

## **Oriana Tabarrini**

**April 2017**, National Scientific Habilitation as Full Professor;

**2002-present**, Associate Professor of Pharmaceutical Chemistry at the Department of Pharmaceutical Sciences of the University of Perugia (Italy) where she has been teacher of various courses; at the moment, Medicinal Chemistry I and Drug analyses, Master degree in Pharmaceutical Chemistry and Technology and Pharmacy, respectively;

**1994-2002**, research assistant;

**1987-1994**, post-graduate researcher with research grants from Pharmaceutical Industries;

**1986**, Degree in Pharmaceutical Chemistry and Technology, summa cum laude, (University of Perugia);

The scientific activity, documented in 105 publications in international journals with high impact factors (of which some invited reviews) and three patents, has been principally focused on the design and synthesis of small molecules as pharmacological tools and potential chemotherapeutic agents. She has a longstanding experience in the design and synthesis of heterocyclic compounds, mainly quinolone derivatives, initially as antibacterials and more recently as antivirals. The HIV represents her principle research interest but important results have been recently achieved also in the anti-cytomegalovirus and anti-influenza fields with the identification of compounds object of patent application, as well as derivatives as hepatitis C virus NS5B polymerase inhibitors. Other fields of interest are heterocyclic compounds active as pump efflux inhibitors, antitubercular, compounds active in Huntington disease, and PARPs inhibitors.

### **Publications: bibliographical data at 24/07/2019** (scopus)

105 publications (of which 32 on *JMedChem*)

Total number of citations: **2110**

H-index: **26**

### **Highlights**

The Article: Massari, S.; et al. A 1,8-Naphthyridone Derivative Targets the HIV-1 Tat-Mediated Transcription and Potently Inhibits the HIV-1 Replication. *J. Med. Chem.* **2010**, *53*, 641-64” was mentioned on Science-business eXchange (BioCentury-Nature), 7.01.2010, vol3/number 1 (page 13).

The Article: Tabarrini, O.; et al "Studies on anti-HIV transcription inhibitor quinolones: Identification of potent N1-vinyl derivatives” *ChemMedChem* **2010**, *5*, 1880-1892 merited the cover picture of the journal.

The Article: Tabarrini, O.; et al " Structural investigation of the naphthyridone scaffold: identification of a 1,6-naphthyridone derivative with potent and selective anti-HIV activity. *ChemMedChem*. **2011**, *6*,1249-57, was mentioned in the cover picture of the journal.

The Article: Corona A.; et al. "Studies on Cycloheptathiophene-3-carboxamide Derivatives as Allosteric HIV-1 Ribonuclease H Inhibitors. *ChemMedChem*. **2016** Mar 16. doi: 10.1002/cmdc.201600015 merited the cover picture of the journal.

The Article: Felicetti T, et al. Searching for Novel Inhibitors of the *S. aureus* NorA Efflux Pump: Synthesis and Biological Evaluation of the 3-Phenyl-1,4-benzothiazine Analogues. *ChemMedChem*. **2017**, *12*, 1293-130. merited the cover picture of the journal.

### Patents

- Loregian A, Palù G, Muratore G, Cruciani G, Tabarrini O. New inhibitors of influenza A and B viruses acting by disrupting PA and PB1 subunit interactions of heterotrimeric viral RNA polymerase. WO2013123974-A1, Aug, 29, **2013**.
- Loregian, A., Palù, G., Mercorelli, B., **Tabarrini, O.**, Cecchetti, V. Compositions and methods for the treatment of the pathological condition(s) associated to cytomegalovirus infection" US provisional Application No 61/374.320 filing date Aug, 17. **2010**
- V. Cecchetti, A. Fravolini, **O. Tabarrini**, P. Terni, T. Xin. Derivati Chinolonici non Fluorurati e Loro Impiego come Agenti Antibatterici. Brev. Italiano MI95A001593. **1996**
- V. Cecchetti, A. Fravolini, P. Terni, P.G. Pagella, **O. Tabarrini**. 6-Aminoquinolones, their Synthesis and their Use as Antibacterial Agents. Eur. Pat. Appl. EP 531,958; *Chem. Abstr.* *119*, **1993**, 139267.

