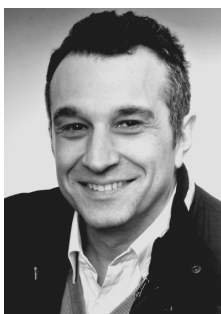


GIANCARLO ALDINI

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Giancarlo Aldini, Ph.D

Full Professor in Medicinal Chemistry

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EDUCATION

- 1991 - Degree in Pharmacy, University of Milan, Milan, Italy
- 1996 - Ph.D in Medicinal Chemistry, University of Milan, Milan, Italy
- 1998 - Specialization in Cosmetic Sciences, University of Milan, Milan, Italy

TEACHING EXPERIENCE

- Università degli Studi di Milano
Degree in Pharmacy, August 1999 to 2006
Course Taught: Analisi dei Medicinali (Drug Analysis)
- Università degli Studi di Milano
Degree in Tecniche Erboristiche, 2000-2002
Course Taught: Analisi Chimico Tossicologica (Chemical and Toxicological analysis)
- Università degli Studi di Milano
Degree in Chimica e Tecnologie Farmaceutiche, 2007-present
Course Taught: Analisi dei Farmaci 1 (Pharmaceutical analysis)
- 2008, 2009: Co-chair with Prof. Righetti of the "Corso teorico pratico della tecnica 2-D PAGE applicata all'analisi del proteoma" (see attached file)
- Università degli Studi di Milano
Degree in Biotecnologie del Farmaco, 2011-2016
Course Taught: Analisi dei farmaci biotecnologici (Biopharmaceutical analysis)
- Università degli Studi di Milano
Degree in Chimica e Tecnologie Farmaceutiche, 2012-present
Course Taught: Metodologie analitiche nella progettazione e nello sviluppo del farmaco e analisi strumentale e procedure di convalida nell'industria farmaceutica (Analytical methods in the drug discovery and development and in the quality control of drugs)

RESEARCH EXPERIENCE

- 1992 - Scholarship from Tecnofarmaci
- 01/07/1995, Assistant professor, Università degli Studi di MILANO.
- 01/03/2005, Associate Professor, Università degli Studi di MILANO; (CHIM/08 - Chimica farmaceutica)

- 01/06/2015 Full professor Università degli Studi di MILANO (CHIM/08 - Chimica farmaceutica)

PROFESSIONAL EXPERIENCE

- 2003-2005: Member of the University of Milan Senate
- 2006 - 2011: Delegate of the Division of Medicinal Chemistry of the Italian Chemical Society (SCI) in the scientific committee of the MS-Pharmaday.
- 2009 – 2016 : Secretary of the International HNE-Club which is an informal group of researchers with wide interests spanning all aspects of lipid peroxidation and other types of oxidation (<http://users.unimi.it/HNECLUB/>).
- 2010 - present: Member of the Ph.D Committee in Medicinal Chemistry, Università degli Studi di Milano.
- 2010 - 2013 - Member elect and secretary of the "Gruppo intradivisionale di Analisi Farmaceutica" della Divisione di Chimica Farmaceutica (SCI)
- 2010 – 2014 : Italian delegate for the Management Committee of the european COST Action CM1001 (Chemistry of non-enzymatic protein modification - modulation of protein structure and function)(<http://users.unimi.it/cm1001/>).
- 2012 – 2016: Elected council member of the European Society of Free Radical Research.
- 2013 – Director of SSPA, Summer School in Pharmaceutical Analysis. The SSPA is planned under the auspices of the Division of Medicinal Chemistry of the Italian Chemical Society and the EFMC (European Federation for Medicinal Chemistry) and it is mainly addressed to researchers and PhD students of the Faculties of Pharmacy and Sciences and to young scientists from pharmaceutical industries.
- 2015-2019: Scientist in charge for UNIMI, beneficiary of the MARIE SKŁODOWSKA-CURIE ACTIONS - Innovative Training Networks (ITN)- H2020-MSCA-ITN-2015 – Project “MASSTRPLAN” MASS spectrometry TRaining in Protein Lipoxidation ANALysis for

Inflammation.

