

## **MOLECULAR CHARACTERIZATION OF HIV TAT PROTEIN FUNCTIONAL PROPERTIES**

The HIV-1 Tat protein plays an essential role in HIV replication and has successfully passed phase II clinical trials as therapeutic vaccine in HIV-infected subjects. Besides possessing important antigenic features, the Tat protein exerts immunomodulatory activities and plays a role in immune dysregulation during HIV infection. Accordingly, the main goal of the project is the functional and molecular characterization of Tat activity on T cells. The expected results will lead to new knowledge on the role of Tat in the immune dysregulation of HIV+ subjects and provide new insights into the possibility of employing Tat as a general effective immune modulator.

### *GOALS*

- Characterization of Tat activity on T cells functions
- Molecular characterization of Tat effects in T cells
- Characterization of Tat as an immune modulator of immune responses against other antigens

### *INSTRUMENTS AND METHODS*

Biochemical, immunological and microbiological methods including purification and cultivation of peripheral blood human cells, cytofluorimetry, analysis of cytokines production/release, analysis of fatty acid and sugar metabolism, analysis of RNA and protein expression. Instruments used in this study are standard instruments for cellular and molecular biology, virology and immunology.

### *SUBJECTS*

Biochemistry, immunology, microbiology and molecular biology.

### *WORKING GROUP*

Riccardo Gavioli  
Peggy Marconi  
Antonella Caputo

### *COLLABORATIONS*

Barbara Ensoli, Istituto Superiore di Sanità, Roma