

EUROPEAN  
CURRICULUM VITAE  
FORMAT



**PERSONAL INFORMATION**

Name **FRANCESCA RAIMONDO**  
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Nationality Italian  
Date of birth 12/15/1976

**WORK EXPERIENCE**

- Dates (from – to) From 01/09/2008
- Name and address of employer University of Milano-Bicocca  
Piazza dell'Ateneo Nuovo 1 20125 Milano (MI)  
University
- Type of business or sector **Researcher, SDD BIO/12**
- Occupation or position held
- Main activities and responsibilities Coordination of research activities in laboratory.

**Research activity**

The main topic of my research activity is the study of extracellular vesicles, and in particular, exosomes, membranous nanovesicles (30-150 nm) released into biological fluids by different cell types under physiological and pathological conditions. We have acquired an excellent experience both from a technical point of view, with management of problems inherent to the isolation and analysis of exosomes from different fluids (conditioned media, urine, blood, amniotic fluid, etc.) and from a biological point of view. In particular, we have focused our attention on the study of urinary exosomes, which originate from the epithelial cells that face the urinary lumen and therefore, are secreted into the urine. This is of particular interest when talking about kidney diseases, because urinary exosomes may provide potential biomarkers for kidney diseases, representing a "liquid biopsy" of kidneys. This approach was applied in the study of renal diseases, for which there are no suitable diagnostic/prognostic/predictive markers to date. In particular, proteomic study of urinary extracellular vesicles was applied to: renal carcinoma, aggressive chemo- and radio-resistant neoplasia with high metastatic potential; renal diseases of genetic origin, such as Barter and Gitelman syndromes, rare diseases of tubular renal origin, with onset in fetal-neonatal age and/or in pediatric age that compromise the quality of life of young patients;

membranoproliferative glomerulonephritis, which involve the development of terminal kidney disease before adulthood for most patients; diabetic nephropathy, common complication of diabetes, associated with alterations in the expression of numerous renal proteins (project "Search for molecular markers for the diagnosis of diabetic nephropathy", a proteomic and lipidomic approach in patients with type 1 and type 2 diabetes and experimental diabetes models "funded by PRIN 2008); idiopathic nephrotic syndrome, the most frequent primary glomerular disease in children.

Part of the research concerns the study of plasma membrane and membrane microdomains (such as caveolae and lipid rafts). These supra-molecular structures enriched of gangliosides are involved in physiological events, such as signal transduction, and pathological events, such as Alzheimer's dementia and tumors. As part of the national interuniversity project "Study of the molecular mechanisms of Alzheimer's disease in platelets and fibroblasts as a peripheral model for new diagnostic approaches", we studied the implications of caveolae, isolated from fibroblasts of Alzheimer's patients, and the alterations in the metabolism of gangliosides. In addition, in the context of the national projects "Renal carcinoma Proteoma Proteoma" and "National Network for the study of Human Proteomics", a study of subcellular proteomics on human renal tissue was addressed in order to identify potential biomarkers for the early diagnosis of renal cancer, with particular attention to the study of membrane microdomain proteoma.

- Dates (from – to) From 25/04/2008 to 25/07/2008
  - Name and address of employer University of Milano-Bicocca  
Piazza dell'Ateneo Nuovo 1 20125 Milano (MI)
  - Type of business or sector University
  - Occupation or position held Volunteer as Laboratory supervisor
  - Main activities and responsibilities Coordination of research activities in laboratory.
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- Dates (from – to) From 01/01/2008 to 31/03/2008
  - Name and address of employer University of Milano-Bicocca  
Piazza dell'Ateneo Nuovo 1 20125 Milano (MI)
  - Type of business or sector University
  - Occupation or position held Occasional collaboration as Laboratory supervisor
  - Main activities and responsibilities Coordination of research activities in laboratory.
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- Dates (from – to) From 11/01/2003 to 12/31/2007
  - Name and address of employer University of Milano-Bicocca  
Piazza dell'Ateneo Nuovo 1 20125 Milano (MI)
  - Type of business or sector University
  - Occupation or position held Laboratory supervisor/Research fellow
  - Main activities and responsibilities Coordination of research activities in laboratory.  
Proteomic and lipidomic of Renal cell carcinoma:  
Subcellular proteomic: protein pattern of subcellular fractions, in particular mitochondria, plasma membranes and membrane microdomains  
Identification of markers in biological fluids: plasma (HDL) and urine (exosomes)  
Study of lipid composition of plasma membranes and microdomains.

