


Turin, July the 5<sup>th</sup>, 2021

<p>Chiara Emilia Irma Cordero Born in Turin - November the 12<sup>th</sup>, 1973 Full Professor of Food Chemistry Dipartimento di Scienza e Tecnologia del Farmaco Università degli Studi di Torino Via Pietro Giuria, 9 - 10125 Turin - Italy Tel: +39 0116707172 PHYTO&amp;FOOD CHEM Group: <a href="http://www.unito.it/dstf">www.unito.it/dstf</a> e-mail: <a href="mailto:chiara.cordero@unito.it">chiara.cordero@unito.it</a></p>		
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### **Current position**

Chiara Cordero received her Master Degree in Pharmaceutical Chemistry and Technology in 1998 with "summa cum laude" at the University of Torino. Thanks to her *curriculum studiorum* she was awarded with the Silver Medal (Medaglia d'argento dell'Università di Torino) as best graduate student in Pharmaceutical Chemistry and Technology for the Academic Year 1996/97. In December 1998 she passed the Italian Pharmacist Licensure Examination.

After graduation Chiara had direct access to a post-doc grant ("Assegno di Collaborazione all'Attività di Ricerca code 14-055 - November 1998/October 2001) from Turin University for a research activity focused on the development of fast and automatic analytical methods to quantify pesticide residues in food.

Since July 2021 Chiara Cordero is Full Professor of Food Chemistry (CHIM/10 - Food Chemistry) at the Dipartimento di Scienza e Tecnologia del Farmaco of the University of Torino.

In 2008 Prof. Cordero was Research Fellow the Deutsche Forschungsanstalt für Lebensmittelchemie - DFA (German Research Center for Food Chemistry) at the Lehrstuhl für Lebensmittelchemie der Technischen Universität München - Garching (Germany) under the supervision of Prof. Peter Schieberle; in 2019 Visiting Professor at Poznan University of Life Sciences, Poznan, Poland and in 2020 Visiting Professor at Stellenbosch University, Stellenbosch, South Africa.

### **Bibliometric parameters:**

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- Orcid ID: <http://orcid.org/0000-0003-3201-0775>
- 125 scientific papers published in International peer-reviewed journals;
- 3428 citations by 2191 documents and 208 co-authors (Scopus);
- 155 posters and oral communications in National and International Symposia and Conferences;
- 12 book chapters.
- H index 36 (Scopus).

### **Area of expertise**

Research interests focus on: (a) development of innovative and advanced instrumental configurations for comprehensive two-dimensional gas chromatography (GC×GC) coupled to Mass Spectrometric detection (MS) for food metabolomics applications; (b) discovery of food intake markers (low molecular weight metabolites, Advanced Glycation End-products and volatiles in bio-fluids) and metabolic fingerprint after diet induced derangements; (c) development and application of miniaturized, fully automated and solvent-free approaches (Solid Phase Microextraction SPME, Stir Bar Sorptive Extraction SBSE) for sensomics characterization of food.

### **Number of students supervised:**

- 25 BSc
- 45 MSc
- 6 PhD (including 1 on-going)

### Institutional responsibilities

**2019 to today**, Vice-President of the Master Degree Course on Pharmaceutical Chemistry and Technology, University of Torino, Italy; **2016 to today**, Member of the Scientific Board of the PhD course in Pharmaceutical and Biomolecular Sciences, University of Torino, Italy; **2015 to today**, Member of the Research Committee of the Dipartimento di Scienza e Tecnologia del Farmaco, University of Torino, Italy; **2018 to today**, Member of Scientific Board of the Second Level Master in Innovation in Food Science and Technology-Michele Ferrero, University of Torino, Italy.

Erasmus Partner Countries Reference contact for the Cooperation agreement with Stellenbosch University (SU), Stellenbosch, South Africa – Reference Prof. André De Villiers. Erasmus + responsible for the bilateral Agreements with Agro-Bio Tech Campus, University of Lieges, Belgium and Slovak University of Technology in Bratislava, Bratislava.

Foreign Collaborator “Colaborador estrangeiro no grupo de pesquisa Substâncias Voláteis de Plantas, do(a) Empresa Brasileira de Pesquisa Agropecuária” EMBRAPA, Rio de Janeiro, Brasil.

### Teaching responsibilities

**Master Degree Course in Pharmaceutical Chemistry and Technology**, Dipartimento di Scienza e Tecnologia del Farmaco (formerly Faculty of Pharmacy), University of Torino:

- ✓ Food Chemistry curricular course since 2007/2008 Academic year to today.
- ✓ Food Analysis extra-curricular course – practical laboratories included since 2007/2009 and up to 2015/2016

**Bachelor Degree Course in Herbal Products**, Dipartimento di Scienza e Tecnologia del Farmaco (formerly Faculty of Pharmacy), University of Torino:

- ✓ Dietary products and Food Chemistry including practical laboratories on Food Analysis curricular course since 2006/2007 Academic year to today.

