

CURRICULUM VITAE

Giulia Vanti is a PhD student at the University of Florence since November 2017. She obtained the High School Diploma in Scientific Studies at “Liceo Statale C. Lorenzini”, Pescia (PT) in 2010. She enrolled at the degree course in Pharmacy, University of Florence, in 2011. She started the experimental thesis in 2016 in the research group of prof. Anna Rita Bilia and she graduated in Pharmacy with the highest marks (cum laude) in April 2017. She got the Doctor’s degree in Pharmacy in July 2017. After a short period of post-graduate training, in October 2017 she won a Research Scholarship at the Department of Chemistry, University of Florence, for the project: “*Formulazione di nuovi veicoli vescicolari per la somministrazione di sostanze naturali*”. In the meantime she won the doctorate competition and she turned down the scholarship in order to start the doctorate in “Drug Research and Innovative Treatments”, curriculum of “Pharmaceutical Sciences”, XXXIII class at the Department of Chemistry, University of Florence, under the leadership of prof. Anna Rita Bilia and prof. Maria Camilla Bergonzi. Since then, she attended to several congresses with oral communications and posters. Currently, she has seven scientific publications. Since 2017 she is member of SIF (Società Italiana di Fitochimica), and she got a scholarship from SIF in 2018. Since 2018 she is member of A.It.U.N. (AAPS Italian University Network); since 2019 she is member of ADRITELF (Associazione Docenti e Ricercatori Italiani di Tecnologie e Legislazione Farmaceutiche) and GA (Society for Medicinal Plants and Natural Product Research). She is also member of SCI (Società Chimica Italiana-Divisione di Tecnologia Farmaceutica) and CRS (Controlled Release Society) Italy Chapter since 2020. Today she works in the research group of prof. Anna Rita Bilia, where she is mainly involved in the project: “*Design and optimization of drug delivery systems based on natural products for dermal and mucosal applications*”.

Personal Data:

- Name: GIULIA VANTI
- Date and place of birth: 5th March 1991; Pescia (PT), Italy
- Nationality: Italian
- Work address: Via Ugo Schiff 6, 50019 Sesto Fiorentino (Florence), Italy. Department of Chemistry “Ugo Schiff”, University of Florence.
- Email: giulia.vanti@unifi.it

Education:

- 1st November 2017 - present: PhD student in “Drug Research and Innovative Treatments” – Curriculum: “Pharmaceutical sciences”, XXXIII class – Department of Chemistry “Ugo Schiff”, University of Florence.
Project: “*Design and optimization of drug delivery systems based on natural products for dermal and mucosal applications*”.
Supervisors: Prof. Anna Rita Bilia, Prof. Maria Camilla Bergonzi.
- October 2017: Research scholarship at Department of Chemistry “Ugo Schiff”, University of Florence.
Project: “*Formulazione di nuovi veicoli vescicolari per la somministrazione di sostanze naturali*”.
Supervisor: Prof. Anna Rita Bilia.
- May - September 2017: Post-graduate advanced training at Department of Chemistry “Ugo Schiff”, University of Florence.

Supervisor: Prof. Anna Rita Bilia.

- 21st July 2017: Doctor's degree in Pharmacy – University of Florence.
- 21st April 2017: Master's Degree in Pharmacy – University of Florence – 110/110 cum laude. Thesis: “*Nanocarrier vescicolari per la somministrazione topica di berberina cloridrato*”. Supervisors: Prof. Anna Rita Bilia, Prof. Maria Camilla Bergonzi.
- July 2010: High School Diploma in Scientific Studies – Liceo Statale C. Lorenzini, Pescia (PT).

Scientific publications:

Review:

Bilia, A. R., Piazzini, V., Asprea, M., Risaliti, L., Vanti, G., & Bergonzi, M. C. (2018). Plants extracts loaded in nanocarriers: An emergent formulating approach. *Natural Product Communications*, 13(9), doi: 10.1177/1934578X1801300914.

