

FERDINANDO CHIARADONNA, PhD



PERSONAL DETAILS

Date and place of birth

October 24th, 1966; Pomigliano d'Arco (NA), Italy

Laboratory address

Biotechnology and Biosciences Dept, University of Milano-Bicocca, Piazza della Scienza 2, 20126 Milan, Italy

Phone

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Email

ferdinando.chiaradonna@unimib.it

PERSONAL SKILLS

Mother tongue

Italian

Other languages

English, written and spoken

Spanish, spoken

ACADEMIC ACTIVITIES

1. Roles

2019 to date: Associate Professor in Biochemistry (BIO/10 Biochimica) at Biotechnology and Biosciences Dept, University of Milano-Bicocca, Milan, Italy

2002-2019: Assistant Professor in Biochemistry (BIO/10 Biochimica) at Biotechnology and Biosciences Dept, University of Milano-Bicocca, Milan, Italy

2002 to date: Group leader at the Biotechnology and Biosciences Dept - University of Milano-Bicocca, Milan, Italy

2012 to date: Principal investigator of a research unit of the Centre of Systems Biology (SYSBIO)

2002 to date: Scientific supervisor for Master and PhD students - Biotechnology and Biosciences Dept, University of Milano-Bicocca, Milan, Italy

2002 to date: Scientific supervisor for Master thesis of the Erasmus Program

2019 to date: National Coordinator of the Italian Society of Biochemistry and Molecular Biology Group Differentiation and Neoplastic Transformation

2. Teaching (2002 to date)

- Cellular Biochemistry, Biotechnology and Biosciences
- Biochemistry II, Biotechnology and Biosciences
- Cellular Biochemistry-laboratories, Biotechnology and Biosciences
- Tumor Biochemistry, Industrial Biotechnology

NON-ACADEMIC SCIENTIFIC ACTIVITIES

Grant Reviewer for AICR (Association for International Cancer Research), Dutch Cancer Society, National Science Centre (Narodowe Centrum Nauki, Poland).

COMMUNICATION SKILLS

Good communication skills gained through many years (from 2002) of experience as University professor, as speaker in several national and international meetings as well as through the interaction with different type of collaborators (academics, medical doctors and industries)

MANAGERIAL SKILLS

Member of the following Commissions:

Commission for Departmental Space Management

Commission for Instruments Management

Commission for Human Resource Management

ACADEMIC ACHIEVEMENTS

2017 National habilitation to the role of full professor of Biochemistry

2017 National habilitation to the role of associate professor of Biochemistry

2013 National habilitation to the role of associate professor of Applied Biology

PUBLICATIONS (37 peer reviewed articles and 1 Book chapter)

Scopus h-index: 22

Google Scholar h- index: 25

Google Scholar i10-index: 30

INVITED SPEAKER (20 National and International congresses)

Reviewer for the following scientific journals: Oncogene, Cell Death and Disease, iScience, Molecular Cancer Therapeutics, BBA-Molecular Cell Research, BBA-Molecular Basis of Disease, Expert Opinion on Therapeutic Targets, ISRN Cell Biology, Biotechnology Advances, Journal of Cellular Physiology, Journal of Cellular Biochemistry, Bioinformatics, Anti-Cancer Agents in Medicinal Chemistry, BioMed Research International, Current Metabolomics, Bioscience Reports, Molecular Cancer Research, Metabolites, Cancer Letters, Molecules, Cell Biology International, Journal of Cancer and Tumor International, Antioxidants and Redox Signaling, Hepatology, BMC Cancer, PLOS One, Frontiers in Oncology, Cancer Chemotherapy and Pharmacology, BBA-General Subjects-, BMC Biology, Seminars in Cell and Developmental Biology, International Journal of Molecular Sciences, Open Life Sciences

Editorial Board Member of ISRN Cell Biology, Oxidative Medicine and Cellular Longevity, BioMed Research International and Journal of Cells

Member of the Industrial Biotechnology "Life Science" PhD board; Member of the Converging Technologies for Biomolecular Systems PhD board

Member of the international Team "Deregulated metabolism" part of the Halifax Project in Carcinogenesis

Member of the international Team "SysRev SOP: Hallmark and key characteristics mapping"

