



Curriculum Vitae

Personal information **Anna Borioni**

Work experience

1. Employer: EDQM
 - Start date: 2017
 - End date:
 - Position: Auditor
 - Activities: Auditor as NMR specialist in EDQM Mutual Joint Audits
 - Country: France
2. Employer: Istituto Superiore di Sanità
 - Start date: 2005
 - End date:
 - Position: Quality Assessor
 - Activities: Assessment of dossier of medicinal products (Module 3_ Quality_chemistry) in National and European marketing authorization procedures
 - Country: Italy
3. Employer: WHO
 - Start date: 2008
 - End date:
 - Position: Quality Assessor
 - Activities: Assessment of dossier of active pharmaceutical ingredients (Quality_chemistry) in the WHO Prequalification Program.
 - Country: Switzerland
4. Employer: Istituto Superiore di Sanità
 - Start date: 2008
 - End date:
 - Position: Quality Assessor
 - Activities: Assessment of the NMR quality control of medicinal products containing heparin in National and European marketing authorization dossiers.
 - Country: Italy
5. Employer: Istituto Superiore di Sanità
 - Start date: 2009
 - End date:
 - Position: Analyst
 - Activities: NMR analysis for identification and quantification of active substances in counterfeit and approved medicinal products in the frame of the EDQM OMCI
 - Country: Italy
6. Employer: Istituto Superiore di Sanità
 - Start date: 2014
 - End date:
 - Position: Analyst
 - Activities: Analysis and evaluation of deficiencies in pharmaceutical products
 - Country: Italy
7. Employer: Istituto Superiore di Sanità
 - Start date: 2012
 - End date:
 - Position: Auditor
 - Activities: Auditor in GMP inspections as expert for the radiopharmaceutical medicinal products.
 - Country: Italy
8. Employer: ISS
 - Start date: 012000
 - End date: 012012
 - Position: Quality Assessor
 - Activities: Assessment of Investigational Medicinal Product dossiers (quality part_chemistry) for Phase I investigational studies.
 - Country: Italy
9. Employer: Istituto Superiore di Sanità
 - Start date: 121991
 - End date: 102003
 - Position: Researcher
 - Activities: Chemical synthesis of new organic molecule in the field of pharmaceutical chemistry and NMR studies on the interaction of chemical molecules with enzymes and liposomes
 - Country: Italy
10. Employer: University of Rome Tor Vergata
 - Start date: 112007
 - End date: 112008
 - Position: Teacher assistant
 - Activities: Teacher assistant for the web chemistry course in the Engineering Master Degree _ University of Rome "Tor Vergata"
 - Country: Italy
11. Employer: ISS _Istituto Superiore di Sanità
 - Start date: 052020
 - End date:
 - Position: Coordinator

- Activities: Coordinator in Pharmacovigilance Section 1 of the Chemical Drugs Unit in the National Centre for the Control and Evaluation of Medicines of the ISS (Istituto Superiore di Sanità - National Institute of Health).
- Country: Italy

Education and training

1. Subject: University of Rome La Sapienza
 - Start date: 111984
 - End date: 071989
 - Qualification: Master degree in Chemistry with highest mark and honours
 - Organisation: Experimental thesis on chemical modifications and characterization of Rifamycins.
 - Country: Italy
2. Subject: University of Rome La Sapienza
 - Start date: 111990
 - End date: 101995
 - Qualification: Ph.D. in Chemical Sciences
 - Organisation: Pharmaceutical Chemistry
 - Country: Italy