### **Academic activity**

- Dates (from – to) From 2011
- Name and address of employer University of Milano-Bicocca  
Piazza dell'Ateneo Nuovo 1 20125 Milano (MI)
- Type of business or sector University
- Occupation or position held Responsible professor of the course of "Biotechnology in Diagnostics", Master's Degree in Medical Biotechnology, School of Medicine and Surgery
- Main activities and responsibilities Responsible professor.

- Dates (from – to) From 2018
- Name and address of employer University of Milano-Bicocca  
Piazza dell'Ateneo Nuovo 1 20125 Milano (MI)
- Type of business or sector University
- Occupation or position held Responsible professor of the course of "Orientation Training", Master's Degree in Medical Biotechnology, School of Medicine and Surgery
- Main activities and responsibilities Responsible professor.

- Dates (from – to) From 2013
- Name and address of employer University of Milano-Bicocca  
Piazza dell'Ateneo Nuovo 1 20125 Milano (MI)
- Type of business or sector University
- Occupation or position held Titular of the course "Enzymes and antibodies: from theory to practice", Bachelor Degree in Biomedical Laboratory Techniques, School of Medicine and Surgery
- Main activities and responsibilities Responsible professor.

- Dates (from – to) From 2016
- Name and address of employer University of Milano-Bicocca  
Piazza dell'Ateneo Nuovo 1 20125 Milano (MI)
- Type of business or sector University
- Occupation or position held Referent for the project "Alternanza Scuola Lavoro/Transversal Competence and Orientation Paths" for the School of Medicine and Surgery
- Main activities and responsibilities Responsible professor.

## EDUCATION AND TRAINING

- Dates (from – to) From 11/01/2000 to 10/31/2003  
Ph.D. in Biochemistry at University of Milano-Bicocca with Prof. M. Pitto as supervisor
- Name and type of organisation providing education and training University of Milano-Bicocca, Medicine and Surgery Faculty, Dept. of Experimental, Environmental Medicine and Biotechnology
- Principal subjects/occupational skills covered Ph.D. project: Studies on subcellular proteomics of renal cell carcinoma  
Evaluation of alterations in protein expression profile of subcellular fractions in tumoral tissue compared to normal one. Aim of this work is the identification of potential biomarker for early diagnosis of RCC.
  - Preparation of subcellular fractions from renal tissue by differential centrifugation.
  - Characterisation of subcellular fraction (mitochondria, plasma membrane and plasma membrane microdomains) by enzymatic assay and protein markers enrichment.
  - Study of protein patterns by electrophoresis (SDS-PAGE and two-dimensional electrophoresis)

Involvement in the project "Study of molecular mechanisms of Alzheimer Disease (AD): platelets and fibroblasts as periferal model for new diagnostic approach".  
Role of caveolae, peculiar membrane microdomains, isolated from fibroblasts from AD patients in Alzheimer disease: study of alterations of glycosphingolipids methabolism.  
Use of fibroblast cell cultures, analysis of proteins (SDS-PAGE/Western Blotting) and lipids (HPTLC, gas chromatography).
- Title of qualification awarded **Ph.D. in Biochemistry**
- Dates (from – to) From 02/26/2003 to 02/28/2003  
Training course in Optical and Electron Microscopy