### Grants (PI or participant):

- Fondazione Cassa Risparmio Perugia, Scientific and Technology Research **2015** : "Sviluppo di farmaci anti-influenzali che interferiscono con il corretto assemblaggio delle subunità polimerasiche". cod. 2015.0342.021. Starting date 3 June 2015. Duration: 12 months (PI)
- Italian Program for AIDS research **2009-2010**: "Targeting HIV transcription to control infection and to purge post-integrative latency". AIDS 2009 Codice progetto UPR-2009-1301355. Starting date December 2010. Duration: 24 months (PI)
- **CINMPIS 2013** (Interuniversity Consortium) – post-doc fellowship for a project "Design and Synthesis of Se and S derivative for the treatment of HIV infection". Starting date March 2013. Duration: 12 months. (scientific coordinators C. Santi and O. Tabarrini)
- **CINMPIS 2014** (Interuniversity Consortium) – post-doc fellowship for a project "Design and Synthesis of Se and S derivative for the treatment of HIV infection". Starting date May 2014. Duration: 3 months. (scientific coordinators C. Santi and O. Tabarrini)
- **2014**. Alexander von Humboldt Foundation. "Targeting HIV-1 Trans-activation responsive RNA by halogenated molecules". Duration: 24 months
- Bando a tema ricerca di base **2010**: "Sviluppo di nuovi farmaci basati sul metabolismo del triptofano per il trattamento della sclerosi multipla". FCR Codice progetto 2010.011.0408. Starting date March 2011. Duration: 18 months (PI)
- **PRIN 2010-11**. "Bloccare la replicazione di HIV-1 attraverso un approccio rivolto verso diversi bersagli molecolari" Starting date February 2013. Duration 36 month.

- **2009.** Italian Ministry of Health and ISS, “Come contrastare la pandemia influenzale: individuazione di nuovi farmaci efficaci”. Starting date: November 2009. Duration: 18 months.
- **PRIN 2008** - cod. 2008CE75SA\_002 - “Progettazione, sintesi e attività biologica di agenti anti-HIV che interagiscono con target virali e cellulari innovativi (IN, HAT, Tat/TAR, CDK9, RNasi H, dimerizzazione dell’RT, DDX3, CXCR4 e CCR5)”, Starting date: March 2010. Duration: 24 mesi
- **PRIN 2006** - cod. 2006030809 - : “Sviluppo di derivati chinolonici e di altri eterocicli azotati come agenti anti-HIV: progettazione, sintesi, studio delle interazioni con nuovi target (IN, RNasi H, Tat/TAR) e modulazioni della farmaco-resistenza (NNRTI)”. Duration: 24 mesi,
- **PRIN 2004**” Optimization of anti-HIV quinolone derivatives as inhibitors of Tat-driven transactivation”, 2004037792\_006. Duration 24 months.
- **PRIN 2002** COFIN 2000 - PRIN 2002 - "Ottimizzazione strutturale di chinoloni anti-HIV" - Prot. 2002038878\_004. Duration: 24 months.
- **COFIN 2000** - "Progettazione, sintesi e valutazione biologica di nuovi agenti anti-AIDS" - Prot. MM03262952\_005. Duration: 24 months.
- **COFIN 1999** – “New agents for the therapy of AIDS and related diseases: design, synthesis and biological assays”-Prot 9903265257\_006
- **COFIN 1997**- “Progettazione, sintesi e valutazione biologica di nuovi farmaci” prot 9703028183\_003-Duration 24 months

### Oral presentations

**2018:** “Cycloheptathiophene-3-carboxamide as useful scaffold for inhibiting essential targets within the influenza virus and HIV-1 replicative cycles. November, 9, 2018. Trinity College of Dublin (Ireland).

**2018:** “Cycloheptathiophene-3-carboxamide as useful sulfur-containing scaffold for inhibiting essential targets of HIV-1 and influenza virus” VII Encontro sobre Enxofre, Selenio e Telurio and 7<sup>th</sup> Workshop of SeS Redox and catalysis, September 2-6, 2018, Santa Maria (Brasil). ML.

**2014:** “Exploiting the Anti-HIV 6-Desfluoroquinolones to Design Multiple Ligands”. V EWDSy: European Workshop in Drug Synthesis. Maggio 18-23, 2014, Siena, Italy.

**2013:**“Targeting CDKs to inhibit the HIV-1 Tat-mediated transcription” S28, XXII National Meeting on Medicinal Chemistry. September 10-13, 2013, Roma – Italy.

**2011:** “HIV-1 Tat-mediated transcription as attractive intervention site for small molecules. German Research School for Simulation Sciences GmbH, JÜLICH (GERMANY), October, 17-19, 2011.

**2010:** “HIV-1 Transcription Inhibitors for an Innovative Chemotherapeutic Intervention. XX National Meeting on Medicinal Chemistry”. Padova, Italy, September 12-16, 2010, ML-13.

**2007:**“Quinolones as Tat-mediated transcription inhibitors. Institut Cochin, Paris, April 2007

**2007:** “New anti-HIV agents”. International Centre for Genetic Engineering and Biotechnology (ICGEB), Trieste, Italy, March, 2007.