Additional information

Publications

1. Mariangela Raimondo, Anna Borioni, Monica Bartolomei, Antonina Mosca, Gianluca Gostoli, Classification of the Ibuprofen Active Pharmaceutical Ingredients by chemical patterns combining HPLC, ¹H-NMR spectroscopy and Chemometrics: Traceability of legal medicines, *Ann Ist Super. Sanità*, accepted for publication 2020.
2. Biagia Musio, Rosa Ragonea, Stefano Todisco, Antonino Rizzuti, Mario Latronico, Piero Mastroioli, ... Anna Borioni, ... Vito Gallo A community-built calibration system: The case study of quantification of metabolites in grape juice by qNMR spectroscopy, *Talanta*, 2020 Vol 14, 120855
3. Vito Gallo, Rosa Ragone, Biagia Musio, Stefano Todisco, Antonino Rizzuti, Piero Mastroioli, Stefania Pontrelli, ... Anna Borioni, ... Mario Latronico, Food Analytical Methods Vol. 13, 2020, 530-541
4. Carlo Mustazza, Maria Cristina Gaudiano, Anna Borioni and Luisa Valvo, The evolution of the illegal market of falsified medicines and the experience of the Italian OMCL: from control to research, *Ann Ist Super Sanità*, 2018, Vol. 54, No. 4: 267-269
5. Gaudiano MC, Borioni A, Antoniella E, Valvo L, Counterfeit Adderall Containing Aceclofenac from Internet Pharmacies, *J Forensic Sci*, 2016, doi: 10.1111/1556_4029.13095.
6. Borioni A, Gostoli G, Bossù E, Sestili I. Quantitative analysis of ibotridol in an injectable preparation by ¹H NMR spectroscopy. *Journal of pharmaceutical and biomedical analysis*, 2014, 94, 19-22.
7. Mustazza C, Borioni A, Rodomonte AL, Bartolomei M, Antoniella E, Di Martino P, Valvo L, Sestili I, Costantini E, Gaudiano MC. Characterization of Sildenafil analogs by MS/MS and NMR: A guidance for detection and structure elucidation of phosphodiesterase_5 inhibitors. *J Pharm Biomed Anal* 2014; 96, 170-86.
8. Maria Cristina Gaudiano, Luisa Valvo, Anna Borioni. Identification and quantification of the doping agent GHRP_2 in seized unlabelled vials by NMR and MS: a case_report. *Drug Testing and Analysis*, 2014, 6(3), 295-300.
9. Mustazza C, Sbriccoli M, Borioni A, Ferretti R, Del Giudice MR. New fluorinated 1,4_bis_(arylaminoethyl)_ and 1,4_bis(arylaminoethyl)benzenes as fluorescent probes for amyloid plaques in Alzheimer's Disease and Transmissible Spongiform Encephalopathies. *MedChemComm* 2012 (3):357-361.
10. Del Giudice Maria Rosaria; Borioni Anna; Bastanzio Giuditta; Sbraccia Maria; Mustazza Carlo; Sestili Isabella. Synthesis and pharmacological evaluation of bivalent antagonists of the nociceptin opioid receptor. *European Journal of Medicinal Chemistry*, 2011; 46(4) 1207-21.
11. Anna Borioni, Giuditta Bastanzio, Maurizio Delfini, Carlo Mustazza, Fabio Sciubba, Massimo Tatti and Maria Rosaria Del Giudice. High-resolution NMR conformational studies of new bivalent NOP receptor antagonists in model membrane systems. *Bioorganic Chemistry*, 2011, 39, 59-66.
12. Cirilli Roberto; Ferretti Rosella; La Torre Francesco; Borioni Anna; Fares Vincenzo; Camalli Mercedes; Faggi Cristina; Rotili Dante; Mai Antonello Chirality 2009, 21(6):604-12.
13. Mustazza C, Borioni A, Sestili I, Sbraccia M, Rodomonte A, Del Giudice MR Synthesis and pharmacological evaluation of 1,2_dihydrospiro[isochinoline_4(3H)_4'_piperidin]_3_ones as nociceptin receptor agonists *Journal of Medicinal Chemistry* 2008 Jan 31 14. Leone G, Delfini M, Di Cocco ME, Borioni A, Barbucci R The applicability of an amidated polysaccharide hydrogel as a cartilage substitute: structural and rheological characterization *Carbohydrate research* 2008 4;343 (2):317-27.
15. Domenici MR, Scattoni ML, Martire A, Lastoria G, Potenza RL, Borioni A, Venerosi A, Calamandrei G, Popoli P Behavioral and electrophysiological effects of the adenosine A2A receptor antagonist SCH 58261 in R6/2 Huntington's disease mice *Neurobiology of disease* 2007 28(2):197-205.
16. Piccioni F, Borioni A, Delfini M, Del Giudice MR, Mustazza C, Rodomonte A, Risuleo G. Metabolic alterations in cultured mouse fibroblasts induced by an inhibitor of the tyrosine kinase receptor FGFR_1. *Analytical biochemistry*, 2007; 367(1):111-121
17. Delfini M, Di Cocco ME, Piccioni F, Porcelli F, Borioni A, Rodomonte A, Del Giudice MR. Tacrine derivatives_acetylcholinesterase interaction: ¹H NMR relaxation study. *Bioorganic chemistry*. 2007;35(3):243-257.
18. Borioni A, Mustazza C, Sestili I, Sbraccia M, Turchetto L, Del Giudice MR. Synthesis of new 4_heteroaryl_2_phenylquinolines and their pharmacological activity as NK_2/NK_3 receptor ligands. *Archiv der pharmazie*. 2007;340(1):17-25.
19. Mustazza C, Borioni A, Sestili I, Sbraccia M, Rodomonte A, Ferretti R, Del Giudice MR. Synthesis and evaluation as NOP ligands of some spiro[piperidine_4,2'(1'H)_quinazolin]_4'(3'H)_ones and spiro[piperidine_4,5'(6'H)_1,2,4]triazolo[1,5_c]quinazolines. *Chemical & pharmaceutical bulletin*, 2006; 54(5):611-622.
20. Gaudiano MC, Rodorigo P, Bartolomei M, Sestili I, Bertocchi P, Manna L, Gostoli G, Borioni A, Gallinella B, Ferretti R, Cirilli R, Gallo FR, Palazzino G. Conclusioni e sviluppo futuro del lavoro valutativo. *Rapporti ISTISAN*. 2006;06(15):22-25.
21. Gaudiano MC, Rodorigo P, Bartolomei M, Sestili I, Bertocchi P, Manna L, Gostoli G, Borioni A, Gallinella B, Ferretti R, Cirilli R, Gallo FR, Palazzino G. Lavoro valutativo sulla parte "qualità" dei dossier. *Rapporti ISTISAN*. 2006;06(15):18-21.
22. Sestili I, Borioni A, Mustazza C, Rodomonte A, Turchetto L, Sbraccia M, Riitano D, Del Giudice MR. A new synthetic approach of N_(4-amino-2-methylquinolin-6-yl)-2-(4-ethylphenoxy)methyl benzamide (JTC_801) and its analogues and their pharmacological evaluation as nociceptin receptor (NOP) antagonists. *European journal of medicinal chemistry*. 2004;39(12):1047-1057.
23. Del Giudice MR, Mustazza C, Borioni A, Gatta F, Tayebati K, Amenta F, Tucci P, Pieretti S. Synthesis of 1_methyl_5_(pyrazol_3_and_5_yl)_ and 1,2,4-triazol_3_and_5_yl)_1,2,3,6_tetrahydropyridine derivatives and their evaluation as muscarinic receptor ligands. *Archiv der pharmazie*. 2003;336(3):143-154.
24. Mustazza C, Borioni A, Del Giudice MR, Gatta F, Ferretti R, Meneguz A, Volpe MT, Lorenzini P. Synthesis and cholinesterase activity of phenylcarbamates related to Rivastigmine, a new therapeutic agent for Alzheimer's disease. *European journal of medicinal chemistry*. 2002;37(2):91-109.
25. Mustazza C, Del Giudice MR, Borioni A, Gatta F. Synthesis of pyrazolo[1,5_a]_, 1,2,4-triazolo[1,5_a]_ and imidazo[1,2_a]pyrimidines related to Zaleplon, a new drug for the treatment of insomnia. *Journal of heterocyclic chemistry*. 2001;38(5):1119-1129.
26. Borioni A, Del Giudice MR, Mustazza C, Gatta F. Synthesis of bicyclic azacompounds (3-dimethylcarbamoyloxyphenyl) substituted as acetylcholinesterase inhibitors. *Journal of heterocyclic chemistry*. 2000;37:799-810.
27. Del Giudice MR, Mustazza C, Gatta F, Ferretti R, Borioni A. Synthesis of 5-amino-1,2,3,4-tetrahydrobenzo [b] [1,7]naphthyridines and 2,3,4,4',5,6-hexahydrobenzo [c] [2,6]naphthyridines. *Journal of heterocyclic chemistry*. 1998;915-922.
28. Del Giudice MR, Borioni A, Mustazza C, Gatta F. Synthesis of 9-aminomethyl-1,2,3,4-tetrahydro- and 1,2,3,4,5,6,7,8-octahydroacridine derivatives. *Journal of heterocyclic chemistry*. 1997;34:1-7.
29. Del Giudice MR, Borioni A, Mustazza C, Gatta F, Dionisotti S, Zocchi C, Ongini E. (E)-1_(Heterocyclyl or cyclohexyl)-2_[1,3,7-trisubstituted (xanthin-8-yl)] ethenes as A2a adenosine receptor antagonists. *European journal of medicinal chemistry*. 1996;31(1):59-63.
30. Del Giudice MR, Borioni A, Mustazza C, Gatta F, Meneguz A, Volpe MT. Synthesis and cholinesterase inhibitory activity of 6_, 7-methoxy_(and hydroxy_) tacrine derivatives. *Il Farmaco*. 1996;51(11):693-698.
31. Baraldi P, Cacciani B, Spalluto G, Borioni A, Vizzano M, Dionisotti S, Ongini E. Current developments of A2a adenosine receptor antagonists. *Current medicinal chemistry*. 1995;2:707-722.
32. Del Giudice MR, Borioni A, Mustazza C, Gatta F. Synthesis of pyridol (2,1_b)_ and thiazolo (2,3_b) purines. *Journal of heterocyclic chemistry*. 1995;32:1725-1730.
33. Del Giudice MR, Borioni A, Mustazza C, Gatta F. New (g)_fused