- Name and type of organisation providing education and training
  - Principal subjects/occupational skills covered
- Microscopy and Image Analysis Society (MIA), University of Milano-Bicocca, Medicine and Surgery Faculty  
 Knowledge on the principal microscopy techniques (optical, confocal and electron microscopy) and their application in cellular studies.
- Dates (from – to)
- From 12/09/2002 to 12/12/2002  
 Course on Mass Spectrometry in the study of Genome and Proteome.  
 University of Tuscia, Vitorchiano (VT) (Italy).
- Name and type of organisation providing education and training
  - Principal subjects/occupational skills covered
- Basic knowledge on the application of Mass spectrometry techniques in the study of genome and proteome
- Dates (from – to)
- From 11/28/2001 to 11/30/2001  
 "Modern Techniques in Industrial Biology", Training course on two-dimensional electrophoresis  
 Didactic Laboratory of University of Torin.  
 Course organized by Foundation for Biotechnologies  
 Practical aspects of two-dimensional electrophoresis from sample preparation to image analysis
- Name and type of organisation providing education and training
  - Principal subjects/occupational skills covered
- From 10/1995 to 07/2000  
 Degree in Medical Biotechnology (Faculty of Medicine and Surgery, University of Milan)  
 University of Milano  
 Dept. of Chemistry and Medical Chemistry  
 Experimental thesis (From March 1998 to July 2000) on "Modulation of dynamic properties of plasma membrane microdomains in neuron cells" with Prof. G. Tettamanti and Prof. M. Pitto as supervisors.
- Title of qualification awarded
- Study of sovramolecular organization of biological membranes.
  - Lipid/protein interactions in plasma membranes and their involvement in human disease.
- Degree in Medical Biotechnology (110/110)**

**PERSONAL SKILLS AND COMPETENCES**

*Acquired in the course of life and career but not necessarily covered by formal certificates and diplomas.*

**MOTHER TONGUE**

ITALIAN

**OTHER LANGUAGES**

- Reading skills
- Writing skills
- Verbal skills

ENGLISH	GERMAN
good	basic
good	basic
good	basic

**SOCIAL SKILLS AND COMPETENCES**

*Living and working with other people, in multicultural environments, in positions where communication is important and situations where teamwork is essential (for example culture and sports), etc.*

- Coordination of research activities in laboratory
- Basketball player
- Coach of basketball team (first grade students)

**ORGANISATIONAL SKILLS  
AND COMPETENCES**

*Coordination and administration of people, projects and budgets; at work, in voluntary work (for example culture and sports) and at home, etc.*

Coordinator of the course of "Biotechnologies in Diagnostics", Master's Degree in Medical Biotechnologies

Coordinator of the course of "Orientation Training", Master's Degree in Medical Biotechnology

Coordinator of the course of "Diagnostic Techniques and Automation", Master's Degree in Medical Biotechnologies

Organization of lesson calendars of Master's Degree in Medical Biotechnology, School of Medicine and Surgery

Laboratory course of enzymatic assay for Medicine and Surgery students

Laboratory course of enzymatic assay and protein electrophoresis/Western blotting for Biomedical Laboratory Technician

Laboratory course of enzymatic assay and protein electrophoresis (1DE, 2DE, diagonal 2D electrophoresis, western blotting) for biotechnology students

Tutor of Medicine and Surgery students

Degree training for biotechnology and biology students

**TECHNICAL SKILLS  
AND COMPETENCES**

*With computers, specific kinds of equipment, machinery, etc.*

**INSTRUMENTATION**

Centrifuges (bench-top, preparative and ultracentrifuges), spectrophotometers, spectrofluorimeters, electrophoresis apparatus for SDS-PAGE (invitrogen NuPAGE, Bio-Rad, ATTO) and two-dimensional electrophoresis (Bio-Rad), western blotting apparatus (invitrogen, Hoefer), densitometer (GS710 Bio-Rad), CCD cameras (AI600 and LAS4000 Image Quant, Image station Kodak2000 R), calorimeter (DSC), Nanoparticle tracking analysis instrument (NanoSight NS300)

**SOFTWARE:**

Microsoft Office, Kodak Molecular Imaging Software, Quantity One Quantitation Software, Image Master 2D platinum, Image Quant TL Image Software, GraphPad Prism, Origin, Gimp2, PhotoFilter

**ARTISTIC SKILLS  
AND COMPETENCES**

*Music, writing, design, etc.*

Pianoforte playing

Diploma in (music) theory and solfeggio at "N. Paganini" Conservatory of Genova, Italy

