Possible project, 30 ECTS Master, Spring 2018

**Differential Ca2+-binding to plant NDB proteins**

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NDB1 and NDB2 are plant redox proteins important for cytosolic redox homeostasis and –regulation. They sit on the outside of the inner mitochondrial membrane and oxidise NADPH (NDB1) and NADH (NDB2). Both bind and are activated by Ca2+, because both have an EF-hand domain each. We have previously seen that the Ca2+-dependence of NDB1 (but not NDB2) depends on pH and presence of quinols. We therefore want to further investigate the Ca2+ binding and activation. The proteins have been expressed in E. coli and a purification scheme has been worked out. The further studies include making new transformants/protein preps and to study the enzymes using activity measurements (single- and multichannel spectrophotometry) Trp-fluorescence changes, and native gels.

Please contact Allan Rasmusson in Biology Building A for further information