Member of Italian Society of Biochemistry

Member of Italian Association of Cell Culture

Member of Italian Group of Bioenergetics and Biomembranes

Member of International Society of Cancer Metabolism

Member of European Association for Cancer Research

Scientific supervisor for Regione Lombardia, Progetto Ingenio

AWARDED FELLOWSHIPS

1994-1996: Three-year scholarship from the Italian Cancer Research Association (International Institute of Genetics and Biophysics)

2000-2001: Annual Scholarship of the Italian Foundation for Cancer Research "Detection of cancer gene mutation and expression profiling by nanotechnology" (European Institute of Oncology)

2001-2002: Annual Scholarship of the Italian Foundation for Cancer Research "Detection of cancer gene mutation and expression profiling by nanotechnology" (European Institute of Oncology)

2002-2003: Annual scholarship from the European Institute of Oncology Foundation and the Italian Foundation for Cancer Research;

AWARDED GRANTS

2007: Progetti di Rilevante Interesse Nazionale (PRIN-Italian Government) (Principal Investigator) "Identification of the role of Sestrin 2 in tumorigenesis by a mouse KO approach" (positive result, not funded for lack of resources)

2008-2012: Progetti di Rilevante Interesse Nazionale (PRIN-Italian Government) (Unit responsible) "Transcriptional, Proliferative and Metabolic analyses of 3AB-OS Cancer Stem Cells Compared to MG-63 osteosarcoma Cells"

2009-2020: Fondi Agevolazione Ricerca (FAR-Italian Government) (Principal Investigator)

2010-2014: Sysbionet Fund (Unit responsible)

2014-2017 Italian Association for Cancer Research (AIRC) (Principal Investigator) "Molecular targeting of the hexosamine biosynthetic pathway in pancreatic cancer as a novel therapeutic strategy"

2019-2021 Executive Programme of Scientific Collaboration between Italy and China, Innovative Biomedical Devices (BIOMED) (Principal Investigator) "Preclinical evaluation of a novel PGM3 inhibitor in pancreatic ductal adenocarcinoma"

SCIENTIFIC EDUCATION

July 2005 - Ph.D. in Life Science at the Open University, London (UK).

Advisors: Prof. PG. Pelicci and Prof. A. Zelent

March 1993 - Doctoral Degree in Biological Sciences-full marks and honors, 110 /110 cum laude-University of Naples, Italy Thesis: "Steroid Nuclear Receptors"- Biochemistry Dept, University of Naples, Italy. Advisor: Prof. P. Quesada

2020-2021 COVID-19 project from Regione Lombardia (Unit responsible) “COVitaminD Trial: Prevention of COVID19 Complications in Cancer Patients”

INTERNATIONAL AND ITALIAN COLLABORATIONS

Faculty of Medicine Albert-Ludwigs-Universität, Center for Chronic Immunodeficiency, Freiburg, Germany; PGM3 insufficiency: a study of genotype-phenotype correlation in Hyper-IgE syndrome (HIES), combined immunodeficiency (CID), to severe combined immunodeficiency (SCID)

Peking Union Medical College Hospital, Beijing, China; Institute of Materia Medica, Chinese Academy of medical Science, Beijing, China. Preclinical evaluation of a PGM3 inhibitor as innovative therapeutic approach for pancreatic ductal adenocarcinoma

Department of Experimental Oncology, Pathology and Surgery of European Institute of Oncology, Milan, Italy; Oncology Research Unit, Pfizer Global Research and Development, La Jolla, California, USA; Sanofi Oncology, Cambridge, Massachusetts, USA; Institute for Applied Cancer, The University of Texas MD Anderson Cancer Center Science, Houston, Texas, USA; Department of Biosciences, University of Milan, Milan, Italy for the identification of resistance mechanisms in breast cancer patients treated with HDAC inhibitors

Luxembourg Centre for Systems Biomedicine, Esch-sur-Alzette, Luxembourg; Department of Informatics Systems and Communication, University of Milano-Bicocca, Milan, Italy; Institute of Molecular Bioimaging and Physiology (IBFM), CNR, Segrate-Cefalù, Italy; Department of Biomedical Sciences for Health, University of Milan, Segrate, Milan, Italy for the definition of the role of PKA in cancer cell resistance to nutrient stress

