

BAG Beam time Progress Report

This represents a summary of the BAG progress in the reporting period, and is **in addition** to the standard ESRF report sheet for each project which will be used for the Review of the BAG.

BAG Title

Allocation Period

List of publications resulting from ESRF beam time

W. F. Ochoa, S. Corbalan-Garcia, J.C. Gomez-Fernandez, N. Verdaguer and I. Fita
Crystal structure of the C2 domain of the novel Protein Kinase C ϵ (PKC ϵ)
(2000, submitted)

Global Summary

The protein Kinase C (PKC) family of lipid-dependent serin/threonine Kinases plays a central role in many intracellular eukariotic signalling events. Members of the novel ($\delta, \epsilon, \eta, \theta$) subclass of PKC isotypes lack the Ca²⁺ dependence of the conventional PKC isotypes. Biochemical data suggest that this domain serves to translocate novel PKC family members to the plasma membrane and may influence binding of PKC activators.

The structure of the calcium independent C2 domain of the novel PKC ϵ was solved by Multiple Isomorphous Replacement. One native data set at 1.7 Å. resolution and two (Hg, Pt) heavy atom derivatives were collected at the beam line ID14-2. The central feature of the PKC ϵ -C2 domain structure is an eight stranded, antiparallel β -barrel with a molecular topology closely related to that found in the C2 domain of phospholipase C- δ 1.

Visits made to the ESRF

Date(s) of visits	Beamline	No. of Shifts	Short Summary of each Visit
20-Nov-99/22-Nov-99 13-Feb-00/15-Feb-00	ID14-2 ID14-2		Data collection of native crystals at 2.2 Å resolution Data collection of Hg and Pt derivatives at 2.3 and 2.5 Å resolution Native data collection till 1.7 Å resolution .