Casamonti, M., Risaliti, L., Vanti, G., Piazzini, V., Bergonzi, M. C., & Bilia, A. R. (2019). Andrographolide loaded in micro-and Nano-formulations: improved bioavailability, target-tissue distribution, and efficacy of the “king of bitters”. *Engineering*, 5(1), 69-75.

Bilia, A. R., Piazzini, V., Risaliti, L., Vanti, G., Casamonti, M., Wang, M., & Bergonzi, M. C. (2019). Nanocarriers: a successful tool to increase solubility, stability and optimise bioefficacy of natural constituents. *Current Medicinal Chemistry*, 26(24), 4631-4656, doi:10.2174/0929867325666181101110050

Research article:

Vanti G, Bani D, Salvatici MC, Bergonzi MC, Bilia AR. Development and Percutaneous Permeation Study of Escinosomes, Escin-Based Nanovesicles Loaded with Berberine Chloride. *Pharmaceutics*. 2019;11(12):682. Published 2019 Dec 15. doi:10.3390/pharmaceutics11120682

Vanti G, Ntallis SG, Panagiotidis CA, et al. Glycerosome of *Melissa officinalis* L. Essential Oil for Effective Anti-HSV Type 1. *Molecules*. 2020;25(14):3111. Published 2020 Jul 8. doi:10.3390/molecules25143111

Cecchi L, Piazzini V, D'Ambrosio M, Luceri C, Rocco F, Innocenti M, Vanti G, Mulinacci N, Bergonzi MC. Formulation of a Phenol-Rich Extract from Unripe Olives (*Olea europaea* L.) in Microemulsion to Improve Its Solubility and Intestinal Permeability. *Molecules*. 2020;25(14):3198. Published 2020 Jul 13. doi:10.3390/molecules25143198

Vanti G, Wang M, Bergonzi MC, Zhidong L, Bilia AR. Hydroxypropyl methylcellulose hydrogel of berberine chloride-loaded escinosomes: Dermal absorption and biocompatibility [published online ahead of print, 2020 Jul 16]. *Int J Biol Macromol*. 2020;164:232-241. doi:10.1016/j.ijbiomac.2020.07.129

Conference paper:

Oral communication:

- *19th Advanced School in Pharmaceutical Technology “Characterization of colloidal nanocarriers” | 9th-12th September 2019 | Soverato, Catanzaro.*
“Melissa officinalis L. essential oil loaded glycosomes: preparation and in vitro activity evaluation against Herpes labialis (HSV-1)”.
Giulia Vanti, Virginia Dourdouni, Diamanto Lazari, Christos Panagiotidis, Christina Patsoura, Vieri Piazzini, Laura Risaliti, Maria Camilla Bergonzi, Anna Rita Bilia.
- *Young Researchers’ Workshop (YRW) 2019 of 67th International Congress and Annual Meeting of the Society for Medicinal Plant and Natural Product Research (GA) | 1st-5th September 2019 | Innsbruck.*
“Melissa officinalis L. essential oil loaded glycosomes: preparation and in vitro activity evaluation against Herpes labialis (HSV-1)”.
Giulia Vanti, Virginia Dourdouni, Diamanto Lazari, Christos Panagiotidis, Sotirios G. Ntallis^b, Stavroula Litsiou, Christina Patsoura, Vieri Piazzini, Laura Risaliti, Maria Camilla Bergonzi, Anna Rita Bilia.
- *XVI Congress of the Italian Society of Phytochemistry jointly with 2nd International Congress on Edible, Medicinal and Aromatic Plants (ICEMAP 2019) | 19th-21th June 2019 | Alghero.*
“Melissa officinalis essential oil-loading glycosomes for the topical appliance against herpes labialis (HSV-1)”.
Giulia Vanti, Virginia Dourdouni, Diamanto Lazari, Christos Panagiotidis, Vieri Piazzini, Laura Risaliti, Maria Camilla Bergonzi, Anna Rita Bilia.
- *18th School for Doctorate in Pharmaceutical Technology. “Innovation in Local Drug Delivery” – 25th-27th September 2018 | ADRITELF, Como.*
“Escin-based nanovesicles to improve berberine topical delivery”.
Giulia Vanti, Daniele Bani, Vieri Piazzini, Laura Risaliti, Maria Camilla Bergonzi, Anna Rita Bilia.
- *Società Italiana di Fitochimica e delle scienze delle piante medicinali, alimentari e da profumo - Scuola “Paolo Ceccherelli”: “Filiera corta in campo erboristico e medicinale: sviluppo tecnologico e programmazione comunitaria” – 7th June to 9th June 2018 | Albenga.*
“Escin-based nanovesicles to improve berberine topical delivery”;
Giulia Vanti, Daniele Bani, Vieri Piazzini, Laura Risaliti, Maria Camilla Bergonzi, Anna Rita Bilia.
- *12th A.It.U.N. Annual Meeting - “Medicines for older people: advances in drug delivery” – 10th – 11th May 2018 | Bologna.*
“Escin-based nanovesicles to improve berberine topical delivery”.
Giulia Vanti, Daniele Bani, Vieri Piazzini, Laura Risaliti, Maria Camilla Bergonzi, Anna Rita Bilia.