Computational Systems Biology Laboratory, Institute of Biomedicine and Genome-Scale Biology Research Program, University of Helsinki, Helsinki, Finland for the identification of a gene signature associated to NCI60 cancer cell collection transformation

Department of Chemical Engineering, Massachusetts Institute of Technology (MIT), Cambridge, MA, USA for the identification of the role of oncogenic K-ras in cancer cell metabolic rewiring

"The Halifax Project", for the identification of the effect of the chemical pollutants on the metabolic alterations associated to cancer

Section of Biochemical Sciences, Department of Experimental Biomedicine and Clinical Neurosciences, Polyclinic, University of Palermo, Palermo, Italy; Institute for Cancer Research and Molecular Medicine, Center of Biotechnology-College of Science and Biotechnology, Temple University, Philadelphia, Pennsylvania, USA for the genetic and metabolic characterization of osteosarcoma cancer stem cells

Institute for Biomedical Technology – CNR, Segrate, Milan, Italy; Computational Systems Biology, Max Planck Institute for Molecular Genetics, Berlin, Germany; Institute for Biology, Theoretical Biophysics, Humboldt University Berlin, Berlin, Germany for the definition of a computational model of the G1 to S transition in a mouse model of K-ras transformed fibroblasts

Department of Informatics Systems and Communication (DISCo), University of Milano-Bicocca, Milan, Italy for the identification of a transcriptional signature PKA-dependent associated to cancer cell survival under glucose depletion

Ludwig Institute for Cancer Research, Royal Melbourne Hospital Parkville, Victoria, Australia; European Molecular Biology Laboratory, Heidelberg, Germany for the characterization of the role of Urokinase in transformed monocyte/macrophage adhesion and migration

Farmitalia Carlo Erba, Nerviano (Milano), Italy; Lepetit Spa Research Center, Gerenzano (Varese) for the synthesis and *in vivo* test of recombinant proteins (Urokinase) for therapeutic purposes

Centro de Biología Molecular, Facultad de Ciencias, Universidad Autónoma de Madrid, Madrid, Spain; Dipartimento di Genetica, Università di Milano; Department of Biology and Biotechnology, San Raffaele Scientific Institute,

Milan, Italy for the definition of the post-translational modifications of Urokinase, involved in cancer cells migration

SCIENTIFIC MEETINGS-Invited speaker (2015-2018)

Main Speaker at the Phd day in Biochemistry Science, Department of Neuroscience, Biomedicine and Movement, University of Verona, February 2018, Verona, Italy

- 20/12/2018-21/12/2018 Speaker at European Institute of Oncology "IEO ALUMNI MEETING", Research Campus, December 2018, Milano, Italy.

4th ISCaM2017 Cancer Metabolism, October 2017, Bertinoro, Italy

59th National Meeting of the Italian Society of Biochemistry and Molecular Biology, September 2017, Caserta, Italy

First International GIBB Meeting, June 2017, Catania, Italy

"hackUniTO for Ageing", November 2016, Turin, Italy

23rd Meeting of the European Section of Urological Research (ESUR), October 2016, Parma, Italy

"Dissecting Biological Complexity at the Molecular Level" Meeting of the Italian Society of Biochemistry and Molecular Biology, March 2016, Bologna, Italy

Annual Scientific Day of the Biotechnology and Biosciences Dept, University of Milano-Bicocca, December 2015, Milan, Italy

2nd International ISCaM Meeting – Metabolism and Microenvironment in Cancer Plasticity, September 2015, Venice, Italy

58^o National Meeting of the Italian Society of Biochemistry and Molecular Biology, September 2015, Urbino, Italy

SCIENTIFIC EXPERIENCE

October 2002-present time

Associate Professor-Biotechnology and Bioscience Dept, University of Milano-Bicocca, Milan, Italy

Major scientific interests: Relationship between the processes leading to cellular transformation and the metabolic alterations characterizing cancer cells;

Identification and test of novel compounds able to induce cell growth arrest and/or death in pancreatic and breast cancer cells through their ability to modulate cancer cell metabolism;

Relationship between nutrient depletion and cancer cell death;

Signal transduction and molecular mechanisms of cell cycle control;

Systems dynamics of cell proliferation and cell death, with a focus to cancer cell models.