**OTHER SKILLS  
AND COMPETENCES**

*Competences not mentioned above.*

**DRIVING LICENCE(S)**

B driving licence

1. Santorelli L, Capitoli G, Chinello C, Piga I, Clerici F, Denti V, Smith A, Grasso A, Raimondo F, Grasso M, Magni F. (2020) In-Depth Mapping of the Urinary N-Glycoproteome: Distinct Signatures of ccRCC-related Progression. *CANCERS (BASEL)*. 2020 Jan 18;12(1):239. doi: 10.3390/cancers12010239
2. Jaconi M, Magni F, Raimondo F, Ponzoni M, Chinello C, Smith A, Piga I, Fusco N, Di Bella C, Pagni F. (2019) TdT Expression in Germ Cell Tumours: A Possible Immunohistochemical Cross-Reaction and Diagnostic Pitfall. *J CLIN PATHOL*. 2019 Aug;72(8):536-541. doi: 10.1136/jclinpath-2019-205713.
3. Cox A, Andreozzi P, Dal Magro R, Fiordaliso F, Corbelli A, Talamini L, Chinello C, Raimondo F, Magni F, Tringali M, Krol S, Jacob Silva P, Stellacci F, Masserini M, Re F. (2018) Evolution of Nanoparticle Protein Corona across the Blood-Brain Barrier. *ACS NANO*. 2018 Jul 24;12(7):7292-7300. doi: 10.1021/acsnano.8b03500.
4. Raimondo F, Chinello C, Stella M, Santorelli L, Magni F, Pitto M (2018). Effects of Hematuria on the Proteomic Profile of Urinary Extracellular Vesicles: Technical Challenges. *JOURNAL OF PROTEOME RESEARCH*, vol. 17, p. 2572-2580, ISSN: 1535-3893, doi: 10.1021/acs.jproteome.7b00763
5. Chinello C, L'imperio V, Stella M, Smith AJ, Bovo G, Grasso A, Grasso M, Raimondo F, Pitto M, Pagni F, Magni F. (2016) The proteomic landscape of renal tumors. *EXPERT REVIEW OF PROTEOMICS*. Dec;13(12):1103-1120. ISSN: 14789450 Epub 2016 Oct 28. DOI: 10.1080/14789450.2016.1248415
6. Raimondo F, Cerra D, Magni F, Pitto M (2016) Urinary proteomics for the study of genetic kidney diseases. *EXPERT REVIEW OF PROTEOMICS*. Jan 18:1-16. ISSN: 1478-9450 (Print) 1744-8387 (Online), doi:10.1586/14789450.2016.1136218
7. Raimondo F, Corbetta S, Savoia A, Chinello C, Cazzaniga M, Rocco F, Bosari S, Grasso M, Bovo G, Magni F, Pitto M (2015) Comparative membrane proteomics: a technical advancement in the search of renal cell carcinoma biomarkers. *MOLECULAR BIOSYSTEMS*, vol. 11, p. 1708-16, ISSN: 1742206X, doi: 10.1039/c5mb00020c
8. Corbetta S, Raimondo F, Tedeschi S, Syrèn M, Rebora P, Savoia A, Baldi L, Bettinelli A, Pitto M (2015). Urinary exosomes in the diagnosis of Gitelman and Bartter syndromes. *NEPHROLOGY DIALYSIS TRANSPLANTATION*, vol. 30, p. 621-630, ISSN: 0931-0509, doi: 10.1093/ndt/gfu362
9. Pitto M, Corbetta S, Raimondo F (2015). Preparation of urinary exosomes: methodological issues for clinical proteomics. *Methods in Molecular Biology*, vol. 1243, p. 43-53, ISSN: 10643745, doi: 10.1007/978-1-4939-1872-0\_3
