Protein-protein interaction regulating DNA damage response and repair processes

Francesca Mattiroli, Michael Uckelmann, Danny Sahtoe, Rick Hibbert, Flora Groothuizen and Titia K. Sixma

Division of Biochemistry, Netherlands Cancer Institute, Plesmanlaan 121, 1066 CX Amsterdam, t.sixma@nki.nl

When DNA damage occurs the cell has the choice between a number of different repair pathways. Our studies explore the regulatory processes dealing with DNA damage at the atomic level. Using a combination of structural biology and biophysical analysis we study how protein-protein interactions provide key steps in selectivity and processivity. Complementing crystallography studies with SAXS and other biophysical techniques provides us with novel insights in the mechanism of key repair factors.