October 2002-October 2019

Assistant Professor-Biotechnology and Bioscience Dept, University of Milano-Bicocca, Milan, Italy

Major scientific interests:

Relationship between the processes leading to cellular transformation and the metabolic alterations characterizing cancer cells;

Identification and test of novel compounds able to induce cell growth arrest and/or death in pancreatic and breast cancer cells through their ability to modulate cancer cell metabolism;

Relationship between nutrient depletion and cancer cell death;

Signal transduction and molecular mechanisms of cell cycle control;

Systems dynamics of cell proliferation and cell death, with a focus to cancer cell models.

September 1997-October 2002

AIRC post-doctoral fellow, European Institute of Oncology, Milan, Italy-Prof P. Pelicci's lab Identification of new genes involved in APL (Acute Promyelocytic Leukemia) phenotype.

PhD student at Open University, London- Supervisor: Prof Arthur Zelent

June 1996-July 1997

Fellowship, I.I.G.B., Naples, Italy-Dr. Stoppelli's lab

Creation of a stable U937 cell lines expressing Nef to devise novel vectors and characterize inducible myelocytic cellular

clones. Analysis of the clones under various experimental conditions in order to define their chemotactic and adhesive properties

May 1996-June 1996

CNR fellow, European Molecular Biology Laboratory (EMBO), Heidelberg, Germany-Prof. T. Graf's lab

February 1996-May 1996

EMBO short-term fellow, EMBO, Heidelberg, Germany-Prof. T. Graf's lab (Differentiation Program) Analysis of the cytoskeletal rearrangement in myelocytic cell lines induced to differentiate by various agents;

Development of several techniques (i.e. microinjection of DNA and proteins in fibroblasts and myelocytic cell lines; confocal microscopy; image elaboration)

January 1994-December 1995

Fellowship, Italian Association for Cancer Research (AIRC), I.I.G.B., Naples, Italy- Dr. Stoppelli's lab. Characterize the ability of human urokinase receptor to bind vitronectin in mammary carcinoma

Identification of the molecular mechanisms involved in monocytic motility and on the adhesion properties of differentiated macrophages

Analysis of the effects of Nef/pp60Src interaction

Extensive experience in expressing proteins in systems, known to transfect very poorly as well as being extremely sensitive to transfection-induced damage

March 1993-March 1994

Fellowship, I.I.G.B., Naples, Italy-Dr. Stoppelli's lab

Regulation of plasminogen activation;

Molecular and cellular biology techniques (recombinant fusion proteins to determine the localization of the enzyme's phosphorylation sites)

