

**Experiment title:**Structure determination of Epsilon toxin of *Clostridium perfringens***Experiment****number:**

LS1810

Beamline: ID14 EH1	Date of experiment: from: 01.02.01 to: 02.2.01	Date of report: 27.02.01
Shifts: 1	Local contact(s): Dr. Stephanie Arzt	<i>Received at ESRF:</i>

Names and affiliations of applicants (* indicates experimentalists):

Ajit K. Basak*, Christine Slingsby.

Depart of Crystallography,

Birkbeck College,

Malet Street,

London WC1E 7HX,

UK

Report:

Crystallins are intercellular structural proteins which form transparent body of the vertebrate eye lens. All lenses comprise representatives of the three major classes, α -, β - and γ -crystallins, although a growing number of metabolically related proteins have been found to be over-expressed in lenses of certain lineages, such as δ -crystallin in the avian lens. α -crystallins, which also functions as small heat-shock proteins are expressed in many other tissues whereas the $\beta\gamma$ -crystallin superfamily has so far only been found in the vertebrate lens. Of the γ -crystallin, there exists five to seven different gene products depending on the species and are differentially expressed during development of adult lens. Recently the human γ D-crystallin has been cloned, sequenced and expressed in *E. coli* and subsequently purified for crystallographic work.

We crystallised and collected a native data set of this protein to 1.9 Å resolution. The structure solution is now in progress.

	Native
Space group	P2 ₁ 2 ₁ 2 ₁
Diffraction Limit (Å)	1.92
Rmerge (%)	7.7 (10.6% in 2.0-1.92 Å shell)
I/sd	6.4 (5.5)

Comp (%)	99.2 (99.1)
Mult (%)	7.1 (6.8)