

Prof. Marco Vanoni, CV essenziale

Career

- *Laurea cum laude* in Biological Sciences (1980)
- Post-laurea Specialization *cum laude* in Biological Sciences (1982)
- Post-doctoral fellow and visiting scientist at the Biochemistry Department of the *Albert Einstein College of Medicine* New York (USA, 1984-85; 1986; 1989) and at the *Ecole Polytechnique*, Paris (France, 1991).
- Associate Professor of Biochemistry at the University of Milano (1992-2001)
- Vice-Coordinator of the Advanced School in Biotechnology of the University of Milano (1993-1999)
- Full Professor of Biochemistry (since 2001) at the *Department of Biotechnology and Biosciences* of the University of Milan-Bicocca.
- Member of the *Senate* (2001-2002) of the University of Milano-Bicocca.
- Coordinator of the *PhD School in Biotechnology* (from 2004 to 2013).
- Coordinator of the *PhD School in Life Sciences* from 2013 to 2017
- Coordinator of the Group “Computational and Systems Biochemistry” of the Italian society of Biochemistry and Systems Biology (2020-current)

Editorial and Reviewing

- Grant evaluator for Italian, European and US Granting agencies
- Reviewer for international journals of Biochemistry, Molecular Biology, Bioinformatics and Systems Biology
- Co-editor of the *Biotechnology Advances* (2012) issue on “*Systems Biology for Biomedical Innovation*”
- Editor for *Frontiers in Physiology* (Systems Biology section)
- Co-editor for the issue on Systems Biology of *Current Opinion in Biotechnology* (2020)
- Editorial Board Member for *Annals Oncology Research*

Grants

- PI of grants from MIUR (COFIN, FIRB), CNR, Regione Lombardia, Companies (Keyros, Norpharma, ADIENNE, Creabilis, Primm), EU (FP7, Horizon2020, EraNet)
- PI of the *Excellence Grant* of the Department of Biotechnology and Biosciences of the University of Milan-Bicocca (Competitive grant awarded by the National Ministry of University and Research), devoted to systems analysis of multi-factorial diseases

Scientific activity

- Molecular and computational studies on protein structure and function, mainly conducted on proteins of biotechnological interest, such as

proteins from thermophilic organisms, and proteins involved in signal transduction pathways in eukaryotes.

- Molecular and computational studies in the field of systems biology of signal transduction, proliferation and cell metabolism in lower (*S. cerevisiae*) and higher eukaryotes (mammalian cells in culture) with particular applications to study of the interrelations between metabolism and altered cell growth, drug resistance and early events of metastasis in cultured tumor cells.
- Author of about 130 articles and reviews in international journals with referees in the field of biochemistry, cell and systems biology (H-index 33 and over 2750 citations, source *Scopus* 2019)

10 recent selected publications (2012-current)

Damiani C, Gaglio D, Sacco E, Alberghina A, **Vanoni M**, Systems metabolomics: from metabolomic snapshots to design principles. *Current Opinion in Biotechnology* 2020 **63**: 190-199.

Caruso A, Caccuri F, Bugatti A, Zani A, **Vanoni M**, Bonfanti P, Cazzaniga ME, Perno CF, Messa C, Alberghina A Methotrexate inhibits SARS-CoV-2 replication *in vitro* *Journal of Medical Virology* 2021 **93**:1780-1785

Damiani C, Maspero D, Di Filippo M, Colombo R, Pescini D, Graudenzi A, Westerhoff HV, Alberghina L, **Vanoni M**, Mauri G. Integration of single-cell RNA-seq data into population models to characterize cancer metabolism. *PLoS Comput Biol.* 2019 **15**: e1006733.

Bersini S, Gilardi M, Ugolini GS, Sansoni V, Talò G, Perego S, Zanotti S, Ostano P, Mora M, Soncini M, **Vanoni M**, Lombardi G, Moretti M. Engineering an Environment for the Study of Fibrosis: A 3D Human Muscle Model with Endothelium Specificity and Endomysium. *Cell Rep.* 2018 **25**:3858-3868.

Damiani C, Colombo R, Gaglio D, Mastroianni F, Pescini D, Westerhoff HV, Mauri G, **Vanoni M**, Alberghina L. A metabolic core model elucidates how enhanced utilization of glucose and glutamine, with enhanced glutamine-dependent lactate production, promotes cancer cell growth: The WarburQ effect. *PLoS Comput Biol.* 2017 **13**:e1005758.

Palumbo P, **Vanoni M**, Cusimano V, Busti S, Marano F, Manes C, Alberghina L. Whi5 phosphorylation embedded in the G1/S network dynamically controls critical cell size and cell fate. *Nature Commun.* 2016 **7**:11372.

Cazzaniga P, Damiani C, Besozzi D, Colombo R, Nobile MS, Gaglio D, Pescini D, Molinari S, Mauri G, Alberghina L, **Vanoni M**. Computational strategies for a system-level understanding of metabolism. *Metabolites.* 2014 **4**:1034-87.

Alberghina L, Gaglio D, Moresco RM, Gilardi MC, Messa C, **Vanoni M**. A systems biology road map for the discovery of drugs targeting cancer cell metabolism. *Curr Pharm Des.* 2014; **20**:2648-66.

Hasan MM, Brocca S, Sacco E, Spinelli M, Papaleo E, Lambrughini M, Alberghina L, **Vanoni M**. A comparative study of Whi5 and retinoblastoma proteins: from sequence and structure analysis to intracellular networks. *Front Physiol.* 2014 **4**:315.

Sacco E, Spinelli M, **Vanoni M**. Approaches to Ras signaling modulation and treatment of Ras-dependent disorders: a patent review (2007--present). *Expert Opin Ther Pat.* 2012 **22**:1263-87.