
Curriculum Vitae

Personal Data

Date/Place of birth: 11.04.1986 Neunkirchen/Saar, Germany
Marital status: Unmarried
Nationality: German
Language skills: German native language, English excellent level of communication, reading and writing skills, French good level of communication, reading and writing skills, Italian good level of communication and skills

University Education

01/2015 – present Post-Doc Sapienza University, Rome (Italy)
01/2014 – 12/2014 Joint Post-Doc position between University of Saarland (Germany) and Sapienza University, Rome (Italy)
11/2010 – 12/2013 PhD thesis at University of Lorraine, Metz (France) and Sapienza University, Rome (Italy) under the Supervision of Prof. Gilbert Kirsch
11/2010 3rd State Examination “Approbation” (license as pharmacist) in Pharmacy
10/2009 – 10/2010 1-year training to receive the license of a pharmacist:
10/2009- 03/2010 training in a public pharmacy “Einhorn Apotheke” in Saarbruecken
04/2010 – 10/2010 diploma project in the group of Prof. Claus Jacob, Bioorganic Chemistry, School of Pharmacy, University of Saarbruecken in cooperation with the University of Exeter, UK, leading to the Diploma in Pharmaceutical Sciences
09/2009 2nd State Examination (similar to a MSc) in Pharmacy
10/2007 – 09/2009 further undergraduated studies of Pharmacy at the University of Saarland, School of Pharmacy
08/2007 1st State Examination (similar to a Bachelors Degree (BSc)) in Pharmacy

10/2005 – 09/2007

Undergraduated studies of Pharmacy at the University of Saarland, School of Pharmacy

Fellowships and Awards

09/2015

Fellowship to attend the EFMC Young Medicinal Chemist Symposium 2015, Antwerp, Belgium and Frontiers in Medicinal Chemistry Symposium 2015, Antwerp, Belgium covering partially the travel and conference expenses

07/2012

Fellowship to attend the ESMEC Urbino meeting covering all travel and conference expenses, Poster selected for oral communication

11/2010 – 12/2013

Early Stage Research fellow funded by the EU via the ITN Marie Curie training Network "RedCat"

Peer-reviewed Publications

A) Current Topics in Medicinal Chemistry 08/2015; Epub ahead of print

Article: DNA Methyltransferases Inhibitors from Natural Sources

Clemens Zwergel, Sergio Valente, Antonello Mai

B) Cancer Research 08/2015; 75(15 Supplement):2946-2946.

Abstract 2946: Effects of two novel quinoline-based non-nucleoside DNA methyltransferase inhibitors against bone sarcomas

Maria Cristina Manara, Sergio Valente, Camilla Cristalli, Cristina Baricordi, Clemens Zwergel, Paola B Arimondo, Piero Picci, Antonello Mai, Katia Scotlandi

C) Journal of Medicinal Chemistry 2015, **58**, 4073–4079

Novel Histone Deacetylase Inhibitors Induce Growth Arrest, Apoptosis, and Differentiation in Sarcoma Cancer Stem Cells.

Gemma Di Pompo, Manuela Salerno, Dante Rotili, Sergio Valente, Clemens Zwergel, Sofia Avnet, Giovanna Lattanzi, Nicola Baldini, Antonello Mai

D) Expert Opinion on Drug Discovery 2015 Apr 20:1-15. [Epub ahead of print]

Emerging approaches for histone deacetylase inhibitor drug discovery.

Clemens Zwergel, Sergio Valente, Claus Jacob, Antonello Mai

E) Bioorganic Medicinal Chemistry Letters 2014, **4**, 3797-3801

Novel inhibitors of human histone deacetylases: Design, synthesis and bioactivity of 3-alkenylcoumarines

Carole Seidel, Michael Schneckeburger, Clemens Zwergel, François Gaascht, Antonello Mai, Mario Dicato, Gilbert Kirsch, Sergio Valente, Marc Diederich

F) Journal of Medicinal Chemistry 2014, **57**, 701-713

Selective Non-Nucleoside Inhibitors of Human DNA Methyltransferases Active in Cancer Including Cancer Stem Cells

Sergio Valente, Liu Yiwei, Michael Schneckeburger, Clemens Zwergel, Sandro Cosconati, Christina Gros, Maria Tardugno, Donatella Labella, Cristina Florean, Steve Minden, Hideharu Hashimoto, Yanqi Chang, Xing Zhang, Gilbert Kirsch, Ettore Novellino, Paola Arimondo, Evelina Miele, Elisabetta Ferretti, Alberto Gulino, Marc Diederich, Xiaodong Cheng and Antonello Mai

