

## Curriculum vitae

Name De Negri Atanasio Giulia

Date of birth 1992

Nationality

e-mail

### Education and training

September 2023-now	Belong to the COST 'CA21139 - 3Rs concepts to improve the quality of biomedical science (IMPROVE)'
March 2022-now	Fellowship at the Department of Earth, Environmental and Life Sciences (DISTAV), University of Genoa Supervisor: Prof. Elena Grasselli
November 2021	Member of the team for the PoC call funded from Compagnia San Paolo 'Validation of engineerEd VaSCULAR bioprosthEses in high performance bioreactor – RESCUE'
March 2021-February 2022	Member of the team for the PoC call funded from MISE and UNIGE 'Validation of engineerEd VaSCULAR bioprosthEses in high performance bioreactor – RESCUE'
13-14 September 2021	Participation to 'cREOgiovani conference' <i>Oral presentation</i> 'Production of emulsion with rotor-stator emulsification and mathematical validation based on experimental data'
25-29 July 2021	Participation to 'the Controlled Release Society (CRS) virtual annual meeting ' <i>Poster presentation</i> 'PLGA-PEG-based nanosystem for a vascular-intended drug delivery'
5-8 July 2021	Participation to '4 <sup>th</sup> BIONECA summer school'
10 June 2021	Ph.D. in Translational Biotechnology at the Department of Experimental Medicine (DIMES) thesis: 'Innovative tools for vascular disease', supervisor: Professor Domenico Palombo.
March 2021-February 2022	Post-hoc fellow at the Department of Civil, Chemical and Environmental Engineering (DICCA)
January 2018-February 2022	Involvement in the Genoa Tissue Bank at the Ospedale Policlinico San Martino, Genova.
November 2020	Participation to seminar 'Produrre nanoemulsioni stabili. Dal laboratorio alla scala industriale' organized from Alfatest strumentazione scientifica.
September 2020	Participation to seminar 'Treatment of cardiovascular disease' organized from the Stem cell Research.
January-July 2020	Research period abroad at the Instituto de Investigação e Inovação da Universidade do Porto (i3S) (Porto, Portugal), supervisor: Professor Bruno Sarmiento.
2019	National congress 'Il contributo dell'Ingegneria Chimica Italiana alla sostenibilità globale' and GRICU summer school. <i>Oral presentation:</i> 'Production and characterization of polymeric nanoparticles for the controlled release of model proteins.'
2018	Summer School 'Comprehensive Summer School on Tissue Engineering from biology to materials and products validation' University of Trento.
2017	Government exam and licensed as a professional industrial pharmacist (Genova, Italy).
2012-2017	Master's degree in pharmacy (LM-13) at the University of Genoa, thesis: 'A release study of gentamicin from bone cement', supervisors: Professor Monica Casale and Professor Laura Pastorino.
2006-2011	High school diploma in scientific studies.