- 2017-present: Chair of the Ph.D School in Pharmaceutical Sciences, Università degli Studi di Milano.

RESEARCH AND TEACHING ACTIVITIES IN INTERNATIONAL RESEARCH CENTERS

- Visiting scientist at Jean Mayer USDA-Human Nutrition Research Center on Aging, Tufts University Boston, Massachusetts (6/1999 - 10/1999)
- Visiting Professor at Jean Mayer USDA-Human Nutrition Research Center on Aging, Tufts University Boston, Massachusetts (7/2000 - 9/2000)

HONOURS AND AWARDS

- 2001: winner of the Sapio prize for the studies on Electron Spin Resonance (I Edition);
- 2002: Plaque of Appreciation from the Korean Nutrition Society.

PATENTS

- COMPOSITIONS CONTAINING D-CARNOSINE US2008194493 (A1) EP1761272 (A1) EP1761272 (B1)
- PEPTIDE DERIVATIVES WITH THERAPEUTIC ACTIVITY EP2041157 (B1) WO2008001174 (A1) US2009247601 (A1) US8765798 (B2) JP2009541295 (A) ITMI20061218 (A1)
- AMINO ALCOHOL DERIVATIVES AND THEIR THERAPEUTIC ACTIVITIES WO2011080139 (A1) US2012316212 (A1) US8623900 (B2) JP2013515753 (A) JP5787899 (B2) ITMI20092317 (A1) IT1397212 (B1) EP2519507 (A1) EP2519507 (B1) CN102791696 (A)

INDUSTRIAL GRANTS

- 2000: Responsible for the research project granted by Flamma. Research title: Studio di attività radical scavenging di peptidi naturali e sintetici.
- 2011: Responsible for the research project granted by VESTI SOLIDALE COOPERATIVA SOCIALE A R.L. ONLUS - VIA GASPAROTTO 19 CINISELLO BALSAMO(MI). Research title: Studio dell'attività antiossidante e caratterizzazione dei componenti polifenolici di scarti di lavorazione del caffè'.
- 2011: Responsible for the research project granted by Flamma. Research title: Studio della carbonilazione proteica in un modello animale di sindrome metabolica e di steatosi epatica non alcolica indotta da una dieta ricca di fruttosio e valutazione di efficacia di FL-926-A16.
- 2012: Responsible for the research project granted by Flamma. Research title: Studio delle modifiche ossidative proteiche in un modello animale di steatosi epatica non alcolica indotta da una dieta priva di metionina e colina e valutazione di efficacia di FL-926-A16.
- 2014 Responsible for the research project entitled: "Analysis of Bioactives in Black rice and functional proteomics using a high resolution LC-MS/MS". INDUSTRY ACADEMIC COOPERATION FOUNDATION, KONKUK UNIVERSITY GLOBAL CAMPUS.
- 2015: Responsible for the research project entitled: "Produzione di proteina VC1-S-ricombinante da batteri o da Pichia pastoris Validazione della resina VC1 per la cattura di AGE modello". EUROCLONE S.P.A.
- 2015: Responsible for the research project entitled: "Action mechanics of red ginseng extract against oxidative damage and inflammation using high resolution LC-MS/MS and quantitative Action mechanisms of red ginseng extract against oxidative damage and inflammation using high resolution LC-MS/MS and quantitative proteomics " INDUSTRY ACADEMIC COOPERATION FOUNDATION, KONKUK UNIVERSITY GLOBAL CAMPUS
- 2015: Principal investigator for the research project entitled: "Messa a punto e applicazione di un metodo analitico in spettrometria di massa per valutare l'effetto di precipitazione proteica da parte di derivati di origine naturale". ABOCA S.P.A. SOCIETA' AGRICOLA
- 2015: Principal investigator for the research project entitled: "Identification and

characterization of reactive carbonyl species (RCS) sequestering agents in black rice with giant embryo using deuterium labeled RCS Determination of reactive carbonyl species sequestering action of black rice with giant embryo in ob/ob mice". INDUSTRY ACADEMIC COOPERATION FOUNDATION, KONKUK UNIVERSITY GLOBAL CAMPUS

