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DEGLI STUDI
DELL'AQUILA



DISCAB
Dipartimento di Scienze
Cliniche Applicate
e Biotecnologiche

CURRICULUM VITAE

PERSONAL INFORMATION	Nicola Franceschini Department: Department of Biotechnological and Applied Clinical Sciences Via Vetoio Loc. Coppito L'Aquila 67100 Italy nicola.franceschini@univaq.it
CURRENT POSITION	Associate Professor of Biochemistry
EDUCATION OTHER QUALIFICATIONS	Master Degree in Biological Sciences
ACADEMIC APPOINTMENTS	Biochemistry Researcher from 20th september 1994 to 28th february 2002 Associate Professor of Biochemistry since 1th March 2002
CLINIC APPOINTMENTS	



TEACHING EXPERIENCE	2023-2024 Functional analysis of biological macromolecules Course of Medical and Pharmaceutical Biotechnologies (year 1) 2023-2024 Structure and properties of biomolecules and drug design Course of Medical and Pharmaceutical Biotechnologies (year 2)
RESEARCH ACTIVITIES	<p>Purification, molecular and kinetic characterization of proteins. Application of molecular biology techniques to study of enzymes involved in the mechanisms of bacterial antibiotics (collaboration with CIP, Center for Protein Engineering of Liège, University of Siena , University of Verona, University of Pavia, University of Catania and University of Las Palmas of Gran Canaria).</p> <p>Kinetic studies related to the activity modulation of matrix metalloproteinases (MMPs) in the context of chronic degenerative osteoarticular pathologies.</p> <p>Potential off-target role of non-steroidal anti-inflammatory drugs (NSAIDs) in the modulation of matrix metalloproteinases (MMPs) activities (collaboration with the S. Camillo Hospital in Rome). Identification of early markers (matrix metalloproteinases and cathepsins) of hand osteoarthritis (collaboration with the University of Aydin, Turkey). Development of cellular models of synoviocytes for the identification of molecules involved in the development and regulation of inflammatory mechanisms. Activity of proteolytic enzymes (cathepsins) in the mechanisms of tumor invasion, in the degradation processes of the extracellular matrix connected with osteoarticular pathologies.</p> <p>Currently the research activity is aimed at studying the <i>in silico</i> interaction of natural substances (polyphenols) with enzymes involved in the metabolic pathway of arachidonic acid (COX, LOX) and studies aimed at the interaction of non-steroidal anti-inflammatory drugs with metalloproteinases of the matrix (drug repositioning). Potential role of natural substances in controlling the activity of the protease produced by COVID-19.</p>
RESPONSIBILITY IN ACADEMIC ACTIVITIES	Chairman of the didactic area council of the course of Cellular and Molecular Biotechnologies from 2010 to 2012
EDITORIAL BOARD, EDITORIAL ACTIVITIES, SOCIETY MEMBERSHIP	<p>Member since 2017 of the Italian Proteomic Association (ItPA)</p> <p>Member since 1993 of the Italian Society of Biochemistry and Molecular Biology (SIB)</p> <p>Member (1994-2007) American Society for Microbiology (ASM)</p> <p>Member since 2017 of the Italian Society of Phytotherapy (SIFIT)</p> <p>Member since 2017 of the European Society of Phytochemistry</p>
SCIENTIFIC ACHIEVEMENTS BIBLIOMETRIC INDICATORS	<p>Scopus Author ID: 7006270914 http://orcid.org/0000-0003-2237-0356</p> <p>Indicatori bibliometrici Scopus: (Hirsch (H) Index 22, i10-Hirsch (H) 6, total number of quotes 2178, median number of quotes by article 27,57</p>
SELECTED PUBLICATIONS	G. Amicosante, M. C. Marinucci, N. Franceschini, M. I. Tizzani, B. Oliva and A. Oratore. Fractionation and characterization of two β -lactamases in



