ESRF	**Experiment title:** Stromelysin-3	**Experiment number:** ls 1509 ls 1658
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Report:

Stromelysin-3 (ST3) belongs to the family of matrix metalloproteinases (MMPs) which are zinc-dependant extracellular enzymes. The Stromelysin-3 is implicated in both physiological and pathological processes such as amphibian metamorphosis, mammalian embryonic development, mammary gland apoptosis, wound healing and invasive carcinomas. In addition, ST3 overexpression is associated to a poor clinical outcome and its proteolytic activity promotes tumour development in mouse models.

We crystallised a fragment of 20kDa that contains the catalytic domain of the mouse ST3 plus some additional amino-acids on the C-terminal part. The crystals (20µm x 20µm x 50µm) were obtained by the hanging-drop vapour-diffusion method at 4°C in the presence of an inhibitor. They were cryoprotected in liquid ethane in the presence of ethylene-glycol.

Data set collected up to now showed twining problems. New data sets measured with small crystals (10µm x 20µm x 40µm) at a resolution of 2.6Å where not twinned. The crystals belong to the orthorhombic space group ($P2_12_12_1$) and have following cell constants: a=140.10Å, b=148.50Å, c=91.40Å. There are 6 molecules per asymmetric unit (V_M =3.96Å^3/Da). The structure was solved by Molecular Replacement using the crystal structure of the human fibroblastic Collagenase-1 (Correlation coefficient = 49.1%; R_{cryst} = 45.5 %). The model was refined with the CNS programs (R_{work}=22.15%; R_{free}=26.67%). We are now analysing this structure.