- 2015: Principal investigator for the research project entitled: "Messa a punto di metodi in cromatografia liquida accoppiata alla spettrometria di massa per valutare la biodisponibilità degli estratti standardizzati di vaccinium macrocarpon e di vaccinium myrtillus". INDENA S.P.A.
- 2015: Principal investigator for the research project entitled "Esecuzione delle attività analitiche concernenti i lavori sperimentali o teorici, svolti con la finalità di acquisire nuove conoscenze, relativi al progetto di ricerca "sintesi di amminoacidi e amminoalcoli a struttura imidazolica dotati di attività biologica" e ad eventuali progetti correlati. FLAMMA S.P.A.
- 2015: Principal investigator for the research project entitled ESECUZIONE DELLE ATTIVITA' ANALITICHE CONCERNENTI I LAVORI SPERIMENTALI O TEORICI, SVOLTI CON LA FINALITA' DI ACQUISIRE NUOVE CONOSCENZE, RELATIVI AL PROGETTO DI RICERCA "SINTESI DI AMMINOACIDI E AMMINOALCOLI A STRUTTURA IMIDAZOLICA DOTATI DI ATTIVITA' BIOLOGICA" E AD EVENTUALI PROGETTI CORRELATI.
- Esecuzione delle attività inerenti la "Convenzione tra il Ministero della Salute e IZS-PLVdA per la sorveglianza sui costituenti di origine animale nei mangimi - anni 2016-2017"

COMPETITIVE GRANTS

RESPONSIBLE

- PRIN 2009: "Metodologie analitiche avanzate nella ricerca e sviluppo del farmaco e dei prodotti per la salute durata": 24 months; responsible of unit.
- 2007-2009: responsible of the Pharmaceutical analysis unit of the Department of Pharmaceutical Sciences for the project granted from the

Ministero della salute commissione per la vigilanza ed il controllo sul doping e per la tutela della salute nelle attività sportive - art.3, comma 1, lett. c) e art. 10, comma 1, l.376/2000. Title: Misure finalizzate alla rilevazione e prevenzione dell'uso non ammesso di metilprednisolone: identificazione di markers metabolici; 24 months;

- 2010-2012: responsible of the financed project granted form Regione Lombardia "Call for Technological and Scientific Cooperation Agreements" (decree n. 6737 July, 2nd 2009) Title of the project: Biomarkers per la diagnosi precoce di patologie cardiovascolari e per la valutazione di efficacia antiossidante di nuovi nutraceutici in soggetti affetti da sindrome metabolica ID _16749 and Ref.n° SAL60. D.d.s. n.6118 June, 18th 2010 (BURL n.26 S.O. June, 28th 2010). (see attached file);18 months
- 2015-2019. H20MCITNIF - Horizon 2020_Marie Skłodowska-Curie actions-Innovative Training Network (ITN)/Individual Fellowships (IF). MASS Spectrometry TRaining network for Protein Lipid adduct Analysis. Responsible of UNIMI unit. IRIS code: H20MCITNIF15GALDI_M
- 2017-2019. CONTR_MIN - Contratti di ricerca finanziata da Ministeri. Esecuzione delle attività inerenti la "Convenzione tra il Ministero della Salute e IZS-PLVdA per la sorveglianza sui costituenti di origine animale nei mangimi - anni 2016-2017". IRIS Ccode: CONTR_MIN17GALDI_01. CONTR_MIN17GALDI_01

COMPONENT/PARTICIPANT

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- PRIN 1997 - Metodologie analitiche per la caratterizzazione, la valutazione di efficacia e sicurezza di nuovi principi bioattivi (molecole ad attività antiossidante) e per il monitoraggio di droghe d'abuso in matrici biologiche. G. Aldini was a component of the Milan unit for 6 months.
 - PRIN 1998 - responsible for the University of Milan unit: MAFFEI FACINO, Roberto - Application of hyphenated techniques (chromatography/mass spectrometry) to the characterization and quantitation of metabolites of the non-steroidal anti-inflammatory drug nimesulide in biological matrices in vitro and in vivo. G. Aldini was a component of the University of Milan unit for 12 months