## Publications

- De Negri Atanasio, G.; Ferrari, P.F.; Campardelli, R.; Perego, P.; Palombo, D. 'Poly (Lactic-co-Glycolic Acid) Nanoparticles and Nanoliposomes for Protein Delivery in Targeted Therapy: A Comparative In Vitro Study.' *Polymers* 2020, 12, 2566.
- Ferrari, P.F., Pettinato, M., Casazza, A.A., De Negri Atanasio, G., Palombo, D., Perego, P. 'Polyphenols from Nerone Gold 26/6, a new pigmented rice, via non-conventional extractions: antioxidant properties and biological validation'. *Journal of Chemical Technology and Biotechnology*, 2021.
- De Negri Atanasio, G.; Ferrari, P.F.; Campardelli, R.; Perego, P.; Palombo, D. 'Innovative nanotools for vascular drug delivery: the atherosclerosis case study' (Review Article) *J. Mater. Chem. B*, 2021.
- De Negri Atanasio, G.; Ferrari, P.F.; Campardelli, R.; Firpo, G.; Perego, P.; Palombo, D. Bevacizumab-Controlled Delivery from Polymeric Microparticle Systems as Interesting Tools for Pathologic Angiogenesis Diseases. *Polymers* 2022, 14, 2593.
- De Negri Atanasio G., Ferrari P.F., Baião A., Perego P., Sarmento B., Palombo D., Campardelli R. 'Bevacizumab encapsulation into PLGA nanoparticles functionalized with immunouteroglobin-1 as an innovative delivery system for atherosclerosis' *International Journal of Biological Macromolecules* 2022,
- Allaria, G.; De Negri Atanasio, G.; Filippini, T.; Robino, F.; Dondero, L.; Soggia, F.; Rispo, F.; Tardanico, F.; Ferrando, S.; Aicardi, S.; Demori, I.; Markus, J.; Cortese, K.; Zanotti-Russo, M.; Grasselli, E. Innovative In Vitro Strategy for Assessing Aluminum Bioavailability in Oral Care Cosmetics. *Int. J. Environ. Res. Public Health* 2022, 19, 9362.
- Demori, I.; El Rashed, Z.; De Negri Atanasio, G.; Parodi, A.; Millo, E.; Salis, A.; Costa, A.; Rosa, G.; Zanotti Russo, M.; Salvidio, S.; Cortese, K.; Grasselli, E. First Evidence of Anti-Steatotic Action of Macrotyimpanin A1, an Amphibian Skin Peptide from *Odorana macrotypana*. *Molecules* 2022, 27, 7417.
- Ferrari, P.F.; Trucillo, P.; De Negri Atanasio, G.; Bufalini, C.; Campardelli, R.; Perego, P.; Palombo, D.; Reverchon, E. Operating Parameters Optimization for the Production of Liposomes Loaded with Antibodies Using a Supercritical Fluid-Assisted Process. *Processes* 2023, 11, 663. <https://doi.org/10.3390/pr11030663>
- Grasso F, Méndez-Paz D, Vázquez Sobrado R, Orlandi V, Turrini F, De Negri Atanasio G, Grasselli E, Tiso M, Boggia R. Feasibility of Enzymatic Protein Extraction from a Dehydrated Fish Biomass Obtained from Unsorted Canned Yellowfin Tuna Side Streams: Part I. *Gels*. 2023; 9(9):760. <https://doi.org/10.3390/gels9090760>
- Orlandi, Valentina, et al. "Green Extraction and Preliminary Biological Activity of Hydrolyzed Collagen Peptides (HCPs) Obtained from Whole Undersized Unwanted Catches (*Mugil cephalus* L.)." *Molecules* 28.22 (2023): 7637.
- Campardelli, R., De Negri Atanasio, G., Carotenuto, C., Griffio, R., Ahmed, E. N., Corrales-González, M., ... & Pralits, J. O. (2023). Rotor-Stator Emulsification in the Turbulent Inertial Regime: Experiments toward a Robust Correlation for the Droplet Size. *Langmuir*, 39(50), 18518-18525.
- Rispo, F., De Negri Atanasio, G., Demori, I., Costa, G., Marchese, E., Perera-del-Rosario, S., ... & Grasselli, E. (2024). An extensive review on phenolic compounds and their potential estrogenic properties on skin physiology. *Frontiers in Cell and Developmental Biology*, 11, 1305835.
- Norese, C., Nicosia, E., Cortese, K., Gentili, V., Rizzo, R., Rizzo, S., De Negri Atanasio, G.,... & Izzotti, A. (2024). SARS-CoV-2 presence in recreational seawater and evaluation of intestine permeability: experimental evidence of low impact on public health. *Frontiers in Public Health*, 12, 1326453.

## Posters and oral presentations

*Person who presented orally is underlined*

- Perego P., Ferrari P.F., De Negri Atanasio G., Pane B., and Palombo D. 'From chemical engineering to tissue engineering: functionalization of small-diameter vascular prostheses with bioactive compounds' 8th International Conference 'Biomaterials, Tissue Engineering & Medical Devices' BIOMMEDD 2018, Cluj-Napoca Romanian. (oral presentation)

- De Negri Atanasio G. G. Allaria, L. Dondero, F. Rispo, F. Tardanico, E. Lertora, K. Cortese, S. Ferrando, F. Soggia, J. Markus, S. Letasiova, T. Filippini, F. Robino, M. Zanotti Russo, E. Grasselli. "Repeated exposure to aluminum in a 3D intestinal tissue: physiological evaluation" The Italian Society of Physiology (SIF) 17th Annual Meeting of Young Researchers in Physiology; Catania, Italy, 22-24 May, 2024 (oral presentation)
- De Negri Atanasio G. G. Allaria, L. Dondero, F. Rispo, F. Tardanico, E. Lertora, K. Cortese, S. Ferrando, F. Soggia, J. Markus, S. Letasiova, T. Filippini, F. Robino, M. Zanotti Russo, E. Grasselli. "Evaluation of physiological repeated exposure of aluminum in a 3D intestinal tissue" 22st International Congress of the European Society of Toxicology In Vitro (ESTIV 2024). Prague, Czech republic, 3-6 June 2024 (oral presentation)