(1,2,4)Triazolo(1,5_c)pyrimidines: synthesis of pyrido (3,2_e) and (4,3_e)(1,2,4)Triazolo (1,4_c)pyrimidine, Pyrimido(5,4_e)(1,2,4)Triazolo(1,5_c)pyrimidine and (1,2,4)Triazolo (1,5_c)pteridine derivatives. Journal of heterocyclic chemistry. 1994;31:1503_1507. 34. Gatta F, Del Giudice MR, Borioni A, Mustazza C, Fazio C. Synthesis of 2,8_disubstituted 1.2.4_Triazolo (5,1_i) purines. Journal of heterocyclic chemistry. 1994;31:1171_1175. 35. Gatta F, Del Giudice MR, Borioni A, Mustazza C. New [f]_fused xanthines: synthesis of 1,3_dipropyl_1H,3H_pyrazino, pyrido, pyrimido and pyrrolo[2,1_f]purine_2,4_diones. Journal of heterocyclic chemistry. 1994;31:81. 36. Gatta F, Del Giudice MR, Borioni A, Borea P, Dionisotti S, Ongini E. Synthesis of imidazo(1,2_c)pyrazolo(4,3_e)pyrimidines, pyrazolo(4,3_e)1,2,4_triazolo(1,5_c)pyrimidines and 1,2,4_triazolo(5,1_i)purines: new potent adenosine A2 receptor antagonists. European journal of medicinal chemistry. 1993;28:569_576. 37. Gatta F, Del Giudice MR, Borioni A. Synthesis of (1,2,4)Triazoloquinazoline and (1,2,4)_Triazolo_1,4_benzodiazepine derivatives. Journal of heterocyclic chemistry. 1993;30(11):11_16.