- PRIN 2000 - responsible for the University of Milan Unit: MAFFEI FACINO, Roberto - Development ofEPR, LC-MS/MS and fluorimetric methodologies for detection and quantitation of nitric oxide and its bioactive species in the evaluation of efficacy and toxicity of new no-releasing anti-inflammatory drugs. G. Aldini was a component of the University of Milan unit for 12 months.
- PRIN 2002 - responsible for the University of Milan unit: MAFFEI FACINO, Roberto Pharmacokinetic and metabolic profile of nitric oxide-releasing drugs: NO-NSAIDs and nitro-heparins. G. Aldini was a component of the University of Milan unit for 12 months.
- PRIN 2003 - responsible for the University of Milan unit: CARINI, Marina - Combined analytical techniques for the study of the hemodynamic role of nitric oxide (NO) and of its bioactive and inactive metabolites in the cardiovascular system. G. Aldini was a component of the University of Milan unit for 10 months.
- PRIN 2004 - responsible for the Unit: MAFFEI FACINO, Roberto - Advanced methodologies in mass spectrometry for the development of inhibitors of carbonylation reactions associated to degenerative diseases: peptides/peptoides as detoxifying agents of cytotoxic aldehydes. G. Aldini was a component of the Milan unit with a total with a period of 7 months.
- PRIN 2007 - responsible for the University of Milan unit: MAFFEI FACINO, Roberto Analytical methodologies in design and evaluation of the activity/metabolic profiles of biologically active compounds: carnosine peptidomimetics as inhibitors of pathological degenerative processes induced by carbonyl stress. G. Aldini was a component of the University of Milan unit for 12 months.
- MIUR 2006 - Progetto MIUR (DM27909) - Legge n. 297/99 (programma FAR) in risposta al Bando Biotecnologie Lombardia 2005: "Ricerca, caratterizzazione e sviluppo di molecole peptidomimetiche della L-carnosina quali inibitori di processi patologici degenerativi da stress carbonilico". Responsible for the University of Milan unit Prof.ssa Marina Carini - Progetto triennale 01/03/2006 - 28/02/2009 in partenariato con Flamma Fabbrica Lombarda Ammino Acidi S.p.A.

EDITORIAL ACTIVITIES

- Guest editor of the special issue : "Advanced analytical strategies for recombinant

therapeutic proteins” published in Current Pharmaceutical Biotechnology, Bentham Science, 2011 Oct;12(10):1507.

- Co-editor of the book entitled "Biomarkers for antioxidant defense and oxidative damage" 2010 Wiley-Blackwell Publishing.
- Member of the Editorial Advisory Board for the journal "The Open Biomarkers Journal" (Bentham Science Publishers) <http://www.benthamscience.com/open/tobiomj/EBM.htm>
- Co-editor of the special issue Special issue on “AGEs and ALEs: chemistry, physiopathology and molecular strategies for their inhibition” published in Free Radical Researchj <http://informahealthcare.com/toc/fra/47/S1>
- Member of the Editorial Board of the Journal “Free Radical Research” (from 2019)

INVITED SEMINARS

- 15/11/2002 - Analytical methods for assessing the total antioxidant capacity of plasma: limits, perspectives and applications. Yonsei University, Seoul, Korea.
- 20/11/2006 - Carnosine and related dipeptides - HNRCA Tuft's University, Boston, USA.
- 20/6/2006 - Determinazione dell'ossido d'azoto in matrici biologiche Meeting 2006 Ossido d'azoto e monossido di carbonio Sala Napoleonica, Università degli Studi di Milano, Milan, Italy.
- 22/2/2007 - Carnosine and related dipeptides: quenchers of reactive carbonyls species and their therapeutic potential Istituto di Ricerche Farmacologiche "Mario Negri". Milan, Italy.
- 22/3/2011 - Specie carboniliche reattive da glico- e lipoperossidazione quali nuovi bersagli di molecole biologicamente attive, Dipartimento Farmaco-chimico, Università degli Studi di Bari "Aldo Moro", Bari, Italy.
- 23/3/2011 - La spettrometria di massa nella progettazione e sviluppo di nuovi farmaci. Short course for the Ph.D program in Pharmaceutical Sciences, Università degli Studi di Bari "Aldo Moro", Bari, Italy.

