

## Curriculum Vitae of Laurent Robert Chiarelli

### PERSONAL INFORMATIONS

Laurent Robert Chiarelli

Born in La F ere (France), 10.24.1973;

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### EDUCATION

2004: Ph.D. degree in Biochemistry, University of Pavia Thesis: "From gene to protein to disease: pyruvate kinase and hereditary hemolytic anemia"

1998: Master's Degree in Biological Science, University of Pavia Thesis: "The allosteric transition of pyruvate kinase, a site specific mutagenesis study"

### PROFESSIONAL EXPERIENCES

2016-2019: Associate Professor – BIO/10 Biochemistry, Department of Biology and Biotechnology, University of Pavia, Italy.

2016-2019: Assistant Professor – BIO/10 Biochemistry, Department of Biology and Biotechnology, University of Pavia, Italy.

2011-2016: Post Doctoral Fellow, Department of Biology and Biotechnology, University of Pavia, Italy.

2006-2011: Post Doctoral Fellow, Department of Biochemistry, University of Pavia, Italy.

2003-2005: Post Doctoral Fellow, Department of Genetic and Microbiology, University of Pavia.

2001-2003: PhD Student in Biochemistry, Department of Biochemistry, University of Pavia Italy.

### TEACHING

2019-present Integrated Laboratory of Molecular Biotechnologies, Module of Biochemistry - Bachelor in Biotechnology, University of Pavia.

2016-present General and Applied Enzymology and Laboratory, Module 2 – Bachelor in Biotechnology, University of Pavia.

2017-present Industrial Biochemistry– Master in Experimental and Applied Biology, University of Pavia.

### PRINCIPAL RESEARCH ACTIVITIES.

The main research activity of Dr. Chiarelli is in the field of protein biochemistry with particular regard to biomedical application.

Currently, his main interests are in the characterization of bacterial enzymes, with particular focus on *M. tuberculosis* and on the cystic fibrosis pathogen *Burkholderia cenocepacia*, as potential targets of antimicrobial drugs, or involved in different mechanisms of resistance such as drug activation/inactivation.

His scientific activity is well documented by 64 in peer-reviewed articles in international journals, 2 book chapters, one international patent (PCT/EP2008/006469), and more than 70 communications at national and international congresses.

From 2012 ad hoc Peer Reviewer for: Antibiotics, Biomolecules, Bioorganic Chemistry, ChemistrySelect, ChemMedChem, Future Medicinal Chemistry, Future Microbiology, International Journal of Molecular Sciences, Journal of Biotechnology, Journal of Microbial and Biomedical Technology, Molecules, Pharmaceuticals, PeerJ, Plos One, Recent Patent on Biotechnology, Virulence. (<https://publons.com/author/1171760/laurent-roberto-chiarelli#profile>)

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### **Past Researches:**

- 1999-2012 Structural and functional analysis of pathological variants of erythrocyte enzymes (pyruvate kinase, pyrimidine 5'nucleotidase, adenylate kinase, phosphoglycerate kinase) associated with hereditary hemolytic anemia.
- 2006-2012 Characterization of *Helicobacter pylori* L-asparaginase, an enzyme with potentials chemotherapeutic applications.
- 2008-2011 Therapeutic drug monitoring of mycophenolate in renal transplant patients through inosine-monophosphate dehydrogenase enzymatic activity determination.

### **Technical Skills:**

Molecular Biology techniques: plasmid and genomic DNA extraction and purification, gene cloning, site directed mutagenesis; DNA sequencing, PCR, RT-PCR, Real-time PCR. Sequence analysis by bioinformatic techniques.

Biochemical techniques: cloning and expression of heterologous recombinant protein; protein purification and characterization (standard and FPLC chromatography; 1D and 2D electrophoresis; western blotting; UV-Vis and fluorescence spectrophotometry; CD spectropolarimetry; LC/MS protein sequencing).

Enzymology: enzymatic assays assessment (colorimetric and spectrophotometric; HPLC or capillary electrophoresis-based assay); enzyme kinetics analysis; enzyme inhibition studies; folding/unfolding kinetic.