### Thesis co-advisor

- Veronica De Mattei 'Studio e modellazione matematica di protesi vascolari biodegradabili ed ingegnerizzate di piccolo calibro in bioreattore' 2019 bachelor's degree in chemical engineering, University of Genoa (2018-2019).
- Alessio Del Lungo 'Produzione di emulsioni con emulsionatore rotore/statore, validazione di modelli matematici sulla base di dati sperimentali' bachelor's degree in chemical engineering, University of Genoa (2021).
- Lucrezia Lodi 'Studio di fattibilità di sistemi microparticellari polimerici per il rilascio controllato di Bevacizumab' bachelor's degree in chemical engineering, University of Genoa (2021).
- Maia Clericuzio 'La tomatidina: un composto di origine naturale con elevate potenzialità in campo farmaceutico' bachelor's degree in chemical engineering, University of Genoa (2021).
- Viola Prando 'Studio dell'effetto del tipo e della concentrazione dei tensioattivi per la produzione e stabilizzazione di emulsioni a base di isopropilmiristato' bachelor's degree in chemical engineering, University of Genoa (2021).
- Veronica De Mattei 'Vascular prostheses production and engineering by electrospun polymeric materials' Master's Degree thesis degree in chemical engineering, University of Genoa (2021).
- Erica Lertora 'Valutazione del potere rimarginante di molecole bioattive estratte dai sottoprodotti della pesca in modelli cellulari bidimensionali e analisi tramite intelligenza artificiale' Master's Degree thesis degree in Biology, University of Genoa (2023)
- Erica Trebiani 'Produzione e caratterizzazione di nanocarriers liposomiali per l'incapsulamento di quercetina' Master's Degree thesis degree in Biology, University of Genoa (2024)

### Awards

- Best Oral Presentation at European Congress of Marine Biotechnology, Malaga, Spain 21-24 November 2023
- Best Oral presentation at 22st International Congress of the European Society of Toxicology In Vitro (ESTIV 2024). Prague, Czech republic, 3-6 June 2024

### Other Activities

- Chairman at The Italian Society of Physiology (SIF) 17th Annual Meeting of Young Researchers in Physiology; Catania, Italy, 22-24 May, 2024

### Languages

- English first certificate (2016) (B2)
- Portuguese (A1)