### Editor activities

**2016:** Editor of the special issue entitled "Acting on Tat-mediated transcription to achieve a long term control of HIV-1 latency". Current Pharmaceutical Design", Volume 23, Issue 28, 2017 DOI : 10.2174/138161282328171102111432

**2016:** Editor of "Archives of Natural and Medicinal Chemistry"  
[https://gavinpublishers.com/journals/board\\_members/archives-of-natural-and-medicinal-chemistry.html](https://gavinpublishers.com/journals/board_members/archives-of-natural-and-medicinal-chemistry.html)

**2016:** Editor of the "Open medicinal chemistry Journal"\_\_ISSN: 1874-1045 .  
<https://www.benthamopen.com/TOMCJ/editorial-board>

### Referee activities.

She is a **referee** for scientific publications: Journal of Medicinal Chemistry, Bioorganic and Medicinal Chemistry, Bioorganic and Medicinal Chemistry Letters, Current Medicinal Chemistry, European Journal of Medicinal Chemistry, ChemMedChem, Amino Acids, ChemPharmBull, Future Medicinal Chemistry, Chemical Biology and Drug Design, Antiviral Research, Future Medicine, Chemistry Open, Biology, Molecules, Letters of Organic Chemistry, Oncotarget.

### Congresses organizer committees

**2019:** WSeS-8, VIII workshop of the network of multidisciplinary research "SeS Redox and Catalysis" Perugia, May 30-June 1<sup>st</sup> 2019.

**2016:** XXIV National Meeting in Medicinal Chemistry and the 10th Young Medicinal Chemists Symposium "Nuove Prospettive in Chimica Farmaceutica", Perugia, September 2016.

**2015:** IV workshop of the network of multidisciplinary research "SeS Redox and Catalysis" Perugia, 20 and 21 April 2015.

**2014.** III workshop of the network of multidisciplinary research "SeS Redox and Catalysis" Perugia, September, 15-17, 2014.

**2011:** XXX TUMA, Perugia, Italy, June 30-July 1, 2011 (Organizer and Scientific Committee)

### Institutional engagements

#### Main

- **2019:** member of the board of "Pharmaceutical Sciences" Department , University of Perugia
- **2018-present:** Referent tutor of RTD-B (D.ssa Massari Serena).
- **2017-present:** Coordinator of the Master Degree in Pharmaceutical Chemistry and Technology (University of Perugia);
- **2015-present:** Local Coordinator of Paul Ehrlich European Medicinal Chemistry Ph.D. Network.
- **2015-2018:** Referent tutor of RTD-A (D.ssa Massari Serena).

- **2015-2017:** Member (Area 03 of the University of Perugia) of CLA activities (University Language Centre).
- **2015-2016:** Delegate of the Department of Pharmaceutical Sciences for Orientation.
- **2009-2016:** Delegate of the Department of Pharmaceutical Sciences (ex Faculty of Pharmacy ) and for special needs and differently-able students.
- **2014-present:** Teaching staff member of the PhD program in “Pharmaceutical Sciences”, University of Perugia.
- **2009-present:** Member of the Panel for the evaluation of Erasmus and Erasmus Placement fellowships Dept. Pharmaceutical Sciences (ex Faculty of Pharmacy), University of Perugia.

### Others

- **2014-2016:** member of the board of “Pharmaceutical Sciences” Department , University of Perugia
- **2009-2015:** Delegate of the Department of Pharmaceutical Sciences (ex Faculty of Pharmacy) for CLA activities.
- **2014-present:** Teaching staff member of the PhD program in “Pharmaceutical Sciences”, University of Perugia.
- **2011-2016:** Member of the Steering Committee of the Master Degree course in CTF.
- **2011-2016:** Coordinator of the teaching activities of the International PhD course in Chemistry and Technology of Drugs and “Pharmaceutical Sciences”(University of Perugia)
- **2011-2016.** Coordinator of the teaching activities and of the Evaluation Committee of the annual reports of PhD students attending the PhD program in “Pharmaceutical Sciences”(University of Perugia)
- **2011-present:** Member of the committee for the allocation of part-time students.
- **2010, 2012, 2018, 2019:** External member of the Examining Board for PhD defense in Pharmaceutical Sciences, Siena (Italy) (2010 and 2012), Padova (Italy) (2018), and Ghent (Belgium) 2019.
- **2007-2012** Advisor of the Committee SCI, section Umbria.
- **2002-2014:** Teaching staff member of the PhD program in “Chemistry and Technology of Drugs at International (Perugia, Vienna e Granada ) and National profiles”, University of Perugia.