Poster:

- *67th International Congress and Annual Meeting of the Society for Medicinal Plant and Natural Product Research* | 1st-5th September 2019 | Innsbruck.
“Development and percutaneous permeation study of escin-based nanovesicles loaded with berberine chloride”.
Giulia Vanti, Daniele Bani, Meng Wang, Zhidong Liu, Vieri Piazzini, Laura Risaliti, Maria Camilla Bergonzi, Anna Rita Bilia.
- *XIII A.It.U.N. Meeting: “New challenges in self- assembling drug delivery systems”* | 13rd-14th June 2019 | Camerino.
“Melissa officinalis essential oil-loading glycosomes for the topical appliance against herpes labialis (HSV-1)”.
Giulia Vanti, Virginia Dourdouni, Christina Patsoura, Diamanto Lazari, Christos Panagiotidis, Sotirios G. Ntallis, Stavroula Litsiou, Vieri Piazzini, Laura Risaliti, Maria Camilla Bergonzi, Anna Rita Bilia
- *3rd European Congress on Pharmaceutics - Bringing science into pharmaceutical practice* | 25th-26th March 2019 | Bologna.
“Escin-based nanovesicles for berberine chloride dermal delivery”.
Giulia Vanti, Daniele Bani, Vieri Piazzini, Maria Camilla Bergonzi, Laura Risaliti, Anna Rita Bilia.
- *12th A.It.U.N. Annual Meeting - “Medicines for older people: advances in drug delivery”* – 10th – 11th May 2018 | Bologna.
“Development of solid lipid nanoparticles and chitosan-coated solid lipid nanoparticles for silibinin delivery: formulation and in vitro studies”.
Vieri Piazzini, Elisabetta Bigagli, Lorenzo Cinci, Mario D’Ambrosio, Cristina Luceri, Giulia Vanti, Laura Risaliti, Anna Rita Bilia, Maria Camilla Bergonzi.
- *VI SYRP: S.I.Fit. Young Researchers Project* – 20th November 2017 | San Marino.
“Nanocarrier improve topical delivery of natural compounds: the case of Berberine Chloride and essential oils of Artemisia annua, Salvia triloba and Rosmarinus officinalis”.
Giulia Vanti, Vieri Piazzini, Laura Risaliti, Maria Camilla Bergonzi, Anna Rita Bilia.

Other activities and awards:

- 2017-2019: Member of *Società Italiana di Fitochimica (SIF)*
- 2018-2019: Member of *AAPS Italian University Network (A.It.U.N.)*
- 2019-2020: Member of *Associazione Docenti e Ricercatori Italiani di Tecnologie e Legislazione Farmaceutiche (ADRITELF)*
- 2019-2020: Member of *Society for Medicinal Plants and Natural Product Research (GA)*
- 2020: Member of *Società Chimica Italiana (SCI) – Divisione di Tecnologia Farmaceutica*
- 2020: Member of *Controlled Release Society (CRS) Italy chapter*
- ❖ 2018: winner of a scholarship from *Società Italiana di Fitochimica (SIF)*