



ALMA MATER STUDIORUM  
UNIVERSITÀ DI BOLOGNA  
DEPARTMENT OF  
PHARMACY AND BIOTECHNOLOGY

## **One Post-Doctoral fellow position at the Department of Pharmacy and Biotechnology, University of Bologna, Italy**

We are seeking a young scientist with a PhD in the field of Cellular and Molecular Biology with expertise in cellular biology (mammals and bacteria), biochemistry, bioenergetics, molecular biology and computational methods for protein structure analysis.

**Project title: DISSECTING THE ROLE OF RESPIRATORY SUPERCOMPLEXES IN MITIGATING THE DELETERIOUS EFFECTS OF MUTATIONS IN COMPLEX III**

**Description of the project:** The aim of this project is to clarify the functional and structural relationships between respiratory complexes I and III to understand whether their supramolecular organization in supercomplexes can mitigate the effect of deleterious mutations in cytochrome *b*, one of the catalytic core subunits of complex III. To this purpose, biochemical approaches will be applied in human and bacterial cellular models carrying mutations in cytochrome *b* to analyze the structural stability and enzymatic activity of complex III in its isolated form or in assembled supercomplex I+III. The biochemical approaches will be associated with molecular dynamics simulations of supercomplex I+III by modeling wild type and mutated cytochrome *b* to obtain information on critical interactions between the two complexes for supercomplexes stability. From this project, we expect to obtain new knowledge on the structural and physiological relevance of supercomplexes healthy and pathological conditions.

The project will be carried in collaboration of three labs of Dept. of Pharmacy and Biotechnology under the supervision of Prof. Anna Maria Ghelli. The salary will be 19367,00 euro/year.

The application form will be published soon in <https://bandi.unibo.it/ricerca/assegni-ricerca>. The approximate start date will be September 2021 or later. The application should include a CV and the list of publications, oral presentations etc.

For further information, candidates could send an email with their CV to [annamaria.ghelli@unibo.it](mailto:annamaria.ghelli@unibo.it)

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