### Current Scientific Collaborations

*Christophe Pannecouque, Johan Neyts, and Dirk Daelemans, Rega Institute for Medical Research, Leuven (Belgium).*

*Paolo Carloni, German Research School for Simulation Sciences Jülich, (German).*

*Gabriele Varani, Department of Chemistry, University of Washington, Seattle, WA.*

*Alessandro Marcello, ICGBE , Trieste (Italy).*

*Barbara Gatto, Dipartimento di Scienze Farmaceutiche, Università of Padova, (Padova)*

*Enzo Tramontano and Elias Maccioni, Dipartimento di Scienze Applicate ai Biosistemi, Cittadella Universitaria S.P. Monserrato (CA).*

*Stuart Le Grice, Head Center of Excellence in HIV/AIDS & Cancer Virology, NCI, U.S.A.*

*Arianna Loregian, Department of Molecular Medicine, University of Padova*

*Gabriele Cruciani and Laura Goracci, Department of Chemistry, Biology, and Biotechnology, University of Perugia;*

*Lari Lehtiö, Biocenter Oulu, Faculty of Biochemistry and Molecular Medicine University of Oulu (Finland)*

*Scott G. Franzblau*, Institute for Tuberculosis Research, College of Pharmacy, University of Illinois at Chicago, 833 S. Wood St., Chicago, IL 60612, USA

*Jose Brea*, BioFarma Research Group, Centro Singular de Investigación en Medicina Molecular y Enfermedades Crónicas (CIMUS), Universidade de Santiago de Compostela, Santiago de Compostela (Spain)

*Gregory M Cook*, Department of Microbiology, University of Otago, NEW ZEALAND

*Sybille Krauss*, German Center for Neurodegenerative Diseases (DZNE), Bonn (Germany).

*Hadian K*, Assay Development and Screening Platform, Institute of Molecular Toxicology and Pharmacology, Helmholtz Zentrum München für Gesundheit und Umwelt, Neuherberg, Germany.

*Katarzyna Kiec-Kononowicz*, Department of Technology and Biotechnology of Drugs, Jagiellonian University, Krakow (Poland)

*Bernhard Lüscher*, Institute of Biochemistry and Molecular Biology, RWTH Aachen University, 52074 Aachen (Germany)

### **Coordinator of ERASMUS agreements**

- Universidad San Pablo CEU, Facultad de Farmacia, Madrid, SPAIN
- Lubiana, Faculty of Pharmaceutical Sciences, Lubjan, SLOVENIA
- Ghent University, Ghent, BELGIUM
- University of Chemistry and Technology, UCT, Prague, CZECH REPUBLIC
- Universitat Ramon Llull IQS, Barcellona; SPAIN

### **Teaching activities**

Dal 1994-95 al 2001-2002 Analisi dei Medicinali (CTF, 2+3L CFU)

Dal 2002-2003 al 2004-2005 Analisi dei Medicinali (CTF, 2+3L CFU) e Chimica Farmaceutica (ISF, 10 CFU)

Dal 2005-2006 al 2009-2010 Analisi dei Medicinali (CTF, 2+3L CFU), Chimica Farmaceutica (ISF, 10 CFU), Chimica Farm Biotecnologica (Biotecnologie Farmaceutiche, 3 CFU)

2010-2011 Analisi dei Medicinali (CTF, 3+3L CFU), Chim Farm Biotecnologica (Biotecnologie, 3 CFU)

2011-2012 al 2013-2014 Analisi dei Medicinali (CTF, 3+3L CFU) e Chimica Farmaceutica (Farmacia, 11 CFU)

2014-2015 Analisi dei Medicinali (CTF, 3+3L CFU)

2015-2016 Chimica Farmaceutica (CTF, 9 CFU)

2016-2017, 2017-2018 Analisi dei Medicinali (Farmacia, 2+3L CFU) e Chimica Farmaceutica (CTF, 9 CFU)

### **Teaching activities at qualified Foreign Universities**

2003 (8 hours): School of Pharmacy Jagellonian University Krakow –PL (LLP-Erasmus Program)

**2016** (8 hours): Department of Organic Chemistry, Faculty of Chemistry, Wrocław University of Technology, PL (Erasmus Plus)

**2016** (8 hours): Department of Organic Chemistry, Faculty of Pharmacy, University of Santiago de Compostela (Erasmus Plus)

**Supervisor**

Supervisor of more than 80 experimental master thesis.

Supervisor of 5 PhD students (Pieroni M, Massari S, Sancineto L, Desantis J, M. G.Nizzi).

Advisor of 4 PhD students (Lorenzini C, Miao H, Dall'Uomo M, Manfroni G).