

Franca Rossi

PERSONAL DATA

Place and date of birth: Padova (Italy) 18.10.1967

Residence: Novara (Italy)

BIO AND EDUCATION

1992 – University degree (110/110 *cum laude*) in Biological Sciences at the University of Pavia (Italy).
1993 – 1997 - Post-graduate research activity in the field of HIV-1 and HBV molecular biology (fellowships granted by the Italian CNR and ISTISAN), at the "IGBE-Istituto di Genetica Biochimica ed Evoluzionistica" of the CNR (Pavia, Italy) (Supervisor: Prof. G. Milanese). 1997 – 2000 Research fellow at the Unit U526 "*Activation des Cellules Hématopoïétiques*", at the School of Medicine "Pasteur", Nice (France) (fellowships granted by the Italian ISTISAN and by the French INSERM) (Supervisor: Dott. J-F. Peyron). 2001 - Research fellow (assegnista) at the Biochemistry and Biocrystallography Unit of the Dipartimento di Scienze del Farmaco (DSF), University of Piemonte Orientale (Novara, Italy) (Supervisor: Prof. M. Rizzi). 2002-present: Researcher (Ricercatore Universitario) at the Biochemistry and Biocrystallography Unit of DSF, University of Piemonte Orientale (Novara, Italy).

UNIVERSITY CAREER

2002-2016	Ricercatore, Università del Piemonte Orientale
2001	Assegnista, Università del Piemonte Orientale

MAIN FIELDS OF INTEREST

Biochemical and X-ray crystallography-based analyses of the structure/function relationship in macromolecules.

CURRENT ISSUES OF RESEARCH

- 1. "Biochemical and structural analysis of key enzymes in tryptophan metabolism in humans and in the malaria vector *Anopheles gambiae*".**

The Research is aimed at the description of key enzymes of tryptophan metabolism in humans and in the *Anopheles gambiae* mosquito, which is responsible for malaria spread into the human population. The 3D structure determination of the target enzymes, and the development of biochemical assays suitable for the high-throughput screening of natural/synthetic compound

libraries will drive the identification/optimization of small, species-specific and selective inhibitors of the mosquito targets.

2. “Analysis of *Mycobacterium tuberculosis* (*Mtb*) DNA repair mechanisms”.

By adopting different experimental approaches, including the use of complementary biochemical and biophysical techniques, the goal of our Research is dual: i) the biochemical and structural characterization of individual enzymes involved in alkylated-DNA repair in *Mtb*; and ii) the identification and characterization of macromolecular complexes participating to the maintenance of *Mtb* genome stability and/or to the co-ordination of DNA repair with other vital aspects of the pathogen biology.

TOP FIVE PAPERS

1. Miggiano R, Casazza V, Garavaglia S, Ciaramella M, Perugino G, Rizzi M, **Rossi F** (2013) Biochemical and Structural Studies of the *Mycobacterium tuberculosis* O6-Methylguanine Methyltransferase and Mutated Variants. *J Bacteriol*, *195*, 2728-2736
2. **Rossi F**, Khanduja JS, Bortoluzzi A, Houghton J, Sander P, Güthlein C, Davis EO, Springer B, Böttger EC, Relini A, Penco A, Muniyappa K, Rizzi M. (2011) The biological and structural characterization of *Mycobacterium tuberculosis* UvrA provides novel insights into its mechanism of action. *Nucleic Acids Res*, *39*, 7316-7328
3. **Rossi F**, Schwarcz R, Rizzi M (2008) Curiosity to kill the KAT (kynurenine aminotransferase): structural insights into brain kynurenic acid synthesis. *Curr Opin Struct Biol*, *18*, 748-755
4. **Rossi F**, Garavaglia S, Giovenzana GB, Arcà B, Li J, Rizzi M (2006) Crystal structure of the *Anopheles gambiae* 3-hydroxykynurenine transaminase. *Proc Natl Acad Sci U S A*, *103*, 5711-5716
5. Bottero V, **Rossi F**, Samson M, Mari M, Hofman P, Peyron JF (2001) Ikappa b-alpha, the NF-kappa B inhibitory subunit, interacts with ANT, the mitochondrial ATP/ADP translocator. *J Biol Chem*, *276*, 21317-21324.