

TIME RESOLVED FLUORESCENCE OF PROTEINS: WHAT CAN WE LEARN ?

Yves ENGELBORGHHS

The possibilities of time resolved fluorescence spectroscopy for the understanding of protein structural heterogeneity, protein dynamics, ligand-binding and protein-nucleic acid interactions will be discussed on the basis of experimental results obtained in our own laboratory as well as in others.

References

Sillen, A. & Y. Engelborghs, The correct use of "average" fluorescence parameters,
Photochem. Photobiol. (1998) **67**, 475-486

Gastmans, M., G. Volckaert & Y. Engelborghs, Tryptophan microstate reshuffling upon
the binding of cyclosporin A to human cyclophilin A, *Proteins : Struct. Funct.*
Genet. (1999) **35**, 464-474

De Beuckeleer, K., G. Volckaert & Y. Engelborghs, Time resolved fluorescence and
phosphorescence properties of individual tryptophan residues of barnase : evidence
for protein-protein interactions, *Proteins : Struct. Funct. Genet.* (1999) **36**, 42-53

Sillen, A., J. Hennecke, D. Roethlisberger, R. Glockshuber & Y. Engelborghs,
Fluorescence quenching in the DsbA protein from E. Coli : complete picture of the
excited-state energy pathway and evidence for the reshuffling dynamics of the
microstates of tryptophan, *Proteins : Struct. Funct. Genet.* (1999) **37**, 253-262

Sillen, A., F. Diaz & Y. Engelborghs, A step towards the prediction of the fluorescence lifetimes of tryptophan residues in proteins based on structural and spectral data, *Protein Sci.* (2000) **9**, 158-169

Bombarda, E., A. Abadou, C. Vuilleminier, D. Gerard, B.P. Roques, E. Piemont & Y. Mely, Time-resolved fluorescence investigation of the Human Immunodeficiency Virus type I nucleocapsid protein : influence of the binding of nucleic acids, *Biophysical J.* (1999) **76**, 1561-1570

Laboratory of Biomolecular Dynamics, K.U. Leuven, Celestijnenlaan 200 D, B-3001 Leuven, Belgium
E-mail Yves.Engelborghs@fys.kuleuven.ac.be