PUBLICATIONS

Papers

1. Ricciardiello F, Gang Y, Palorini R, Li Q, Giampà M, Zhao F, You L, La Ferla B, De Vitto H, Guan W, Gu J, Zhang T, Zhao Y, **Chiaradonna F***. Hexosamine pathway inhibition overcomes pancreatic cancer resistance to gemcitabine through unfolded protein response and EGFR-Akt pathway modulation. *Oncogene*. 2020 May;39(20):4103-4117. *Corresponding Author
2. Barilani M, Palorini R, Votta G, Piras R, Buono G, Grassi M, Bollati V, **Chiaradonna F***, Lazzari L. Central metabolism of functionally heterogeneous mesenchymal stromal cells. *Sci Rep*. 2019 Oct 28;9(1):15420.. *Co-Corresponding
3. Nobile MS, Votta G, Palorini R, Spolaor S, De Vitto H, Cazzaniga P, Ricciardiello F, Mauri G, Alberghina L, **Chiaradonna F***, and Besozzi D*. Fuzzy modeling and global optimization to predict novel therapeutic targets in cancer cells. *Bioinformatics*. 2020 Apr 1;36(7):2181-2188. *Co-Corresponding Author
4. **Chiaradonna F***, Ricciardiello F, Palorini R. The Nutrient-Sensing Hexosamine Biosynthetic Pathway as the Hub of Cancer Metabolic Rewiring. *Chiaradonna F, Ricciardiello F, Palorini R. Cells*. 2018 Jun 2;7(6). *Corresponding Author
5. Paiotta A, D'Orazio G, Palorini R, Ricciardiello F, Zoia L, Votta G, De Gioia L, **Chiaradonna F**, Barbara La Ferla. Design, Synthesis, and Preliminary Biological Evaluation of GlcNAc-6P Analogues for the Modulation of Phosphoacetylglucosamine Mutase 1 (AGM1/PGM3). *Eur. J. Org. Chem.*, 2018 Mar, 1946-1952.
6. Ricciardiello F, Votta G, Palorini R, Raccagni I, Brunelli L, Paiotta A, Tinelli F, D'Orazio G, Valtorta S, De Gioia L, Pastorelli R, Moresco RM, La Ferla B, **Chiaradonna F***. Inhibition of the Hexosamine Biosynthetic Pathway by targeting PGM3 causes breast cancer growth arrest and apoptosis. *Cell Death Dis*. 2018 Mar 7;9(3):377. *Corresponding Author
7. Nonnenmacher Y, Palorini R, d'Herouël AF, Krämer L, Neumann-Schaal M, **Chiaradonna F**, Skupin A, Wegner A, Hiller K. Analysis of mitochondrial metabolism in situ: Combining stable isotope labeling with selective permeabilization. *Metab Eng*. 2016 Dec 15.
8. **Chiaradonna F***, Pirola Y, Ricciardiello F, Palorini R. Transcriptional profiling of immortalized and K-ras-transformed mouse fibroblasts upon PKA stimulation by forskolin in low glucose availability. *Genomics Data*. 2016, Sep; 9: 100-104. *Corresponding Author
9. Palorini R, Votta G, Pirola Y, De Vitto H, De Palma S, Airoidi C, Vasso M, Ricciardiello F, Lombardi PP, Cirulli C, Rizzi R, Nicotra F, Hiller K, Gelfi C, Alberghina L, **Chiaradonna F***. Protein Kinase A Activation Promotes Cancer Cell Resistance to Glucose Starvation and Anoikis. *PLoS Genet*. 2016 Mar 15;12(3):e1005931. *Corresponding Author
10. **Chiaradonna F**, Barozzi I, Miccolo C, Bucci G, Palorini R, Fornasari L, Botrugno OA, Pruneri G, Masullo M, Passafaro A, Galimberti VE, Fantin VR, Richon VM, Pece S, Viale G, Di Fiore PP, Draetta G, Pelicci PG, Minucci S, Chiocca S. Redox-Mediated Suberoylanilide Hydroxamic Acid Sensitivity in Breast Cancer. *Antioxid Redox Signal*. 2015 Jul 1;23(1):15-29.
11. **Chiaradonna F***, Cirulli C, Palorini R, Votta G, Alberghina L. New insights in the connection between HDACs, cell metabolism and cancer. *Antioxid Redox Signal*. 2015 Jul 1;23(1):30-50. *Corresponding Author
12. Goodson WH 3rd, Lowe L, Carpenter DO, Gilbertson M, Manaf Ali A, Lopez de Cerain Salsamendi A, Lasfar A, Carnero A, Azqueta A, Amedei A, Charles AK, Collins AR, Ward A, Salzberg AC, Colacci A, Olsen AK, Berg A, Barclay BJ, Zhou BP, Blanco-Aparicio C, Baglolle CJ, Dong C, Mondello C, Hsu CW, Naus CC, Yedjou C, Curran CS, Laird DW, Koch DC, Carlin DJ, Felsher DW, Roy D, Brown DG, Ratovitski E, Ryan EP, Corsini E, Rojas E, Moon EY, Laconi E, Marongiu F, Al-Mulla F, **Chiaradonna F**, Darroudi F, Martin FL, Van Schooten FJ, Goldberg GS, Wagemaker G, Nangami GN, Calaf GM, Williams G, Wolf GT, Koppen G, Brunborg G, Lyerly HK, Krishnan H, Ab Hamid H, Yasaei H, Sone H, Kondoh H, Salem HK, Hsu HY, Park HH, Koturbash I, Miousse IR, Scovassi AI, Klaunig JE, Vondráček J, Raju J, Roman J, Wise JP Sr, Whitfield JR, Woodrick J, Christopher JA, Ochieng J, Martinez-Leal JF, Weisz J, Kravchenko J, Sun J, Prudhomme KR, Narayanan KB, Cohen-Solal KA, Moorwood K,