10. Raimondo F, Corbetta S, Chinello C, Pitto M, Magni F (2014). The urinary proteome and peptidome of renal cell carcinoma patients: A comparison of different techniques. *EXPERT REVIEW OF PROTEOMICS*, vol. 11, p. 503-514, ISSN: 1478-9450, doi: 10.1586/14789450.2014.926222
11. Raimondo F, Corbetta S, Morosi L, Chinello C, Gianazza E, Castoldi G, Di Gioia C, Bombardi Rosa C, Stella A, Battaglia C, Bianchi C, Magni F, Pitto M (2013). Urinary exosomes and diabetic nephropathy: a proteomic approach. *MOLECULAR BIOSYSTEMS*, vol. 9, p. 1139-1146, ISSN: 1742-206X, doi: 10.1039/C2MB25396H
12. Raimondo F, Morosi L, Corbetta S, Chinello C, Brambilla P, Della Mina P, Villa A, Albo G, Battaglia C, Bosari S, Magni F, Pitto M (2013). Differential protein profiling of renal cell carcinoma urinary exosomes. *MOLECULAR BIOSYSTEMS*, vol. 9, p. 1220-1233, ISSN: 1742-206X, doi: 10.1039/c3mb25582d
13. Del Boccio P, Raimondo F, Pieragostino D, Morosi L, Cozzi G, Sacchetta P, Magni F, Pitto M, Urbani A (2012). A hyphenated microLC-Q-TOF-MS platform for exosomal lipidomics investigations: Application to RCC urinary exosomes. *ELECTROPHORESIS*, vol. 33, p. 689-696, ISSN: 0173-0835, doi: 10.1002/elps.201100375
14. Raimondo F, Morosi L, Chinello C, Perego R, Bianchi C, Albo G, Ferrero S, Rocco F, Magni F, Pitto M (2012). Protein profiling of microdomains purified from renal cell carcinoma and normal kidney tissue samples. *MOLECULAR BIOSYSTEMS*, vol. 8, p. 1007-1016, ISSN: 1742-206X, doi: 10.1039/c2mb05372a
15. Raimondo F, Salemi C, Chinello C, Fumagalli D, Morosi L, Rocco F, Ferrero S, Perego R, Bianchi C, Sarto C, Pitto M, Brambilla P, Magni F (2012). Proteomic analysis in clear cell renal cell carcinoma: identification of differentially expressed protein by 2-D DIGE. *MOLECULAR BIOSYSTEMS*, vol. 8, p. 1040-1051, ISSN: 1742-206X, doi: 10.1039/c2mb05390j
16. Raimondo F, Morosi L, Chinello C, Magni F, Pitto M (2011). Advances in membranous vesicle and exosome proteomics improving biological understanding and biomarker discovery. *PROTEOMICS*, vol. 11, p. 709-720, ISSN: 1615-9853, doi: 10.1002/pmic.201000422
17. Bianchi C, Bombelli S, Raimondo F, Torsello BR, Angeloni V, Ferrero S, Di Stefano V, Chinello C, Cifola I, Invernizzi L, Brambilla P, Magni F, Pitto M, Zanetti G, Mocarelli P, Perego R (2010). Primary cell cultures from human renal cortex and renal-cell carcinoma evidence a differential expression of two spliced isoforms of Annexin A3. *THE AMERICAN JOURNAL OF PATHOLOGY*, vol. 176, p. 1660-1670, ISSN: 0002-9440, doi: 10.2353/ajpath.2010.090402