**Master Degree Course in Food Systems, International Degree within the EIT-Food platform**, School of Agronomy and Veterinary Medicine, University of Torino:

- ✓ Natural sources and green extraction technologies to obtain bioactive compounds curricular course, Academic year 2020/2021

**Post-graduate school of Specialization in Hospital Pharmacy**, Dipartimento di Scienza e Tecnologia del Farmaco (formerly Faculty of Pharmacy), University of Torino:

- ✓ Food Chemistry curricular course since 2006/2007 to today.

**Bachelor Degree in Clinical Nutrition (Dietistica abilitante alla professione)**, School of Medicine, University of Torino:

- ✓ Food Chemistry curricular course since 2011/2012 to today.

**Bachelor Degree in Prevention techniques in the Environment and in the Workplace** (Tecniche della Prevenzione nell'Ambiente e nei Luoghi di Lavoro), School of Medicine, University of Torino:

- ✓ Analytical techniques and methodologies for food safety assessment curricular course since 2011/2012 to today.

**Second-level Master Degree Course in Food Science, Technology and Human Nutrition – Michele Ferrero**, University of Torino:

- ✓ Advanced in Food Analysis curricular course and practical laboratories Academic years: 2008/2009-2010/2011-2012/2013-2014/2015-2016/2017-2018/2019.

**Second-level Master Degree Course in Innovation in Food Science and Technology – Michele Ferrero**, Department of Agricultural, Forest and Food Sciences at the University of Torino and the Faculty of Agriculture, Food and Environmental Sciences at the Università Cattolica del Sacro Cuore – Piacenza Campus:

- ✓ Food quality and Safety – Integrated Course Coordinator Academic year 2020/2021

**Second-level Master Degree Course in Quality, Safety, Sustainability and Innovation for the Milk production and transformation chain (Qualità, Sicurezza, Sostenibilità e Innovazione della Filiera del Latte)**, School of Agronomy and Veterinary Medicine, University of Torino.

Analytical techniques for chemical characterization and traceability of milk and milk-derived products, Academic years 2015/2016 and 2017/2018

**PhD School in Pharmaceutical and Biomolecular Sciences**, University of Torino:

- ✓ Food-omics: integrated analytical strategies for in-depth chemical characterization of food, Academic year 2018/2019

### Editorial responsibilities

**2016 to today**, Member of the Editorial Board of the *Journal of Agricultural and Food Chemistry* (ACS); **2016 to today** Member of the Editorial Board of *International Journal of Food Science and Technology* (Wiley); **2018 to today**, Academic Editor for MDPI Journals *Separations* and *Molecules*.

Chiara Cordero is regularly reviewing papers for: *Food Chemistry*, *Journal of Agricultural and Food Chemistry*, *Analytical Chemistry*, *Trends in analytical Chemistry*, *Journal of Chromatography A*, *Talanta*, *Analytica Chimica Acta*, *Journal of Separation Science*, *Journal of Chromatographic Science*, *LWT-Food Science and Technology*, *FFJ-Flavour and Fragrance Journal*, *Journal of Hazardous Materials*, *Innovative Food Science and Emerging Technologies*, *Food & Function*, *Journal of Plant Interactions* etc.

### Commission of trust

**2013 to today** Scientific Evaluation of various International Research Projects for: Alberta Innovates, Alberta State Research Foundation, Canada; FNRS Fonds pour la Formation à la Recherche dans l'Industrie et dans l'Agriculture, Belgium; NWO Cooperation China - Joint Scientific Thematic Research Programme – Joint Research Projects 2012 ALW, The Netherlands; National Science Centre (Narodowe Centrum Nauki); the University and Research (MIUR), Italy; the Italian Agency for the Evaluation of the University and Research (ANVUR), Italy.

### Prize/Awards/Academic memberships and Committees

**2019-present** Member of the Executive Board of the Italian Society of Chemistry – Interdisciplinary Group of Food Chemistry.

**2019-present**, Member of the Scientific Board of the ITACHEM FOOD – Italian Society of Food Chemistry.

**2014-present** Member of the Organization Committee of the International Symposium of GCxGC ([http://iscc44.chromaleont.it/4DAction/web\\_home\\_item/6](http://iscc44.chromaleont.it/4DAction/web_home_item/6)).

**2014-present** Member of the Advisory Board of ZOEX Europe (<http://www.zoex.eu/?id=32&title=Advanced-GCXGC-Scientific-Board>).

**2016**, included in the list of Top 50 most influential women in the analytical sciences - The Analytical Scientist 2016 The Power List (<https://theanalyticalscientist.com/power-list/2016/>).

**2014**, "John B. Phillips Award" ([http://iscc44.chromaleont.it/4DAction/web\\_home\\_item/19](http://iscc44.chromaleont.it/4DAction/web_home_item/19)) for research activity in the GCxGC field

**2008**, "Leslie S. Ettre Award" ([http://iscc44.chromaleont.it/4DAction/web\\_home\\_item/19](http://iscc44.chromaleont.it/4DAction/web_home_item/19)) for the young scientist who presented the most interesting original research in capillary gas chromatography with an emphasis on environmental and food safety" during the 32nd International Symposium on Capillary Chromatography (ISCC) and 5th GCxGC Symposium (26-30 May, 2008).

