

## **Dr. NICOLA LUIGI BRAGAZZI**



He was born on the 2<sup>nd</sup> of March in 1986 in Carrara (MS), Tuscany (Italy) and is currently a MD, a MSc, a PhD and a resident in Public Health.

He got his MD (medical degree) on the 15<sup>th</sup> of July in 2011 with a final mark of 110/110 *cum laude* with a thesis on Personalized Nanomedicine ("Nanomolecular aspects of medicine, at the cutting-edge of the nanobiosciences in the field of health-care") discussed with Professor Claudio Nicolini, Evgeniya Peshkova and Victor Sivozhelezov and the joint Italo-Russian MSc (Master of Science) in nanobiotechnologies at Lomonosov Moscow State University (27<sup>th</sup> April 2012).

He got his PhD in nanochemistry and nanobiotechnology at Marburg University, Germany with a final mark of "very good", discussed with Professors Claudio Nicolini, Norbert Hampp and Evgeniya Peshkova. Moreover, he is currently a resident in Public Health at University of Genoa, Italy, 3<sup>rd</sup> year.

### **AWARDS**

Alfiere della Repubblica Italiana (Young Knight of Italian Republic), awarded by President Carlo Azeglio Ciampi (2<sup>nd</sup> June 2005)

Medal Degree at University of Genoa (2011)

### **STAGES**

1) Stage at Scuola Normale di Pisa, Colle di Val d'Elsa (Siena), 18-24 July 2004.

2) Stage at Luminy, Marseille, France, Department of Theoretical Physics, supervisor professor Carlo Rovelli, December 2008.

3) Stage at Lomonosov Moscow State University, with as supervisors Aleksey Shaytan, Victor Sivozhelezov, Olga Levkova, Marine Bozdaganyan. July 2009.

4) Stage at Hacettepe Universitesi, Ankara, at Oncology Department, supervisor professor Emin Kansu, October 2010.

### **REVIEWER/REFEREE**

1) Evolutionary Bioinformatics (Libertas Academica)

2) Journal of Proteome Research (JPR, ACS)

3) International Journal of Nanomedicine (DovePress)

4) Nanomaterials and nanotechnology

5) BioMed Research International (Hindawi)

6) Journal of Oral Pathology and Medicine (JOPM)

- 7) Public Health Genomics (Karger)
- 8) OncoTargets and Therapy (DovePress)
- 9) Vaccine (Elsevier)
- 10) Acta Crystallographica D
- 11) Global Journal of Health Science (GJHS)
- 12) Nanomedicine: Nanotechnology, Biology, and Medicine (Elsevier)
- 13) OMICS A journal of integrative biology (MaryAnn Liebert)
- 14) Oral Health and Dental Management (OMICS)
- 15) Current Pharmacogenomics and Personalized Medicine (CPPM, Bentham)
- 16) Current Psychopharmacology (Bentham)
- 17) Nutrition (Elsevier)
- 18) Current Psychiatry Reviews (Bentham)
- 19) Journal of Nanoparticles (Hindawi)
- 20) Journal of nanomaterials & molecular nanotechnology (OMICS)
- 21) Clinical Oral Investigations