	<p>Citrobacter diversus ULA-27 strain by chromatofocusing. J. Chromatography, (1987), 403, 366-372</p> <p>G. Amicosante, A. Oratore, N. Franceschini, M. Maccarrone, R. Strom, M. Galleni and J.M. Frère. Citrobacter diversus ULA-27 β-lactamases. Biochem. J., (1988), 254, 885-890</p> <p>L. Fattorini, G. Amicosante, D. Fiorentino, N. Franceschini, L. Di Marzio, A. Oratore and G. Orefici. Inhibitors and inactivators of beta-lactamase from Mycobacterium fortuitum. J. Chemother., (1989), 1, 293-297</p> <p>G. Amicosante, A. Felici, B. Segatore, L. Di Marzio, N. Franceschini and M. Di Girolamo. Do inert β-lactamases inhibitors act as synergizers of β-lactam antibiotics? Utility of boric and boronic acids. J. Chemother. (1989), 1, 394-399</p> <p>Amicosante G., Segatore B., Perilli M., Felici A and Franceschini N. The β-lactamases of Citrobacter diversus and their hydrolysis kinetics for some structurally-related cephalosporins. J. Chemother. (1989), 1, 399-402</p> <p>G. Amicosante, N. Franceschini, B. Segatore, A. Oratore, L. Fattorini, G. Orefici, J. Van Beeumen and J.M. Frère. Characterization of a β-lactamase produced in Mycobacterium fortuitum D316. Biochem. J. (1990), 271, 729-734</p> <p>N. Franceschini, G. Amicosante, M. Perilli, M. Maccarrone, A. Oratore, J. Van Beeumen and J.M. Frère. Proteolytic interconversion and N-terminal sequences of the Citrobacter diversus major β-lactamases. Biochem. J. (1991), 275, 629-633</p> <p>Fattorini L., Scardaci G., Jin S. H., Amicosante G., Franceschini N., Oratore A. and Orefici G. Beta-lactamase of Mycobacterium fortuitum: kinetics of production and relationship with resistance to β-lactam antibiotics. Antimicrob. Agents Chemother. (1991), 35, 1760-1764</p> <p>Perilli M., Franceschini N., Segatore B., Amicosante G., Oratore A., Duez C., Joris B. and Frère J.M. Cloning and nucleotide sequencing of the gene encoding the β-lactamase from Citrobacter diversus. FEMS Microbiology Letters (1991), 83, 79-84</p> <p>B. Oliva, T. Taraborrelli, N. Franceschini, G. Amicosante. β-lactamase induction antagonizes β-lactam susceptibilities in Citrobacter diversus and Enterobacter cloacae clinical isolate. J. Chemother. (1991), 3, 343-347</p> <p>L. Fattorini, G. Orefici, S.H. Jin, G. Scardaci, G. Amicosante, N. Franceschini, A. Oratore and I. Chopra. Resistance to β-lactams in Mycobacterium fortuitum. Antimicrob. Agents Chemother. (1992), 36, 1068-1073</p> <p>N. Franceschini, M. Galleni, J.M. Frère, A. Oratore and G. Amicosante. A class A β-lactamase from Pseudomonas stutzeri highly active against monobactams and cefotaxime. Biochem. J. (1993), 292, 697-700</p> <p>Franceschini N., Impagnatiello A., Oratore A., Strom R. and Bozzi A. S-adenosylhomocysteine hydrolase from Acinetobacter calcoaceticus: purification and partial characterization. Biochem. Mol. Biol. Int. (1993), 30, 1081-1092</p> <p>Scopetti F., Iona E., Fattorini L., Goglio A., Franceschini N., Amicosante G. and Orefici G. Activity of antimicrobial drugs evaluated by agar dilution and</p>
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Wagner B., Fattorini L., Wagner M., Jin S., Stracke R., Amicosante G., Franceschini N., Orefici G. Antigenic properties and immunoelectron microscopic localization of *Mycobacterium fortuitum* β -lactamase. *Antimicrob. Agents Chemother.* (1995), 39, 739-745

Felici A., Perilli M., Segatore B., Franceschini N., Setacci D., Stefani S., Oratore A. and Amicosante G. Interactions of Biapenem with serine-active-site and metallo- β -lactamases. *Antimicrob. Agents Chemother.* (1995), 39, 1300-1305

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Impagnatiello A., Franceschini N., Oratore A., Bozzi A. Inhibition studies of S-adenosylhomocysteine hydrolase purified from *Acinetobacter calcoaceticus* ULA-501. *Biochimie* (1996), 78, 267-272

Felici A., Perilli M., Franceschini N., Rossolini G.M., Galleni M., Frère J.M., Oratore A., Amicosante G. Sensitivity of *Aeromonas hydrophila* carbapenemase to β -3-cephems: comparative study with other metallo- β -lactamases. *Antimicrob. Agents Chemother.* (1997), 41, 866-868

