: [SpectraPro](#), [Pylon](#), [PIXIS](#), [BLAZE](#)