



PAOLA ZANETTA – CURRICULUM VITAE

CONTACTS

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INSTRUCTION

01/11/2020 - PRESENT

PhD student in Food, Health and Longevity (XXXVI Cycle) at Università del Piemonte Orientale (UPO), Novara (NO), Italy in Professor Azzimonti's Laboratory of Applied Microbiology. PhD project title "*Impact of selected probiotics and vitamin D against excessive oral pathogens colonization in oral squamous cell carcinogenesis: an integrated approach*".

MARCH 2019

Master's Degree in medical Biotechnologies at Università degli Studi di Milano-Bicocca, Monza (MB), Italy. Thesis Title "*Efficacy evaluation of natural extracts against Poxvirus using a Western Reserve modified Vaccinia virus infection model in cell culture*".
Final score: 110/110 cum laude. Thesis, presentation and discussion in English.

OCTOBER 2016

Bachelor's Degree in Biotechnologies at Università del Piemonte Orientale (UPO), Novara (NO), Italy. Thesis Title "*Efficacy evaluation of novel drugs against a Western Reserve Vaccinia virus strain by using a plaque assay in the BS-C-1 cell line*".
Final score: 105/110. Thesis written in English.

JULY 2013

Scientific High School Diploma at Liceo Scientifico Galileo Galilei, Borgomanero (NO), Italy.
Final score: 86/100

LANGUAGES

ITALIAN: Native speaker

ENGLISH: Level C1, assessed on the OLS platform at the end of the Erasmus+ for Traineeship mobility

FRENCH: Basic knowledge

GERMAN: Self-taught beginner

SOFTWARE KNOWLEDGE

Microsoft and Microsoft Office programs (i.e. Word, Excel, PowerPoint, Publisher)

GraphPad Prism program for biostatistical data analysis

Online data bank and programs (i.e., PubMed, NCBI, BLAST, ENA)

vNTI program for plasmid and primer design
Image-J and Image-J Fiji software for imaging data processing
Geneious 6 Bioinformatic Software for sequencing data analysis
Justbio
Mendeley

PROFESSIONAL EXPERIENCES

02/12/2019 - 31/10/2020 Fellowship owner for the project "Microbiota and vitamin D involvement in cardiovascular diseases development in HNSCC patients" c/o Prof/Dr Barbara Azzimonti's applied Microbiology Lab, Center for Translational Research on Autoimmune and Allergic Diseases, University of Piemonte Orientale (CAAD, UPO) in Novara, Italy, thanks to the "FAR-2017" (Fondo di Ricerca di Ateneo) funding provided by the UPO;

Methodological skills: eukaryotic primary and immortalised cells and aerobic/anaerobic/microaerophilic bacteria cultures; anti-bacterial activity testing of material against *S. aureus* and *P. aeruginosa* using agar diffusion and transwell tests; bacterial secretome production and quantification; DNA purification from FFPE samples.

Materials: bacterial culture media preparation; Alamar blue and XTT viability tests; TECAN Microplate Reader; anaerobic and microaerophilic Bug Boxes (Concept, BAKER RUSKINN); optical and fluorescence microscopy, Leica confocal microscope; Image-J and GraphPad PRISM programs.

General skills: SOPs improvement; development of novel experimental procedures for anti-bacterial activity testing of material against fastidious bacteria; communication skills; autonomous work organization; project and review writing; thesis tutoring.

04/05/2020 - 30/06/2020 Collaboration with the Company "FASTMED ITALIA Srl" (<https://www.fastmeditalia.com/>) with a project entitled "Evaluation of the biocidal activity of COMVIR – non-woven fabric", during the SARS-CoV-2 emergency, to certificate the employment of this fabric as mattresses and pillows cover protection.

05/02/2018 - 30/09/2018 AND 08/10/2018 - 25/01/2019
Erasmus+ for Traineeship at Institut für Mikrobiologie der Bundeswehr, Munich, Germany, in PD Dr Joachim J. Bugert's Virology Lab.

Methodological skills: eukaryotic cells and virus cultures; working with synthesised molecules and natural extracts; use of modified viruses (eGFP and Luciferase); antiviral testing against Vaccinia virus, Zika virus, Tick Borne Encephalitis virus (BSL-3) and Dengue type 2 virus (BSL-3) using plaque and viability assays (CellTiter-Glo® Viability Assay, CellTiter96® Aqueous Non-Radioactive Cell Proliferation Assay-MTS), reporter assay (Dual-Glo® Luciferase Assay System), time lapse microscopy and YILED assay; immunofluorescence staining for Chikungunya virus infectivity; autophagy study using Western Blot; DNA extraction using Midi and Mini Qiagen kits; RNA/DNA purification for real-time PCR; protein cloning in *E. coli*.

