ESRF	**Experiment title:** SSAO semicarbazide-sensitive amine oxidase. BAG: Uppsala (II)	**Experiment number**: MX-274
Beamline: ID14-EH1	**Date of experiment**: from: 14 May 2004 to: 15 May 2004	**Date of report**: 30 August 2004
Shifts: 1	**Local contact(s)**: Stéphanie Monaco	*Received at ESRF:*

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Report:

Human SSAO (semicarbazide sensitive amine oxidase) is a plasma membrane-anchored monoamine oxidase found in vascular and visceral smooth muscle cells, endothelial cells and adipocytes. A soluble circulating form of SSAO also exists. This enzyme catalyses the oxidation of primary amines to the corresponding aldehyde, hydrogen peroxide and ammonia. The resulting aldehydes from the deamination reaction, *e. g.* formaldehyde and methylglyoxal, are toxic. These reaction products are thought to contribute to the damage seen in the vasculature of diabetic patients, shown to have elevated levels of SSAO activity. Further the expression of SSAO is induced at sites of inflammation and it has been shown that SSAO mediates the lymphocyte entry to inflamed tissues.

A new native dataset to 2.8 Å and a ligand dataset to 3.0 Å were collected. The structure was solved with data collected previously but this native dataset improved the maps enough to build an almost complete model of the protein. Unfortunately no density for the ligand was visible in the ligand dataset.