## ARTICLES

- 1) **Bragazzi NL**, Giacomelli L, Sivozhelezov V, Nicolini C. LeaderGene: a fast data-mining tool for molecular genomics. *J. Proteomics bioinform.* 2011;4(4):083-086.
- 2) Racapé M, **Bragazzi NL**, Sivozhelezov V, Danger R, Pechkova E, Soullillou JP, Brouard S, Nicolini C. SMILE silencing and PMA activation in HeLa cells: comparison with kidney transplantation networks. *J Cell Biochem.* 2012 Jun;113(6):1820-32 (**IF 3.368; 3.117**).
- 3) **Bragazzi NL**, Pechkova E, Scudieri D, Terencio TB, Adami M, Nicolini C. Recombinant laccase: II. Medical biosensor. *Crit Rev Eukaryot Gene Expr.* 2012;22(3):197-203 (**IF 2.385; 3.082**).
- 4) Nicolini C, Bruzzese D, Cambria MT, **Bragazzi NL**, Pechkova E. Recombinant laccase: I. Enzyme cloning and characterization. *J Cell Biochem.* 2013 Mar;114(3):599-605 (**IF 3.368; 3.117**).
- 5) Nicolini C, **Bragazzi N**, Pechkova E. Nanoproteomics enabling personalized nanomedicine. *Adv Drug Deliv Rev.* 2012 Oct;64(13):1522-31 (**IF 12.707; 15.271**).
- 6) Pechkova E, **Bragazzi NL**, Bozdaganyan M, Belmonte L, Nicolini C. A review of the strategies for obtaining high quality crystals utilizing nanotechnologies and space. *Crit Rev Eukaryot Gene Expr.* 2014;24(4), in press DOI: 10.1615/CritRevEukaryotGeneExpr.2014008275 (**IF 2.385; 3.082**).
- 7) Bozdaganyan M, **Bragazzi NL**, Pechkova E, Shaitan K, Nicolini C. Identification of best protein crystallization methods by Molecular Dynamics. *Crit Rev Eukaryot Gene Expr.* 2014;24(4), in press DOI: 10.1615/CritRevEukaryotGeneExpr.2014010201 (**IF 2.385; 3.082**).
- 8) Orlando B, **Bragazzi N**, Nicolini C. Bioinformatics and systems biology analysis of genes network involved in OLP (Oral Lichen Planus) pathogenesis. *Arch Oral Biol.* 2013 Jun;58(6):664-73 (**IF 1.880; 1.852**).
- 9) Nicolini C, Adami M, Sartore M, **Bragazzi NL**, Bavastrello V, Spera R, Pechkova E. Prototypes of newly conceived inorganic and biological sensors for health and environmental applications. *Sensors (Basel).* 2012 Dec 12;12(12):17112-27 (**IF 2.048; 2.457**).
- 10) **Bragazzi NL**, Nicolini C. A Leader Genes Approach-based Tool for Molecular Genomics: From Gene-ranking to Gene-network Systems Biology and Biotargets Predictions. *J Comput Sci Syst Biol.* 2013;6:165-176.
- 11) Spera R, Festa F, **Bragazzi N**, Pechkova E, LaBaer J, Nicolini C. Conductometric monitoring of protein-protein interactions. *J Proteome Res.* 2013 Dec 6;12(12):5535-47. (**IF 5.001; 4.894**).
- 12) **Bragazzi NL**, Spera R, Pechkova E, Nicolini C. NAPPA-Based Nanobiosensors for the Detection of Proteins and of Protein-Protein Interactions Relevant to Cancer. *J Carcinog & Mutagen.* 2014;5(3):166.
- 13) **Bragazzi NL**, Pechkova E, Nicolini C. Proteomics and proteogenomics approaches for oral diseases. *Adv Protein Chem Struct Biol.* 2014;95:125-62. (**IF 3.736; 3.416**).

- 14) Pechkova E, **Bragazzi NL**, Nicolini C. Advances in nanocrystallography as a proteomic tool. *Adv Protein Chem Struct Biol.* 2014;95:163-91. (**IF 3.736; 3.416**).
- 15) **Bragazzi NL**, Nicolini C. Nanogenomics for Personalized Nanomedicine: An Application to Kidney Transplantation. *Cell Mol Biol.* 2014;60(3):1000115. (**IF 0.691; 0.768**)
- 16) Pechkova E, **Bragazzi NL**, Bozdaganyan M, Belmonte L, Nicolini C. A review of the strategies for obtaining high-quality crystals utilizing nanotechnologies and microgravity. *Crit Rev Eukaryot Gene Expr.* 2014;24(4):325-39. *IF 2.385*
- 17) Bozdaganyan M, **Bragazzi NL**, Pechkova E, Shaitan KV, Nicolini C. Identification of best protein crystallization methods by molecular dynamics (MD). *Crit Rev Eukaryot Gene Expr.* 2014;24(4):311-24. *IF 2.385*
- 18) Bozdaganyan ME, Orekhov PS, **Bragazzi NL**, Panatto D, Amicizia D, Pechkova E, Nicolini C, Gasparini R. Docking and Molecular Dynamics (MD) Simulations in Potential Drugs Discovery: An Application to Influenza Virus M2 Protein. *American Journal of Biochemistry and Biotechnology.* 2014;10(3):180-188.
- 19) Nicolini C, **Bragazzi NL**, Pechkova E, Lazzari R. Ab Initio Semi-Quantitative Analysis of Micro-Beam Grazing-Incidence Small-Angle X-Ray Scattering (M-GISAXS) during Protein Crystal Nucleation and Growth. *J Proteomics Bioinform.* 2014;7:064-070.
- 20) Nicolini C, Spera R, **Bragazzi NL**, Pechkova E. Drug-Protein Interactions for Clinical Research by Nucleic Acid Programmable Protein Arrays-Quartz Crystal Microbalance with Dissipation Factor Monitoring Nanoconductometric Assay. *American Journal of Biochemistry and Biotechnology.* 2014;10(3):189-201
- 21) Pechkova E, **Bragazzi NL**, Fiordoro S, Nicolini C. Langmuir-Blodgett (LB)-based Nanobiocrystallography at the Frontiers of Cancer Proteomics. *Anticancer Res.* 2015;35(2), in press. *IF 1.872*
- 22) Nicolini C, **Bragazzi NL**, Pechkova E. Determination of Protein-Protein Interaction for Cancer Control via Mass Spectrometry and Nanoconductimetry of Nucleic Acid Programmable Protein Arrays SNAP Microarrays: An Overview. *Anticancer Res.* 2015;35(2), in press. *IF 1.872*

