ESRF	**Experiment title:** **Crystallographic studies of the *Mamestra brassicae* chemosensory protein (MbraAOBP2)**	**Experiment number:** LS1657
Beamline: ID14-2	**Date of experiment:** from: 12-7-00 to: 13-7-00	**Date of report:** Aug00
Shifts: 3	**Local contact(s):** Ed MITCHELL	*Received at ESRF:*

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Report:

Odorant binding proteins (OBPs) have been identified in the olfactory system of a wide variety of insects and have been suggested to carry odors and pheromones through the aqueous barrier of the lymph to the receptors. Antennal odorant binding proteins, also named chemosensory protein, belong to a novel type of OBPs with unknown function. They have been described in moths (Maleszka *et al.* 1997), cockroaches (Picimbon *et al.* 1997), phasmids (Tuccini *et al.* 1996) and in *Drosophila melanogaster* (OS-D protein, McKenna *et al.* 1994), suggesting that OS-D-like proteins seem to be conserved in the insect phylum.

A dataset of small cetyl alcohol-bound MbraAOBP2 complex crystals was collected on ID14-EH2 (Table 1). These crystals belong to the space group $P2_1$ with cell dimensions a=47.6Å, b=49.7Å, c=50.3Å, β=110.12°.

At the moment, no model is available. Seleno-methionine substituted protein was expressed and crystallization is under way in order to use MAD method. We also obtained bigger crystals of the complex and we would like to collect a dataset at 1Å to use *ab initio* method.

Table 1 Structural Statistics

Data Collection	
Beamline	ID14-EH2
Space group	$P2_1$
λ (Å)	0.933
Resolution (Å)	1.6
R_{sym} (%)	4.5
I/σ	8.2
Completeness	97.5
Multiplicity	2.0

References

Maleszka R., Stange G. (**1997**) *Gene*, **202**, pp 39-43.

Picimbon J.F., Leal W.S. (**1997**) ISCE-14th meeting.

Tuccini A., Maida R., Rovero P., Mazza M., Pelosi P. (**1996**) *Insect. Biochem. Mol. Biol.* **26**, pp 19-24.

McKenna M.P., Hekmat-Scafe D.S., Gaines P., Carlson J. R. (**1994**) *J. Biol. Chem.*, **23**, pp 16340-16347.