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Perilli M., Felici A., Franceschini N., De Santis A., Pagani L., Luzzaro F., Oratore A., Rossolini G.M., Knox J.R., Amicosante G. Characterization of a new TEM-derived β -lactamase produced in a *Serratia marcescens* strain. *Antimicrob. Agents Chemother.* (1997), 41, 2374-2382

Franceschini N., Perilli M., Segatore B., Setacci D., Amicosante G., Mazzariol A., Cornaglia G. Ceftazidime and aztreonam resistance in *Providencia stuartii*: characterization of a natural TEM-derived Extended-Spectrum β -lactamase, TEM-60. *Antimicrob. Agents Chemother.*, (1998), 42, 1459-1462

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Bellio P., Di Pietro L., Mancini A., Piovano M., Nicoletti M., Brisdelli F., Franceschini N., Amicosante G., Perilli M., and Celenza G. SOS response in bacteria: Inhibitory activity of lichen secondary metabolites against Escherichia coli RecA protein. Phytomedicine (2017) vol. 29, pp. 11-18 Ianni A., Celenza G., Franceschini N. Oxaprozin: A new hope in the modulation of matrix metalloproteinase 9 activity. Chem Biol Drug es. (2019) 93(5):811-

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Ianni A, Bennato F, Martino C, Grotta L, Franceschini N, Martino G. Proteolytic Volatile Profile and Electrophoretic Analysis of Casein Composition in Milk and Cheese Derived from Mironutrient-Fed Cows. Molecules. 2020 May 10;25(9):2249

Ianni A, Ruggeri P, Bellio P, Martino F, Celenza G, Martino G, Franceschini N. Expression and Activity of Matrix Metalloproteinase 9 in MDA-MB-231 Human Breast Cancer Cells. Paolo, Marco Piccardi, Silvia Bisti and Benedetto Falsini. Saffron: A Multitask Neuroprotective Agent for Retinal Degenerative Diseases Antioxidants 2019, 8(7), 224;

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Petricca S, Celenza G, Luzi C, Cinque B, Lizzi AR, Franceschini N, Festuccia C, Iorio R Synergistic Activity of Ketoconazole and Miconazole



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	<p>with Prochloraz in Inducing Oxidative Stress, GSH Depletion, Mitochondrial Dysfunction, and Apoptosis in Mouse Sertoli TM4 Cells. <i>Int J Mol Sci.</i> 2022 May 12;23(10):5429.</p> <p>Fagnani L, Nazzicone L, Bellio P, Franceschini N, Tondi D, Verri A, Petricca S, Iorio R, Amicosante G, Perilli M, Celenza G. Protocetraric and Salazinic Acids as Potential Inhibitors of SARS-CoV-2 3CL Protease: Biochemical, Cytotoxic, and Computational Characterization of Depsidones as Slow-Binding Inactivators. <i>Pharmaceuticals (Basel).</i> 2022 Jun 4;15(6):714.</p> <p>Bennato F, Ianni A, Oliva E, Franceschini N, Grotta L, Sergi M, Martino G. Characterization of Phenolic Profile in Milk Obtained by Ewes Fed Grape Pomace: Reflection on Antioxidant and Anti-Inflammatory Status. <i>Biomolecules.</i> 2023 Jun 22;13(7):1026.</p> <p>96 comunicazioni a congressi nazionali e internazionali 3 lavori premiati:</p> <p>-Premio "Mauro Prevedello" dell'ASSOLOMBARDA Estrazione di oli essenziali con anidride carbonica in fase supercritica nell'ambito del 32° Congresso Nazionale SICC 2014, Milano, Italy</p> <p>-Lavoro vincitore Miglior Poster Congresso AIR2015 Ianni A., Marolda G., Ciampani V., Chichierca G., Iarussi S., Franceschini N. Osteolisi periprotetica: quale ruolo per le cistein-proteasi? VI Congresso Nazionale dell'Associazione Italiana Riprotesizzazione, 9-10 ottobre 2015, Brescia, Italy</p> <p>Lavoro vincitore Premio Zanichelli Ianni A., Celenza G., Franceschini N. Identification of molecules capable of modulating the activity of enzymes involved in the extracellular matrix remodeling. 59° National Meeting of the Italian Society of Biochemistry and Molecular Biology, 20-22 september, 2017 Caserta, Italy</p>
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