ESRF	Experiment title: Maltose-binding protein Uppsala (II) BAG, LS-1665 (T. Alwyn Jones BAG)	**Experiment number**: LS-1935
Beamline: ID29	**Date of experiment**: from: 30 March 2001 to: 31 March 2001	**Date of report**: 28 Aug 2001
Shifts: 3	**Local contact(s)**: Bill Shepard	*Received at ESRF:*

Names and affiliations of applicants (* indicates experimentalists):

T. Alwyn Jones, Uppsala University, alwyn@xray.bmc.uu.se
Sherry L. Mowbray, Swedish Univ. Agric. Sciences, mowbray@alpha2.bmc.uu.se
* Evalena Andersson, Uppsala University, evalena@xray.bmc.uu.se
* Ulrika Magnusson, Uppsala University, ulrika@xray.bmc.uu.se

Report:

Binding events initiate many cellular processes, often via sensory proteins known as receptors. We are studying the means by which receptors regonise effectors, and how that information is converted inte information useful to the cell. We have studied a specific receptor on the gram-positive bacterium *Alicyclobacillus acidocaldarius* that binds maltose, thus allowing transport of the nutrient into the cell. This receptor can also bring insight to acidostability of proteins since this organism has a pH optimum around 3.

Native data of this protein has previously been collected at ID14-4. During this visit we collected two possible heavy atom derivatives, gold and platinum, to a resolution of 3Å. No phasing information has yet been obtained but further trials are on their way.