### Coordination/Participation of/to projects

Since 2003 she is involved in national and international projects as project or research unit coordinator. Moreover, relevant activities are related to the technological transfer of advanced analytical strategies for the food, flavor and fragrance industry.

- ✓ **2004-2007** Principal Investigator - Regione Piemonte - Bando regionale sulla ricerca scientifica applicata per l'anno 2004 nei settori: Salute e scienze mediche, Qualità e sicurezza alimentare, Ambiente, Nanotecnologie e nanoscienze, Aeronautica e spazio - "Total Analysis System: analisi di tracce di inquinanti organici in acque potabili con tecniche ad automazione totale Stir Bar Sorptive Extraction-GC/MS" B5 (R/03/02).
- ✓ **2010-2013** Unit Coordinator Progetto POR-FESR "Competitività regionale e occupazione" 2007-2013, Asse 1, Misura I.1.1, "Piattaforme innovative" della Regione Piemonte. Progetto "ITACA- Innovazione Tecnologica, Automazione e nuovi Controlli Analitici per migliorare la qualità e la sicurezza dei prodotti alimentari piemontesi".
- ✓ **2010-2013** Unit Coordinator Progetto POR-FESR "Competitività regionale e occupazione" 2007-2013, Asse 1, Misura I.1.1, "Piattaforme innovative" della Regione Piemonte. Progetto "ECO-FOOD".

- ✓ **2016-2020** Metabolomic Unit Coordinator ERA-HDHL Transnational Call "Biomarkers for Nutrition and Health" JPI Project "Salivage"
- ✓ **2017-present** Unit Coordinator Progetto VIOLIN - Valorization of Italian OLive products through INnovative analytical tools, AGER Fondazioni in Rete per la Ricerca Agroalimentare (<https://olivoelio.progettoager.it/index.php/olio-e-olivo-per-la-ricerca/itemlist/user/49-violin>)
- ✓ **2019-present** Metabolomic Unit Coordinator "A Healthy Diet for a Healthy Life" (JPI HDHL) and of the ERA-NET Cofund HDHL INTIMIC (GA N° 727565 of the EU Horizon 2020 Research and Innovation Programme) Project Carb-Q-4-Health.
- ✓ **2019-present** Principal Investigator Application and Core Technology University Research (ACT-UR) Agilent Technologies Inc., Project "Development and Validation of Novel Tools to Facilitate Conversion of Thermal Modulated GCxGC Methods to Reverse Flow Modulated GCxGC Methods" Grant #4294.
- ✓ Responsible of the Research for the Cooperation and Agreement with Max Rubner-Institut (MRI), Federal Research Institute of Nutrition and Food, represented by the Department of Safety and Quality of Fruit and Vegetables **Years 2017-2021**.


#### Technology Transfer Projects:

- ✓ Project Leader since **2004** to today in the Cooperation and Research Agreements with Soremartec Italia srl (Ferrero Group, Alba, CN Italy) – **19 Projects** of different topics related to food chemistry and nutrition (high-quality hazelnuts chemistry, cocoa traceability and sensory quality, tea aroma and polyphenolic composition, dried-fruits and nuts quality along shelf-life, peanuts quality and traceability, chemical indices of quality for ready-to-drink teas, cooling agents, high-quality mint essential oils sensory characterization and valorization, development of advanced analytical solutions for quality characterization of primary materials).
- ✓ Project Leader **2014-2016** in the Cooperation and Research Agreement with Firmenich SA (Geneva, Switzerland) "Development of a quantification method for complex flavor and fragrance mixtures".
- ✓ Project Leader **2017-2018** in the in the Cooperation and Research Agreement with Firmenich SA (Geneva, Switzerland) "Screening of volatiles in High quality chocolate using Comprehensive GCxGC and data mining in view of mapping them".
- ✓ Project Leader **2018-2019** in the in the Cooperation and Research Agreement with Firmenich SA (Geneva, Switzerland) "Performance evaluation and strategies to translate analytical profiling methods from thermal to flow modulated Comprehensive 2D-GC with the objective to transfer applications in QA labs".
- ✓ Project Leader **2014-present** in the in the Cooperation and Research Agreement with SRA Italy - Cernusco sul Naviglio (MI) for GCxGC-MS solution development for high throughput analysis on the field of volatiles profiling and fingerprinting. Development of new and innovative GCxGC configurations by thermal modulators and differential flow modulators.
- ✓ Project Leader **2014-present** in the in the Cooperation and Research Agreement with Markes International Ltd (Llantrisant UK) for application partnership for the Time of Flight Mass Spectrometric Detection with hard and soft ionization. TOF-MS hyphenation with GCxGC for advanced fingerprinting of complex samples.

#### Public internet links

<https://www.scopus.com/authid/detail.uri?authorId=7004576406>

<https://scholar.google.it/citations?user=uTZ0X7wAAAAJ&hl=it>

 <https://orcid.org/0000-0003-3201-0775>