- 29/11/2012 - Covalent and non-covalent binding of proteins by MS: from drug discovery to chemical toxicology. Seminar at the Department of Chemistry at UMASS, Amherst, USA.
- 8/2/2013 - Nuovi approcci molecolari per l'inibizione della glico-ossidazione proteica. Seminario nell'ambito del "Corso di Dottorato in Medicina e Terapia sperimentale, Università degli Studi di Torino.
- 28/6/2013 - Protein analysis by mass spectrometry. SSPA, Summer School on Pharmaceutical Analysis. Advanced Analytical Methodologies In Biopharmaceutical Quality Control. 27-29 June 2013, Rimini, Italy.
- 28/6/2013 - How to measure the molecular weight of proteins using mass spectrometry Summer School on Pharmaceutical Analysis. Advanced Analytical Methodologies In Biopharmaceutical Quality Control. 27-29 June 2013, Rimini, Italy.
- 4/7/2013 - Intact protein analysis by MS. COST CM1001, Workshop Mass Spectrometry Analysis of Protein Oxidation, School of Life & Health Sciences, Aston University, Birmingham, UK.
- 4/7/2013 - OxPTMs as biomarkers COST CM1001, Workshop Mass Spectrometry Analysis of Protein Oxidation, School of Life & Health Sciences, Aston University, Birmingham, UK.
- 6/12/2013. Novel molecular strategies to inhibit AGEs and ALEs formation and their damaging effects. The Institute of Bioanalytical Chemistry at the Faculty of Chemistry and Mineralogy. Universität Leipzig
- 1/8/2014. Searching for natural bioactive compounds as sequestering agents of cytotoxic reactive carbonyl species. Konkuk University, Republic of Korea
- 13/2/2014 Dai dipeptidi di origine alimentare a promettenti *lead compounds*: il caso dei petidomimetici della carnosina. Dipartimento di Farmacia, Università di Napoli Federico I
- 27 Ottobre 2014 Carnosine and Bioavailable Derivatives as Selective and Efficient Sequestering Agents of Cytotoxic Carbonyl Species: from Molecular Design To Preclinical Studies. The Diabetes and Obesity Center, University of Louisville, Kentucky. USA

- 16 Ottobre 2015 - Carbonilazione e glicazione proteica: ruolo patogenetico e approcci molecolari per la loro inibizione. Dipartimento di Farmacia, università degli Studi di Parma.
- 3 Giugno 2015 - Carnosine peptidomimetics are effective inhibitors of AGEs and ALEs: from molecular design to preclinical studies. The Hebrew University of Jerusalem, Israel.
- 14 Dicembre 2016 - Mass Spectrometry of Covalent Protein Binding: Applications in Drug Discovery I. University of Geneva, Switzerland.
- 12-15 Luglio 2016 Analytical strategies to study protein-lipid adducts. 1st Induction and workshop meeting, MASSTRPLA. Horizon2020. Leipzig, Germany
- 3-4 Luglio 2017 - Protein Lipoxidation: Detection strategies and challenges. University of Aveiro, Portugal. 1st Network Summer School. MASSTRPLAN. Horizon2020.
- 12-16 Marzo 2018 – La spettrometria di massa nelle scienze farmaceutiche. 23° Corso di Spettrometria di Massa. Società Chimica Italiana, Divisione di Spettrometria di Massa, Certosa di Pontigliano, Siena.
- 11-15 Marzo 2019 – La spettrometria di massa nelle scienze farmaceutiche. 23° Corso di Spettrometria di Massa. Società Chimica Italiana, Divisione di Spettrometria di Massa, Certosa di Pontigliano, Siena.