18. Cifola I, Spinelli R, Beltrame L, Peano C, Fasoli E, Ferrero S, Bosari S, Signorini S, Rocco F, Perego R, Proserpio V, Raimondo F, Mocarelli P, Battaglia C (2008). Genome-wide screening of copy number alterations and LOH events in renal cell carcinomas and integration with gene expression profile. *MOLECULAR CANCER*, ISSN: 1476-4598, doi: 10.1186/1476-4598-7-6
19. Magni F, Chinello C, Raimondo F, Mocarelli P, Kienle MD, Pitto M (2008). AQP1 expression analysis in human diseases: implications for proteomic characterization. *EXPERT REVIEW OF PROTEOMICS*, vol. 5, p. 29-43, ISSN: 1478-9450, doi: 10.1586/14789450.5.1.29
20. Ticozzi-Valerio D, Raimondo F, Pitto M, Rocco F, Bosari S, Perego R, Sarto C, Di Fonzo A, Bosso N, Mocarelli P, Kienle MD, Magni F (2007). Differential expression of AQP1 in microdomain-enriched membranes of Renal Cell Carcinoma. *PROTEOMICS. CLINICAL APPLICATIONS*, vol. 1, p. 588-597, ISSN: 1862-8346, doi: 10.1002/prca.200601048
21. Chinello C, Gianazza E, Zoppis IF, Mainini V, Galbusera C, Picozzi S, Rocco F, Galasso G, Bosari S, Ferrero S, Perego R, Raimondo F, Bianchi C, Pitto M, Signorini S, Brambilla P, Mocarelli P, Kienle MD, Magni F (2010). Serum biomarkers of Renal Cell Carcinoma assessed using a protein profiling approach based on ClinProt technique. *UROLOGY*, vol. 75, p. 842-847, ISSN: 0090-4295, doi: 10.1016/j.urology.2009.09.050 -
22. Bosso N, Chinello C, Picozzi S, Gianazza E, Mainini V, Galbusera C, Raimondo F, Perego R, Casellato S, Rocco F, Ferrero S, Bosari S, Mocarelli P, Kienle MD, Magni F (2008). Human urine biomarkers of renal cell carcinoma evaluated by ClinProt. *PROTEOMICS. CLINICAL APPLICATIONS*, vol. 2, p. 1036-1046, ISSN: 1862-8346, doi: 10.1002/prca.200780139
23. Masserini M, Pitto M, Raimondo F, Cazzaniga E, Sesana S, Bellini T (2005) Methyl-beta-cyclodextrin treatment affects the thermotropic behaviour of membranes and detergent-resistant membrane fractions of cultured A431 cells. *BIOLOGICAL AND PHARMACEUTICAL BULLETIN*, vol. 28, p. 2185-2188, ISSN: 09186158, doi.org/10.1248/bpb.28.2185
24. Ceppi P, Colombo S, Francolini M, Raimondo F, Borgese N, Masserini ME (2005). Two tail-anchored protein variants, differing in transmembrane domain length and intracellular sorting, interact differently with lipids. *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*, vol. 102, p. 16269-16274, ISSN: 0027-8424, doi: 10.1073/pnas.0508157102
25. Raimondo F, Ceppi P, Guidi K, Masserini M, Foletti C, Pitto M (2005) Proteomics of plasma membrane microdomains. *EXPERT REVIEW OF PROTEOMICS*, vol. 2, p. 793-807, ISSN: 14789450, doi: 10.1586/14789450.2.5.793
26. Maccarinelli G, Sibilia V, Torsello A, Raimondo F, Pitto M, Giustina A, Netti C, Cocchi D (2005). Ghrelin regulates proliferation and differentiation of osteoblastic cells. *JOURNAL OF ENDOCRINOLOGY*, vol. 184, p. 249-256, ISSN: 0022-0795, doi: 10.1677/joe.1.05837
27. Pitto M, Raimondo F, Zoia CP, Brighina L, Ferrarese C, Masserini ME (2005). Enhanced GM1 ganglioside catabolism in cultured fibroblasts from Alzheimer patients. *NEUROBIOLOGY OF AGING*, vol. 26, p. 833-838, ISSN: 0197-4580, doi: 10.1016/j.neurobiolaging.2004.07.006
28. Sarto C, Valsecchi C, Magni F, Tremolada L, Arizzi C, Cordani N, Casellato S, Doro G, Favini P, Perego R, Raimondo F, Ferrero S, Mocarelli P, Kienle MD (2004). Expression of heat shock protein 27 in human renal cell carcinoma. *PROTEOMICS*, vol. 4, p. 2252-2260, ISSN: 1615-9853, doi: 10.1002/pmic.200300797
29. Rindi G, Necchi V, Savio A, Torsello A, Zoli M, Locatelli V, Raimondo F, Cocchi D, Solcia E (2002). Characterisation of gastric ghrelin cells in man and other mammals: studies in adult and fetal tissues. *HISTOCHEMISTRY AND CELL BIOLOGY*, vol. 117, p. 511-519, ISSN: 0948-6143, doi: 10.1007/s00418-002-0415-1