

[Please paste here your Experiment Details form after its completion]

## ESRF BLOCK ALLOCATION GROUP PROGRESS REPORT

**BAG RESPONSIBLE:** Felix Frolow  
**EXPERIMENT NO:** MX-117  
**LAST REVIEW DATE:** September 2002

**Shift usage since last Biennial Review:**

Allocated	21	Used	20	Cancelled by Users	0	Cancelled by ESRF	1
Total Number of Visits		2	Total Number of Visitors		15		

**BAG Principle Investigators (indicate by # those left since last review, \* those new since last review.)**

Principal Investigator	Institute
Felix Frolow	Tel Aviv University
Nathan Nelson	Tel Aviv University
Linda Shimon	The Weizmann Institute of Science
Zipora Shakked	The Weizmann Institute of Science
Oded Livnah	The Hebrew University of Jerusalem
Orly Dym	The Hebrew University of Jerusalem

Total Number of PDB submissions from data from ESRF beam lines since last report	
Total Number of Publications resulting from data from ESRF beam lines since last report	

**List below the five most important publications directly resulting from data recorded either wholly or partially on ESRF beamlines (you must indicate <sup>1</sup> ESRF data only; <sup>2</sup> data from more than one source):**

1. Y. Pazy., O.H. Laitinen, B. Ravoy, M.S. Kulomaa, M. Wilchek, E. A. Bayer and O. Livnah (2001). Crystallization and preliminary X-ray analysis of W120K mutant of streptavidin. *Acta Cryst D57*, (1885-1886)<sup>1</sup>
2. L. J Shimon, M. Peretz, E. Gohberg, Y. Burstein, F. Frolow, (2002) Thermophilic alcohol dehydrogenase from the mesophile *Entamoeba histolytica*: crystallization and preliminary X-ray characterization. *Acta Cryst D58*, (546-548)<sup>1</sup>
3. L. J. Shimon, A. Rabinkov, T. Miron, D. Mirelman, M. Wilchek, F. Frolow. (2002) Alliin lyase (alliinase) from garlic (*Allium sativum*): crystallization and preliminary X-ray characterization. *Acta Cryst D58*, (1335-1337)<sup>1</sup>
- 4 I. Noach, R. Lamed, Qi Xu, Sonia Rosenheck, L. J.W. Shimon, E. A. Bayer, F Frolow (2003) Preliminary X-ray characterization and phasing of a type II cohesin domain from the cellulosome of *Acetivibrio cellulolyticus*. *Acta Cryst D59*, (1670-1673)<sup>1</sup>
5. A. Fish, M. Lebediker, R. Nechushtai, O. Livnah (2003) Purification, crystallization and preliminary X-ray analysis of ferredoxin isolated from thermophilic cyanobacterium *Mastigocladus laminosus*. *Acta Cryst D59*, (734-736)

**Summary (250 words maximum) of the results obtained since last biennial review:**

During last year we have visited ESRF once as a BAG MX-117 and once on reserve time. For the purposes of this report we treat these visits as comparable. We were allocated 23 shifts and we used them all. During this time we have used ID14-4, ID14-2 and BM30A stations. We have collected 50 single wavelength data sets (ID14-4, ID14-2 and BM30A) and 3 complete MAD SeMet data sets (BM30A). During these visits we collected also a lower resolution data sweeps when needed in order to clean data from overexposed reflections. All data processing was completed during the experiment to ensure completeness and quality of each measurement. Many of our systems were of low crystallographic symmetry (mainly P21) and required about 180° rotation in the space. Among these data sets are 16 full data sets from complete photosystem I which were used to improve low order and high order resolution as well. Many of these structures, including PSI are already solved and under refinement (see the following Table). During this time four students were given initial training to use synchrotron for the protein data collection.