PLENARY, AND KEYNOTE LECTURES

- 2002: A selective measurement of antioxidant capacity in both the aqueous and lipid compartment of plasma. Korean Nutrition Society's Annual Meeting (plenary lecture).
- 2006: Carbonylated proteins as markers and predictors of human diseases: role of mass spectrometry in their identification and development of sequestering agents of cytotoxic carbonyls. XXII Congresso Nazionale della Società Chimica Italiana Divisione di Chimica Farmaceutica. Firenze, Italy (invited lecture)
- 2006: Mass spectrometry in drug discovery. 4th MS Pharmaday. Parma, Italy. (plenary lecture)

- 2006: Mass spectrometric strategies for identification of peptides and proteins adducted by alfa-beta-unsaturated aldehydes. 3rd HNE Club Meeting. Genova, Italy (plenary lecture).
- 2008: Carnosine derivatives as novel RCS sequestering agents in preventing protein carbonylation and related cellular dysfunction. Lipid peroxidation 2008. Karuizawa, Japan (invited lecture).
- 2008: Cytotoxic reactive carbonyl species (RCS): from metabolic studies to the discovery of novel RCS sequestering agents. XIX National Meeting on Medicinal Chemistry. Verona, Italy (main lecture).
- 2008: Bio-analysis in drug discovery: an introduction. 13th Summer Course on Pharmaceutical Analysis. Rimini, Italy.
- 2009: The newest biomarkers of oxidative damage: peptidomics and albuminomics. 19th International congress of Nutrition. Bangkok, Thailand (invited lecture).
- 2009: Mass spectrometric approaches for detection of S-glutathionylated and S-cysteinylated proteins in blood as biomarkers of oxidative stress. XXIII Congresso Nazionale della Società Chimica Italiana, Divisione di Spettrometria di Massa (key note lecture).
- 2009: Analytical Toxicology: Methodologies for Detection of Proteins Covalently Modified by Electrophilic Drug Metabolites and Endogenous Intermediates XXIX European School of Medicinal Chemistry. Urbino, Italy. (invited lecture)
- 2011: Carnosine and related dipeptides as quenchers of reactive carbonyl species. International congress on carnosine in exercise and disease. Ghent (Belgium). (invited lecture)
- 2011: Meeting on analytical methods to study oxidative damage, antioxidants and drugs Top-down and bottom-up mass spectrometric analysis of covalent modifications of albumin Cys34 as biomarker of oxidative stress. Medical University of Bialystok, Faculty of Pharmacy, Bialystok, Poland (plenary lecture).
- 2011: Covalent and non-covalent binding of proteins by MS: from drug discovery to chemical toxicology. Recent Developments in Pharmaceutical Analysis (RDPA2011).

Pavia, Italy. (key note lecture)

- 2012: Innovative high resolution mass spectrometry applications in drug discovery. Nuove prospettive in chimica farmaceutica. 6° Meeting. Riccione, Italy. (main lecture).
- 2013: The discovery of carnosine derivatives as selective and efficient sequestering agents of cytotoxic carbonyl species: from molecular design to preclinical studies. COST Action CM1001 Strategic Group Meeting on "Lipid peroxidation by-products in metabolic diseases", The Hebrew University Faculty of Medicine, Ein-Kerem Campus, Jerusalem, Israel, January 12-14, 2013 (key note lecture).
- 2013: Mass spectrometry of covalent protein binding: applications in drug discovery 24th International Symposium on Pharmaceutical and Biomedical Analysis PBA 2013 - Recent Developments in Pharmaceutical Analysis (RDPA 2013) 30 June - 3 July, 2013 Palazzo Gnudi Scagliarini - Bologna, Italy.
- 2013: High resolution mass spectrometric strategies for studying AGEs inhibitors and RAGE antagonists. SFRR-Europe 2013. Athens (Greece), 23-25 September 2013.
- 2014: Carnosine and bioavailable derivatives as sequestering agents of α,β -unsaturated aldehydes: toward the discovery of a novel class of bioactive compounds. International Congress on Carnosine and Anserine, Hoshi University, Tokyo, 2014
- Protein oxidative modifications as biomarkers and drug targets. XXIII National Meeting in Medicinal Chemistry, September 6-9, Salerno 2015.
- Lipoxidation induced protein modifications as biomarkers and drug targets. 2016 Shanghai Symposium on Lipid Metabolism and Related Diseases & 8th Biannual Meeting of International HNE-Club. Sept 16-19, 2016, Shanghai, China
- 2017 Novel molecular approaches for improving enzymatic and nonenzymatic detoxification of 4-hydroxynonenal: toward the discovery of a novel class of bioactive compounds. Meeting of the International HNE-Club. 14-15 September 2017, Graz, Austria
- 23-27 Affinity chromatography and MS strategies for studying protein lipoxidation. ISC 2018 Cannes-Mandelieu, France 32nd International Symposium on Chromatography