Materials: Promega kits (i.e. CellTiter-GLO®, CellTiter96®, Dual-Glo®), Victor X5 plate reader, optical and fluorescence microscopy, Zeiss LSM 710 confocal microscope also in combination with ibidi® cell in focus hardware to perform time lapse imaging experiments, real-time PCR and the relative data analysis, restriction enzymes, Image-J and GraphPad PRISM programs.

General skills: SOPs improvement; development of experimental procedures (i.e. to calculate drug IC50/CC50 values); big data amount analysis; communication skills; autonomous work organization; data presentation in meetings and publications.

During the Erasmus+ period the Master Thesis project was developed; the Italian supervisor of the work was Prof. Clementina Elvezia Cocuzza (<https://www.unimib.it/clementina-elvezia-cocuzza>).

26/01/2015 - 31/07/2015
Erasmus+ at Cardiff University, UK, in PD Dr Joachim J. Bugert's medical microbiology lab.

Methodological skills: eukaryotic cells and virus cultures; antiviral tests against Vaccinia virus, Measles virus, Yellow Fever virus (vaccine) and Dengue virus type 2 using plaque inhibition assay and viability assay; protein cloning in *E. coli* BL21 RIL+ using a pGEX-6P1 expression vector; monoclonal antibodies production from Hybridoma cell lines; infected cells immunofluorescence staining.

Materials: Promega kits (i.e. CellTiter-Glo® Viability Assay); Optima FLUOstar plate reader; optical and fluorescence microscopy; PCR; restriction enzymes; GraphPad PRISM, vNTI, Geneious 6, ENA, NCBI, BLAST and Justbio programs.

General skills: team working, communication in a foreign language, writing and following SOPs, work organization, working with GM organism and infected materials.

During this Erasmus period my Bachelor Thesis project was developed; the Italian supervisor of the work was Prof. Barbara Azzimonti (<https://upobook.uniupo.it/barbara.azzimonti@med>).

OTHERS

Biochemistry lab techniques (i.e. chromatography, Bradford assay, ELISA); proteomic course (samples preparation for MALDI-TOFF analysis and Mass Spectrometry data analysis (Mascot) - basic course); nanomedicine laboratory (construction and characterization of nanoparticles such as lipid nanoparticles, liposomes); diagnostic techniques (i.e. 2D electrophoresis gel); microbiology diagnostic techniques (i.e. API test, antibiogram, culture of biological samples as urine and stool samples).

ACADEMIC ROLES

2014 - 2016 Students' representative in the Consiglio di Dipartimento of Health Sciences (DSS) at UPO

2013 - 2016 Biotechnology Degree Course students' representative in the Commissione Paritetica of the School of Medicine at UPO

2013 - 2016 Biotechnology students' representative of the 1st (2013-2014), 2nd (2014-2015) and 3rd (2015-2016) years at UPO

AWARDS AND GRANTS

01/11/2020 - PRESENT PhD fellowship owner in Food, Health and longevity

02/12/2019 - 31/10/2020 fellowship owner on the project "Microbiota and vitamin D involvement in cardiovascular diseases development in HNSCC patients" in Dr Azzimonti's applied microbiology lab; Center for Translational Research on Autoimmune and Allergic Diseases (CAAD, UPO) in Novara, Italy.

05/02/2018 - 30/09/2018 AND 08/10/2018 - 25/01/2019 winner of Erasmus+ for Traineeship fellowship at the Università degli Studi di Milano-Bicocca. Mobility done at the Institut für Mikrobiologie der Bundeswehr, Munich.

26/01/2015 - 31/07/2015 winner of Erasmus Placement fellowship UPO. Mobility done at Cardiff University.

