

|   |  |                                       |
|---|--|---------------------------------------|
|   | <b>Experiment title: Crystal structure of TdT complexed with its different natural substrates.</b> | <b>Experiment number:</b><br>LS-1685  |
| <b>Beamline:</b><br>ID14-3  | <b>Date of experiment:</b><br>from: 09-Apr-2000 to: 22-June-2000                                   | <b>Date of report:</b><br>25-Aug-2000 |
| <b>Shifts:</b><br>3   | <b>Local contact(s):</b> J. Lescar   | <i>Received at ESRF:</i>              |
| <p><b>Names and affiliations of applicants (* indicates experimentalists):</b></p> <p>Marc DELARUE, C.N.R.S., Unité de Biochimie Structurale, Institut Pasteur, Paris, 75015.</p> <p>J. LESCAR, E.S.R.F., Joint Structural Biology Group, Grenoble, France.</p> |  |                                       |

### Report:

Two complete data sets of crystals soaked with dpT5 + ddATP and dpA5 + ddTTP have been collected at 2.7 and 2.8 Å, respectively. Fourier difference show density only for the dideoxynucleotide triphosphate, but not the pentanucleotide, in contrast to the experiment of Sept-1999, where the binary complex of the enzyme with d-BrU5 was clearly formed in the crystal upon soaking. Our current interpretation is that the order of the soaking is important : crystals should be first soaked with the oligonucleotide for 48 hrs before subjecting them to a soak with the dideoxynucleotide. This will be done in the next experiments

An attempt to recollect MAD data for the mercury derivative of the enzyme alone to improve current experimental phases has failed, because of the poor quality of the crystals.

### Publication:

Crystallization of the catalytic domain of murine Terminal desoxynucleotidyl Transferase.  
N. Sukumar, J.B. Boulé, N. Expert-Bezançon, N. Jourdan, J. Lescar, F. Rougeon, C. Papanicolaou & M. Delarue. Acta Cryst. D. Accepted.