GRANT EVALUATOR

- BARD, the United States - Israel Binational Agricultural Research & Development Fund
- Austrian Academy of Sciences
- Israel Science Foundation
- Diabetes Australia
- Austrian Academy of Sciences
- PRIN, MIUR, Italy
- Istituto Zooprofilattico Sperimentale del Piemonte, Liguria e Valle d'Aosta (Italy)

MEMBER OF SCIENTIFIC AND ORGANIZING COMMITTEES

- 2008 Member of the Scientific Committee of the 13th Summer Course on Pharmaceutical analysis, Rimini, 21-23 September 2008
- 2008 Member of the Scientific Committee of the 5th MS-Pharmaday 2008, Verona October 27-29, 2008
- 2009 Co-chair of the International Congress RDPA2009 "Recent Developments in Pharmaceutical Analysis" September 9-12, 2009 Milan, Italy.
- 2009 Member of the Scientific and Organizing Committee of the 14th Summer School on Pharmaceutical Analysis 7-9 September 2009, Milan, Italy.
- 2010 Member of the Scientific Committee of the 6th MS-Pharmaday, Milan October 6-8, 2010
- 2010 Member of the Scientific Committee of MASSA 2010, Milan, October 6-8, 2010
- 2011 Member of the Scientific Committee of RDPA2011 "Recent Developments in Pharmaceutical Analysis", September 21-24, Pavia, Italy
- 2011 Member of the Scientific and Organizing Committee of the International congress on "Carnosine in exercise and disease", July 10-12, 2011 Ghent, Belgium.

- 2011 Member of the Scientific and of the Organizing Committee of the workshop "La spettrometria di massa in Lombardia". Milan, December 1, 2011
- 2013 Member of the Scientific Committee of the 24th International Symposium on Pharmaceutical and biomedical analysis (PBA2013), Bologna, Italy.
- 2014 Member of the Scientific Committee of the International Congress on Carnosine and Anserine 2014, ICCA2014, Tokio, Japan.
- 2017 Member of the Scientific Committee of the International Congress on Carnosine and Anserine 2017, September 12-14, University of Louisville, Louisville, KY, USA
- 2017 Member of the Scientific and Organizing Committee and the International Congress Recent Development in Pharmaceutical Analysis, 20-23 September 2017

PH.D AND POST-DOC TUTORSHIP AND SUPERVISION

- Tutor of Dr. Luca Gamberoni, Ph.D Dottorato di ricerca in Chimica del Farmaco Discovery of inhibitors of carbonyl related degenerative disease: peptides and derivatives as detoxifying agents of cytotoxic aldehydes. University of Milan, 2004-2006. (Ph.D School in Medicinal Chemistry).
- Tutor of Dr. Luca Regazzoni, Ph.D Dottorato di ricerca in Chimica del Farmaco Post translational oxidative modifications of albumina s potential biomarkers for the early diagnosis of cardiovascular diseases and as a toll to evaluate the efficacy of reactive carbonyl species sequestering agents. University of Milan, 2006-2008. (Ph.D School in Medicinal Chemistry).
- Tutor of Dr. Federico Riccardi Sirtori, Ph.D Dottorato di ricerca in Chimica del Farmaco Study of covalent and non covalent interactions of biopolymer by mass spectrometry. University of Milan, 2007-2009. (Ph.D School in Medicinal Chemistry).
- Tutor of Dr. Danilo De Maddis, Ph.D - Dottorato di ricerca in Chimica del Farmaco - High resolution mass spectrometric strategies in drug discovery for the investigation of covalent and non covalent interactions - University of Milan. 2010-2014. (Ph.D School in Medicinal

Chemistry).

