Inter-Protein Electron Transfer Subgroup

The inter-protein electron transfer (ET) subgroup aims to study the fundamental structural, dynamic, and energetic features that control the protein-protein electron transfer kinetics and the relationship between binding and reactivity.

Mixed Metal Hemoglobin Hybrids

Mixed metal hemoglobin hybrids are used as a "predocked" complex to explore the effects of the material environment upon ET.

Cytochrome c Peroxidase and Cytochrome c

Cytochrome c peroxidase (CcP) and cytochrome c (Cyt c) are used as a model system for proteins with multiple binding domains to study complex kinetics.

The W191F mutation of CcP eliminates the redox active tryptophan and allows direct heme-heme electron transfer.

Project Collaborators: Prof. Marcellus Ubbink (Leiden University)

Myoglobin and Cytochrome b5

Myoglobin (Mb) and cytochrome b5 (b5) constitute a model system for the "dynamic docking" paradigm.

Mutagenesis and heme esterification (dme) increases reactivity and binding between Mb and b5.

Different temperatures and different viscogen concentrations were tested.

Project Collaborators: Prof. Amy Rosenzweig (NU) and Prof. Michael Wasielewski (NU)

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