- Ferrari P.F., De Negri Atanasio G., Pralits J.O., Perego P. and Palombo D. 'Study of engineered vascular bioprotheses in bioreactor' al 68<sup>th</sup> congress internazionale organized from European Society of Cardiovascular Surgery (ESCVS) 2018 (oral presentation).
- Ferrari P.F., De Negri Atanasio G., Pralits O.J., Perego P. and Palombo D. 'Biodegradable engineered small-diameter vascular scaffold: a study in bioreactor' ESVB 2019 Strasbourg, France. (oral presentation)
- De Negri Atanasio G., Ferrari P.F., Campardelli R., Palombo D. and Perego P. 'Production and characterization of polymeric nanoparticles for the controlled release of model proteins' National congress 'Il contributo dell'Ingegneria Chimica Italiana alla sostenibilit  globale' Palermo, Mondello 3-6 July 2019 (oral presentation).
- De Negri Atanasio G., Ferrari P.F., Pane B., Pralits O.J. Palombo D., and Perego P. 'Study of vascular prosthesis in bioreactor' National congress 'Il contributo dell'Ingegneria Chimica Italiana alla sostenibilit  globale' Palermo, Mondello 3-6 July 2019 (poster presentation).
- De Negri Atanasio G., Ferrari P.F.; Sarmento B., Perego P., Palombo D., Campardelli R. 'PLGA-PEG-based nanosystem for a vascular-intended drug delivery' The Controlled Release Society (CRS) virtual annual meeting 2021 (poster presentation).
- De Negri Atanasio G., Pralits O.J., Campardelli R. 'Production of emulsion with rotor-stator emulsification and mathematical validation based on experimental data' 'cREOgiovani conference' 2021 (oral presentation).
- Allaria G., Tardanico F, De Negri Atanasio G, Dondero L, Rispo F, Filippini T, Robino F, Soggia F, Ferrando S, Aicardi S, Demori I, Markus J, Cortese K, Cagliani M C, Zanotti-Russo M, Grasselli E; Innovative in vitro strategy for assessing aluminum bioavailability in oral care products. XVI International Congress of Toxicology (ICT 2022) UNITING IN TOXICOLOGY. Maastricht (NL), 18-21 Settembre 2022(poster presentation).
- Orlandi V, Dondero L, Grasso F, Tiso M, De Negri Atanasio G, Rispo F, Tardanico F, Allaria G, Turrini F, Grasselli E, Boggia R;The fish product as an aexample of renewable resource: exploitation and valorization of mullet (*Mugil cephalus*) skin. First Symposium for Young Chemists: Innovation and Sustainability, Rome 20-23 June 2022 (poster presentation).
- Allaria G, Tardanico F, De Negri Atanasio G, Dondero L, Rispo F, Filippini T, Robino F, Soggia F, Ferrando S, Aicardi S, Demori I, Markus J, Cortese K, Cagliani M C, Zanotti-Russo M, Grasselli E;Assessing aluminum bioavailability in oral care products by an in vitro double step approach. International Symposium of the federation of European societies on trace elements and minerals. FESTEM 2022, Madrid, 28 Settembre – 1 Ottobre 2022(poster presentation).
- Grasselli E, Allaria G, Dondero L, De negri Atanasio G, Galliani G, Cortese K, Rispo F, Tardanico F, Filippini T, Robino F, Soggia F, Ferrando S, Aicardi S, Demori I, Markus J, Zanotti-Russo M; In vitro investigation of aluminum bioavailability after exposure of oral care products. (2022). 21st International Congress of the European Society of Toxicology In Vitro (ESTIV 2022). Barcelona-Sltges, Spain, 21-25 November 2022 (oral presentation)
- Zanotti-Russo M, Allaria G, Dondero L, De Negri Atanasio G, Rispo F, Tardanico F, Robino F, Perata E, Bruzzone F, Grasselli E; The study on EDs and the application of the NGRA according to the guidelines SCCS NoG XI Ed: two overlapping challenges; (2022). 21st International Congress of the European Society of Toxicology In Vitro (ESTIV 2022). Barcelona-Sltges, Spain, 21-25 November 2022 (poster presentation).
- De Negri Atanasio G, Robino F, Dondero L, Perata E, Rispo F, Allaria G, Tardanico F, Bruzzone F, Zanotti-Russo M, Grasselli E; ToxTool: an innovative database for the regulatory affair. (2022). 21st International Congress of the European Society of Toxicology In Vitro (ESTIV 2022). Barcelona-Sltges, Spain, 21-25 November 2022 (poster presentation).
- Dondero L, De Negri Atanasio G, Rispo F, Allaria G, Tradanico F, Turrini F, Grasso F, Orlandi V, Boggia R, Grasselli E; Evaluation of extracted collagen from food waste as an active ingredient for cosmetic application. (2022); 21st International Congress of the European Society of Toxicology In Vitro (ESTIV 2022). Barcelona-Sltges, Spain, 21-25 November 2022(poster presentation).
- Rispo F, Dondero L, De Negri Atanasio G, Allaria G, Tardanico F, Rosatto S, Bellisomi M, Palumbi G, Tomesani I, Iervasi E, Izzotti A, Nicosia E, Grasselli E; Estrogenic activity related to the presence os SARS-CoV-2 in wastewater. (2022). 21st International Congress of the European Society of Toxicology In Vitro (ESTIV 2022). Barcelona-Sltges, Spain, 21-25 November 2022(poster presentation).
- De Negri Atanasio G., Allaria G., Dondero L., Rispo F., Tardanico F., Perata E., Zanotti-Russo M., Grasselli E., Casazza A.A. 'Benzophenone-3: remediation with microalgae and the following investigation of endocrine disruptor potential' European Congress of Marine Biotechnology Malaga, Spain, 21-24 November 2023 (oral presentation)

## Skills and competences

### Informatic skills

- Good command of Microsoft office software.
- Good command of program for digital images elaboration (ImageJ).
- Good command of statistic software (Origin, Statistica, Prism).

### Laboratory skills

- Production of polymeric nanoparticles by different techniques (i.e., double emulsion, nanoprecipitation and microfluidic).
- Production of liposome by the hydration of lipidic film.
- Production of single emulsion O/W and W/O by different techniques (i.e., use the rotor/stator emulsification and microfluidic).
- Production of alginate microparticle.
- Deposition of polymeric shell on surface nanoparticles.
- Superficial carrier functionalization for targeted drug therapy.
- Extraction techniques: solid liquid extraction (SLE), ultrasound-assisted extraction (UAE), high pressure and temperature extraction (HPTE).
- Assay for the extract validation (DPPH, ABTS, and Folin-Ciocalteu)
- Morphology characterization tests (SEM, TEM, and DLS).
- Analytical chemistry (FTIR, CD, and UV).
- Study of antimicrobial activity.
- Hemocompatibility studies.
- Cell viability tests (MTS and LDH).
- Biochemical analyses (zymography, protein analysis; western blot, ELISA).
- Cellular uptake studies.
- Production of vascular polymeric prostheses by electrospinning.
- Mechanical characterization of biomaterials.
- Studies in bioreactor to test the polymeric prostheses behaviour under different regimes of pressure (systolic and diastolic).
- Detection of lipid peroxidation (TBARS).
- CALUX

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Genova, 15/07/2024

Giulia de Negri Atanasio