- Tutor of Dr. Davide Garzon, currently Ph.D student - Dottorato di ricerca in Chimica del Farmaco – High resolution mass spectrometric strategies for Detection of Proteins Covalently Modified by Electrophilic Drug Metabolites and Endogenous Intermediates University of Milan, 2011. (Ph.D School in Medicinal Chemistry).
- Tutor of Dr. Alessandra Altomare - Dottorato di ricerca in Chimica del Farmaco. High resolution mass spectrometry strategies for the identification of small and large bioactive molecules. (Ph.D School in Medicinal Chemistry). University fo milan, 2015
- Tutor of Dr. Giovanna Baron - Dottorato di ricerca in Scienze Farmaceutiche. Mass spectrometric strategies for the study of plant extracts bioavailability, bioactivity and mechanisms of action. University of Milan, 2018
- Supervisor of Dr. Mara Colzani, postdoc position type A for tfour years (reg. al n. 0273919 del 6/6/2011 - AREA 10 - Scienze Farmaceutiche e Farmacologiche). Title of the research project: Albumina carbonilata quale biomarker di patologie su base ossidativa e infiammatoria: studi in spettrometria di massa in modalità top-down e bottom-up. 2011-2015.
- Supervisor of Dr. Luca Regazzoni, post doc position type b for one year in 2011 - Biomarkers per la diagnosi precoce di patologie cardiovascolari e per la valutazione di efficacia antiossidante di nuovi nutraceutici in soggetti affetti da sindrome metabolica. (announcement of University of Milan number 0271085).
- Supervisor of Dr. Luca Cannizzaro, post doc position type b for two year 2011-2013. (announcement of University of Milan number 027448).
- Supervisor of Dr. Alessandra Altomare, post doc position b for two years and A for two years.

RESEARCH ACTIVITY

Essential

The research activity of Dr. Aldini started in 1993 and led to the publications of 175 papers in peer

reviewed journals, 7 book chapters, more than 200 abstracts of oral or poster communications at national/international congresses, including several key note/plenary lectures at international congresses.

The h index for the papers is 49 as calculated by Scopus on the 4/3/2019.

The overall scientific production is mainly focused on the development and application of analytical methods and strategies in the pharmaceutical and medicinal chemistry field and it can be grouped into the four main research interest areas described below:

1. Development and application of analytical methods for the identification, characterization and quantitation and for studying the activity and reaction mechanisms of bioactive compounds isolated from natural sources.
2. Development and application of analytical methods for the identification, characterization and quantitation of drugs and their metabolites in pre-clinical and clinical studies.
3. Analytical methods for the discovery and development of carnosine derivatives as new detoxifying agents of cytotoxic reactive carbonyl species (RCS).
4. Mass spectrometric strategies for studying biomacromolecules-ligand interaction and covalent binding.

Selected papers

Scopus

EXPORT DATE:01 Apr 2019

Anderson, E.J., Vistoli, G., Katunga, L.A., Funai, K., Regazzoni, L., Blake Monroe, T., Gilardoni, E., Cannizzaro, L., Colzani, M., De Maddis, D., Rossoni, G., Canevotti, R., Gagliardi, S., Carini, M., Aldini, G.

A carnosine analog mitigates metabolic disorders of obesity by reducing carbonyl stress (2018) *Journal of Clinical Investigation*, 128 (12), pp. 5280-5293. Cited 5 times.

DOI: 10.1172/JCI94307

Boldyrev, A.A., Aldini, G., Derave, W.

Physiology and pathophysiology of carnosine

(2013) *Physiological Reviews*, 93 (4), pp. 1803-1845. Cited 262 times.

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30 Aprile 2019

A handwritten signature in black ink, appearing to read "Francesco Aldini". The signature is written in a cursive, flowing style.