



	Experiment title: Structural studies of bacterial fimbrial proteins	Experiment number: MX 1812
Beamline: ID29	Date of experiment: from: 08-03-2016 17.00 to: 09-03-2016 08.00	Date of report: 15-04-2016
Shifts: 2	Local contact(s): Ulrich Zander	<i>Received at ESRF:</i>
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Report:

The following results were achieved using data collected during session MX-1812:

Several datasets were collected for the Mfa1 shaft subunit of the minor fimbriae of the periodontal pathogen *Porphyromonas gingivalis*. Using this data we have now solved the structure and are hence able to begin studying the mechanisms underlying fimbrial assembly and function.

Multiple datasets were collected from the *Listeria monocytogenes* PrfA master virulence regulator in the presence of various novel 2-pyridone based inhibitor compounds. These data now allow us to complement our *in vitro* and *in vivo* studies on the effect of these drug compounds on *Listeria* virulence with detailed structural information on the ligand binding interactions. Already this is leading to further development of the specificity and efficiency of these compounds in attenuating *Listeria* virulence. In addition multiple datasets were obtained for the PrfA protein in complex with promoter DNA, allowing us to understand the precise mechanisms of PrfA-DNA binding.

Furthermore MAD data was collected on SeMet labelled crystals of the LPA19 photosystem II accessory protein, allowing us to solve the structure of this protein and begin to understand its function in the biogenesis of the Photosystem II complex.