## BOOK CHAPTERS

- 1) Sivozhelezov V., Spera R., Giacomelli L., Hainsworth E., LaBaer J., Bragazzi NL. and Nicolini C., —Bioinformatics and fluorescence DNAsier for NAPPA studies on cell transformation and cell cycle In : —Functional Proteomics and Nanotechnology-Based Microarrays” (Volume 2). Nicolini C, LaBaer J (Eds). Pan Stanford Series on Nanobiotechnology, London–New York–Singapore, 31–59 (2010).
- 2) **Bragazzi NL.**, Bozdaganyan M. and Nicolini C. Molecular dynamics for vaccine and drug design. Pan Stanford IV. 2013, in press. To appear in *Nanobiotechnology in energy, environment and electronics: methods and applications*. Edited by Claudio Nicolini and Norbert Hampp. Volume 4 NANOBIO TECHNOLOGY SERIES. Series Editor: Claudio Nicolini. PAN STANFORD PUBLISHING. Singapore, London, New York. 2013.
- 3) **Bragazzi NL**, Nicolini C. Genomics and bioinformatics of Oral Lichen Planus (OLP). In: (Sonis ST ed), *Genomics, Personalized Medicine and Oral Disease*. Springer, 2015, in press.

## POSTER COMMUNICATIONS

- 1) **Bragazzi NL**, Sivozhelezov V, Spera R, Nicolini C. NAPPA studies on cell transformation and cell cycle data analysis by bioinformatic data mining and DNAsier fluorescence. Hyderabad, 2011, International conference and exhibition on proteomics and bioinformatics, India.
- 2) Pechkova E, Bragazzi NL, Nicolini C, Laccase sensor for health via recombinant and LB (Langmuir-Blodgett) technologies, 56th Biophysical Society, San Diego, 29 February 2012
- 3) Pechkova E, **Bragazzi NL**, Nicolini C. SNAP Nanoarrays for Structural and Functional Nanoproteomics. 4th International Congress BioNanoMed 2013. Krems, Austria 13-15 March, 2013.

4) **Bragazzi NL**, Pechkova E, Nicolini C. NAPPA Technology for vaccine design. ICOPHAI2013 (2<sup>nd</sup> International Congress on Pathogens at the Human-Animal Interface: One Health for Sustainable Development). Brazil.

5) **Bragazzi NL**, Nicolini C, Pechkova E, Lazzari R. New insights on protein crystal growth from ab initio study of MICROGISAXS experiments with and without LB. Italian National Conference on Condensed Matter Physics (Including Optics, Photonics, Liquids, Soft Matter), FisMat2013. Milan, 9-13 September 2013.

6) Nicolini C, **Bragazzi N**, Pechkova E. NAPPA-SNAP and APA Technologies for genomics detection. ICOPHAI2013 (2<sup>nd</sup> International Congress on Pathogens at the Human-Animal Interface: One Health for Sustainable Development). Brazil.

### **ORAL COMMUNICATIONS**

1) **Bragazzi NL**, Pechkova E, Nicolini C. Nanogenomics and Nanoproteomics Enabling Personalized, Predictive and Preventive Nanomedicine. 6<sup>th</sup> Chinese Medicinal Biotech Forum (CMBF), Shenzhen, China. 25-26<sup>th</sup> September 2013.

### **PATENTS**

2012

1) Nicolini C, Bragazzi NL, Pechkova E. GE2012A000080. APA -SNAP NANOARRAYS PER PROTEOMICA LB-BASATA (STRUTTURALE E FUNZIONALE) E PER VACCINOLOGIA.

### **PDB STRUCTURES**

1) 4ihn. Belmonte L, Pechkova E, **Bragazzi NL**, Nicolini C. High Resolution Insulin by Langmuir-Blodgett Modified Hanging Drop Vapour Diffusion.

2) 4i5y. Belmonte L, Pechkova E, **Bragazzi NL**, Nicolini C. Insulin protein crystallization via Langmuir-Blodgett.

3) 4i5z. Belmonte L, Pechkova E, **Bragazzi NL**, Nicolini C. Insulin protein crystallization via Langmuir-Blodgett.

4) 4i8s. Belmonte L, Pechkova E, **Bragazzi NL**, Scudieri D, Nicolini C. Hen Lysozyme protein crystallization via standard hanging drop vapor diffusion.

### **AFFILIATIONS TO SCIENTIFIC SOCIETIES**

ACS. American Chemical Society.

SIBPA. Società Italiana di Biofisica Pura e Applicata.

SILS. Società Italiana di Luce di Sincrotrone.