G) Medicinal Chemistry Communications 2013, **4**, 1571-1579

Novel benzofuran-chromone and -coumarine derivatives: Synthesis and biological activity in K562 human leukemia cells

Clemens Zwergel, Sergio Valente, Angela Salvato, Zhanjie Xu, Oualid Talhi, Antonello Mai, Artur Silva, Lucia Altucci and Gilbert Kirsch

H) European Journal of Organic Chemistry 2013; 2869-2877

Reactivity of 4-Vinyl-2H-1-benzopyran-2-ones in Diels–Alder Cycloaddition Reactions: Access to Coumarin-Based Polycycles with Cdc25 Phosphatase-Inhibiting Activity

Sergio Valente, Zhanjie Xu, Emilie Bana, Clemens Zwergel, Antonello Mai, Claus Jacob, Peter Meiser, Denyse Bagrel, Artur M. S. Silva and Gilbert Kirsch

I) Natural Products Communications, 2012; 7,3 389-394

Aurones: Interesting Natural and Synthetic Compounds with Emerging Biological Potential

Clemens Zwergel, François Gaascht, Sergio Valente, Marc Diederich, Denyse Bagrel and Gilbert Kirsch

J) Medicinal Chemistry Communications, 2011, 2, 196-200

Interactions of polysulfanes with components of red blood cells

Thomas Schneider, Lalla Aicha Ba, Khairan Khairan, Clemens Zwergel, Nguyen Duc Bach, Ingolf Bernhardt, Wolfgang Brandt, Ludger Wessjohann, Marc Diederich and Claus Jacob

Conference Contributions

- 09/2015 EFMC Young Medicinal Chemist Symposium 2015, Antwerp, Belgium
Design and Synthesis of MC1568 Analogues as Highly Isoform-
Selective HDAC Inhibitors
Clemens Zwergel, Sergio Valente, Artur Silva, Angela Nebbioso, Lucia
Altucci, Antonello Mai
- 09/2015 Frontiers in Medicinal Chemistry Symposium 2015, Antwerp,
Belgium
Structure-Based Lead-Optimization of Quinoline-Based Agents as
Selective Non-Nucleoside DNA Methyltransferase Inhibitors
Clemens Zwergel, Sergio Valente, Christina Gros, Paola B. Arimondo,
Michael Schneckeburger, Marc Diederich, Antonello Mai
- 07/2015 5th International HIPS Symposium, University of Saarland,
Saarbrücken, Germany
MC1568 regulates HSP90 acetylation and localization in influenza

- virus infected cells and inhibits viral replication
Clemens Zwergel, Sergio Valente, Simona Panella, Giovanna Simonetti, Anna Teresa Palamara and Antonello Mai
- 09/2014 EFMC-ISMIC Lisbon, Portugal; Poster Presentation: Structure-Based Lead Optimization of Quinoline-Based Agents as DNA Methyltransferase Inhibitors
Clemens Zwergel, Sergio Valente, Daniela Trisciuglio, Veronica Rodriguez, Christina Gros, Claus Jacob, Donatella Del Bufalo, Paola B. Arimondo and Antonello Mai
- 07/2013 ESMEC Urbino, Italy; Poster Presentation, PhD project: Structure-Based Lead-Optimization of Quinoline-Based DNA Hypomethylating Agents as DNMT1 Inhibitors
C. Zwergel S. Valente, Y. Liu, M. Schnekenburger, S. Cosconati, C. Gros, M. Tardugno, D. Labella, C. Florean, S. Minden, H. Hashimoto, Y. Chang X. Zhang, G. Kirsch, E. Novellino, P. B. Arimondo, E. Miele, E. Ferretti, A. Gulino, M. Diederich, X. Cheng and A. Mai
- 05/2013 COST Epigenetic Rome Training School: Active participation in the organization of the PhD-school as well as attendance in the plenary lectures, lab courses and journal clubs.
- 11/2012: 3rd meeting on medicinal chemistry, 3enqt, Aveiro, Portugal; Poster Presentation: Structure-Based Lead-Optimization of Quinoline-Based DNA Hypomethylating Agents as DNMT1 Inhibitors
S. Valente, M. Schnekenburger, C. Zwergel, C. Florean, M. Diederich, G. Kirsch and A. Mai
- 11/2012: Final RedCat Meeting, Aveiro, Portugal; Poster and oral presentation: Coumarine and Chromone based derivatives and study of their biological activities
C. Zwergel, S. Valente, F. Gaascht, L. Altucci, M. Diederich and G. Kirsch
- 11/2012: Ecole Doctorale de Chimie et Physique Moléculaires SESAMES Journée de rentrée, Metz, France; Oral Presentation: Overview over the PhD project
C. Zwergel, G. Kirsch
- 07/2012: ESMEC Urbino, Italy; Poster and Oral Presentation: PhD project: Coumarine and Chromone based derivatives and study of their biological activities
C. Zwergel, S. Valente, G. Kirsch
- 03/2012: SCF Grand Est 7 Reims, France; Poster Presentation: Preparation of novel aurones from coumarin-4-aldehyde and 3-formylchromone
C. Zwergel, Z. Xu, S. Valente, G. Kirsch
- 02/2012: SCT Journées Jeunes Chercheurs 2012 Paris, France; Poster Presentation: Preparation of novel aurones from coumarin-4-aldehyde and 3-formylchromone
C. Zwergel, Z. Xu, S. Valente, G. Kirsch