Projects

Memberships

Expert for the European Medicinal Agency for the evaluation of medicinal product dossier (quality part – chemistry)
Expert for the Radiopharmaceutical medicinal products in GMP inspections Member of the WHO Prequalification Program assessor group for the evaluation of active substances dossiers (quality part_ chemistry) Expert for the ISS for the Assessment of Investigational Medicinal Product dossiers (quality part _ chemistry) for Phase I investigational studies.

Other Relevant Information

Languages: Italian (mother language) English, self assessment: B2 in understanding, speaking, writing. French, self assessment: A1 in understanding, speaking. Participation in Courses/Workshops/Symposia as a speaker 2017 28,29 February: 3rd Symposium for OMCLs "Compating Counterfeit and other illegal Medicines_Facing New Challenges". 2016 17 May: Educational Session on IMPD Evaluation, Quality part (ISS) 2012: II Training Course for the Assessment of Phase I Investigational Medicinal Products Dossier (ISS) Attended Training Courses 2019 Training and Workshop for auditors of the MJA/MJV Scheme of the General European OMCL Network Risk management in the Italian Centre for the Control of Medicines –ISS Italian and European regulations for Advanced Therapy Medicinal Products_AIFA/ISS NMR Pharma Night Drug Development & Quality Control_ Bruker NMR Pharma Day Biologics and Biosimilars_Bruker Protection of data_ ISS Protection of e_mails _ISS 2018 Control Charts for the quality of analytical results in OMCLs_ISS New ISO/IEC 17025:2017 for laboratory accreditation Theoretical_Practical training on the endotoxin test (LAL test) 2017 Counterfeit testing training for OMCLs hosted by MPA Sweden Validation of Analytical Methods –AIFA Health and Safety at work: risk perception and risk assessment_ISS 2016 Training on Quality Assessment on specific types of products_AIFA 2014 Quantitative Nuclear Magnetic Resonance (NMR) Course – University of Rome "TorVergata" Good Weighing Practice – Mettler Toledo 2013 Pharma NMR Workshop _ Bruker Italia 2012 Karl Fisher Titration School– Sigma Aldrich Counterfeit/Illegal Medicins Testing Training for OMCLs – EDQM 2011 NMR in Pharmaceutical Laboratory: from research to quality control– Bruker NMR Seminar – Agilent 2010 WorldWide Magnetic Resonance Conference _Joint Euromar 2010 and 17th ISMAR Bruker Biospin NMR 2008 2nd Workshop on the characterisation of heparin products 2006 Bruker Biospin NMR user's meeting 2004 Nuclear Magnetic Resonance Bruker Avance II Course 2003 XXXIII National Congress on Magnetic Resonance 2002 Nuclear Magnetic Resonance Bruker Avance I Course Nuclear Magnetic Resonance Bruker Avance M Course 2000 ISO 9000 Course 2001 Course on Scientific Communication. 1990 Course on Analytical Chemistry Tecnique – University of Rome "la Sapienza".