
Experimental Report – MX-741

"Function of DNA-polymerase eta in translesion synthesis"

Quality of measurement/data and status / progress of evaluation

Three data sets to ~ 3.4 Å spacing on crystals of *Saccharomyces* DNA Polymerase η in complex with a DNA lesion containing 2-aminofluorene in the elongation step of DNA synthesis were collected. The crystals appear to belong to a different symmetry (orthorhombic) than crystals of Pol η and 2-aminofluorene in the DNA synthesis-initiation step (tetragonal). Molecular replacement using the coordinates of the apo-polymerase η as search model has been carried out.

Results

An electron density map to 3.4 Å of *S. cerevisiae* DNA Polymerase η using molecular replacement could be obtained. But model building/refinement trials revealed that the crystals did not contain any DNA. *Figure 1* depicts an example of the initially obtained electron density map after molecular replacement. Moreover higher resolution-diffraction data will be necessary to decipher the mechanism of trans-lesion synthesis and for the comparison with previously obtained data of the DNA synthesis initiation step. Crystal optimisation is in progress

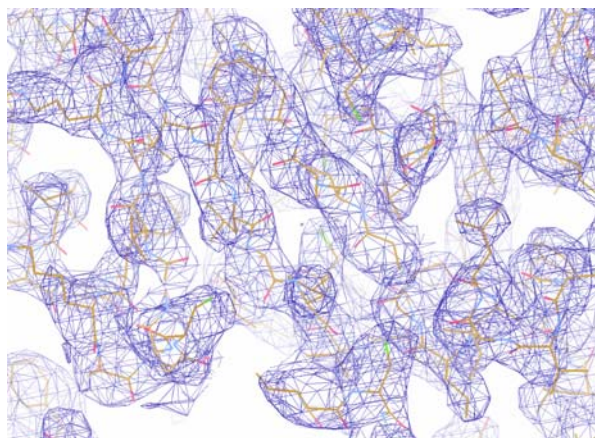


Figure 1 Example of initial electron density map at 3.4 Å after molecular replacement contoured at 1 σ level.