- 01/2012: Meeting on Redox regulation - Natural compounds as regulators of inflammation signalling, Luxemburg; Poster Presentation: Preparation of novel auronones from coumarin-4-aldehyde and 3-formylchromone
C. Zwergel, Z. Xu, S. Valente, G. Kirsch
- 11/2011: Ecole Doctorale de Chimie et Physique Moléculaires SESAMES Journée Scientifique de rentrée, Metz, France; Poster Presentation: 4-Vinyl-2H-1-benzopyran-2-one reactivity for [4+2] thermal cycloaddition: access to novel steroid-like coumarin-based heterocycles
C. Zwergel, Z. Xu, S. Valente, A. M. S. Silva, G. Kirsch
- 08/2011: ASMC St. Petersburg, Russia; Poster Presentation: 4-Vinyl-2H-1-benzopyran-2-one reactivity for [4+2] thermal cycloaddition: access to novel steroid-like coumarin-based heterocycles
Z. Xu, C. Zwergel, S. Valente, A. M. S. Silva, G. Kirsch
- 05/2011: Ecole Doctorale de Chimie et Physique Moléculaires SESAMES Journée Scientifique de rentrée, Nancy, France; oral communication: 4-Butoxyvinyl coumarins and 4-Acetyl coumarins as starting material for polycyclic systems
C. Zwergel, S. Valente, Z. Xu, G. Kirsch
- 04/2011: Annual Gathering 2011 of the RedCat project, Metz, France; oral communication: 2H-chromen-2-one (Coumarin) as scaffold for new anticancer agents
C. Zwergel, S. Valente, Z. Xu, G. Kirsch

Skills/ Expertise

Teaching	1 st and 2 nd year pharmacy students in inorganic analytical chemistry (qualitative and quantitative analyses), lab courses and seminars (regularly evaluated by external sources with very good results and satisfaction), introduction of Bachelor/Master/ Diploma students into scientific writing and work in a research lab, co-supervisor of young pharmacists during their practical training in a local pharmacy shop
Synthetic Chemistry	Experience in different organic methods to prepare novel compounds via different medicinal chemistry approaches
Analytical Chemistry	HPLC, LC-MS, NMR, UV-Vis, electrochemistry
Biological Experiments	Basic knowledge in microorganisms (e.g. E.coli) and human cells (e.g. erythrocytes) as well as cell assays (e.g. MTT)
IT	Excellent knowledge in different Operating Systems (Windows XP, Vista, 7,8, 10, Linux, MacOS), MS Office

Pharmacy

Responsible for compounding and dispensing medications to patients on weekends and night shifts in a medium sized local pharmacy

Additional training

- 1) COST Epigenetic Rome Training School: Active participation in the organization of the PhD-school as well as attendance in the plenary lectures, lab courses and journal clubs.
- 2) NMR-Training: theoretical and practical course
- 3) Workshop during my PhD: Project Management and Communication
- 4) Workshop during my PhD: Science and Society
- 5) Workshop during my PhD: Science and Industry
- 6) Workshop during my PhD: Fit to Europe
- 7) Workshop during my PhD Scientific writing combined with English Course
- 8) French language course for foreign students
- 9) Italian course for foreigners

Rome, 01.11.2015