OPEN BADGE

International Student:

<https://best.it/award/show/c1154631266ca6576b447e94abeda0714ae9c932>

Biotechnologie Mediche Master's Degree:

<https://bestr.it/award/show/9a5d9e3582db52468f8a9b0118ce76ec2ad85df2>

COURSES

16/07/2020 Attendance at the UPO Safety Course “Sicurezza e Salute nei Luoghi di Lavoro – Formazione Generale”

16/07/2020 Attendance at the UPO Safety Course “2019/2020 Formazione Specifica in tema di sicurezza nei laboratori chimici e biologici”

20/04/2020 Attendance at the UPO Safety Course “COVID-19: prevenzione e news”

01/05/2015 Attendance at the Cardiff University Safety Induction Course for GMO Workers

PUBLICATIONS

Azzimonti B, Raimondo L, Squarzanti DF, Rosso T, **Zanetta P**, Aluffi Valletti P, Chiusa L, Masini L, Pecorari G, Airoidi M, Krengli M, Giovarelli M, Valente G. Macrophages expressing TREM-1 are involved in the progression of HPV16-related oropharyngeal squamous cell carcinoma. *Ann Med*. 2021 Dec;53(1):541-550. doi: 10.1080/07853890.2021.1905872. PMID: 33769181; PMCID: PMC8008925.

Zanetta P, Squarzanti DF, Sorrentino R, Rolla R, Aluffi Valletti P, Garzaro M, Dell'Era V, Amoruso A, Azzimonti B. Oral microbiota and vitamin D impact on oropharyngeal squamous cell carcinogenesis: a narrative literature review. *Crit Rev Microbiol*. 2021 Mar;47(2):224-239. doi: 10.1080/1040841X.2021.1872487. Epub 2021 Jan 21. PMID: 33476522.

Squarzanti DF, **Zanetta P**, Azzimonti B. Non-Melanoma Skin Cancer and the Cutaneous Microbiota Network. *Bio Med (Aligarh)* 2020 November 23; 12:473. Doi: 10.35248/0974-8369.20.12.473.

Bugert JJ, Hucke F, **Zanetta P**, Bassetto M, Brancale A. Antivirals in medical biodefense. *Virus Genes*. 2020 Apr;56(2):150-167. doi: 10.1007/s11262-020-01737-5. Epub 2020 Feb 19. PMID: 32076918; PMCID: PMC7089181.

McGuigan C, Serpi M, Slusarczyk M, Ferrari V, Pertusati F, Meneghesso S, Derudas M, Farleigh L, **Zanetta P**, Bugert J. Anti-flavivirus Activity of Different Tritylated Pyrimidine and Purine Nucleoside Analogues. *ChemistryOpen*. 2016 Jan 21;5(3):227-35. doi: 10.1002/open.201500216. PMID: 27551659; PMCID: PMC4984408.

CONFERENCES

2-3 JULY 2020 “Food, Health and factors promoting longevity” workshop, Novara (postponed to 2021 due to SARS-CoV-2 pandemic) with the following abstract: “*Role of a blend of probiotic secretoma & vitamin D forms against S. aureus viability: a novel in vitro approach to study skin tumorigenesis*”, DF Squarzanti, **P Zanetta**, N Filigheddu, A Amoruso, F Deidda, A Visciglia, E Zavattaro, L Camillo, P Savoia and B Azzimonti

28-31 OCTOBER 2018 16th Medical Biodefense Conference, Munich with the following abstracts:

GO 03 “*Biological evaluation of novel small-molecule antiviral agents versus tick-borne encephalitis virus*”, **P Zanetta**, F Hucke, D Friese, M Bassetto, A Brancale and JJ Bugert (presenting author) – oral presentation

GO 05 “*Biological evaluation of natural extracts versus poxviruses*”, **P Zanetta** (presenting author), L Baillie, J Blaxland and JJ Bugert – **oral presentation**

GP 02 "*Biological evaluation of antiviral agents versus encephalitis viruses using live cell microscopy*", L Hurler (presenting author), **P Zanetta**, R Narayan, D Friese and JJ Bugert – poster presentation

GP 04 "*Biological evaluation of novel small-molecule antiviral agents versus Chikungunya virus*", F Hucke (presenting author), **P Zanetta**, D Friese, A Helfen, M Bassetto, A Brancale and G Sutter – poster presentation

GP 05 "*Flaviviral NS4A induces autophagy in human epithelial cells*", A Tscherne (presenting author), R Narayan, C Hinz, **P Zanetta**, D Friese, A Helfen and JJ Bugert – poster presentation

I authorize the use of my personal data in compliance with the current Legislative Decree.

MAGGIORA, 20/12/2020

PAOLA ZANETTA