- Gonzalez L, Soucek L, Jian L, D'Abronzio LS, Lin LT, Li L, Gulliver L, McCawley LJ, Memeo L, Vermeulen L, Leyns L, Zhang L, Valverde M, Khatami M, Romano MF, Chapellier M, Williams MA, Wade M, Manjili MH, Leonart ME, Xia M, Gonzalez MJ, Karamouzis MV, Kirsch-Volders M, Vaccari M, Kuemmerle NB, Singh N, Cruickshanks N, Kleinstreuer N, van Larebeke N, Ahmed N, Ogunkua O, Krishnakumar PK, Vadgama P, Marignani PA, Ghosh PM, Ostrosky-Wegman P, Thompson PA, Dent P, Heneberg P, Darbre P, Sing Leung P, Nangia-Makker P, Cheng QS, Robey RB, Al-Temaimi R, Roy R, Andrade-Vieira R, Sinha RK, Mehta R, Vento R, Di Fiore R, Ponce-Cusi R, Dornetshuber-Fleiss R, Nahta R, Castellino RC, Palorini R, Abd Hamid R, Langie SA, Eltom SE, Brooks SA, Ryeom S, Wise SS, Bay SN, Harris SA, Papagerakis S, Romano S, Pavanello S, Eriksson S, Forte S, Casey SC, Luanpitpong S, Lee TJ, Otsuki T, Chen T, Massfelder T, Sanderson T, Guarnieri T, Hultman T, Dormoy V, Odero-Marah V, Sabbisetti V, Maguer-Satta V, Rathmell WK, Engström W, Decker WK, Bisson WH, Rojanasakul Y, Luqmani Y, Chen Z, Hu Z. Assessing the carcinogenic potential of low-dose exposures to chemical mixtures in the environment: the challenge ahead. *Carcinogenesis*. 2015 Jun;36 Suppl 1:S254-96.
13. Robey RB, Weisz J, Kuemmerle NB, Salzberg AC, Berg A, Brown DG, Kubik L, Palorini R, Al-Mulla F, Al-Temaimi R, Colacci A, Mondello C, Raju J, Woodrick J, Scovassi AI, Singh N, Vaccari M, Roy R, Forte S, Memeo L, Salem HK, Amedei A, Hamid RA, Williams GP, Lowe L, Meyer J, Martin FL, Bisson WH, **Chiaradonna F**, Ryan EP. Metabolic reprogramming and dysregulated metabolism: cause, consequence and/or enabler of environmental carcinogenesis? *Carcinogenesis*. 2015 Jun;36 Suppl 1:S203-31.
 14. Palorini R, Votta G, Balestrieri C, Monestiroli A, Olivieri S, Vento R, **Chiaradonna F***. Energy metabolism characterization of a novel cancer stem cell-like line 3AB-OS. *J Cell Biochem*. 2014 Feb;115(2):368-79. *Corresponding Author
 15. Palorini R, Cammarata FP, Balestrieri C, Monestiroli A, Vasso M, Gelfi C, Alberghina L, **Chiaradonna F***. Glucose starvation induces cell death in K-ras-transformed cells by interfering with the hexosamine biosynthesis pathway and activating the unfolded protein response. *Cell Death Dis*. 2013 Jul 18;4:e732. *Corresponding Author
 16. Palorini R, Simonetto T, Cirulli C, **Chiaradonna F***. Mitochondrial complex I inhibitors and forced oxidative phosphorylation synergize in inducing cancer cell death. *Int J Cell Biol*. 2013;2013:243876. *Corresponding Author
 17. Di Fiore R, Fanale D, Drago-Ferrante R, **Chiaradonna F**, Giuliano M, De Blasio A, Amodeo V, Corsini LR, Bazan V, Tesoriere G, Vento R and Russo A. Genetic and Molecular Characterization of The Human Osteosarcoma 3AB-OS Cancer Stem Cell Line: A Possible Model For Studying Osteosarcoma Origin and Stemness. *J Cell Physiol*. 2013 Jun;228(6):1189-201.
 18. Palorini R, De Rasio D, Gaviraghi M, Sala Danna L, Signorile A, Cirulli C, **Chiaradonna F***, Alberghina L and Papa S. Oncogenic K-ras expression is associated with derangement of the cAMP/PKA pathway and forskolin-reversible alterations of mitochondrial dynamics and respiration. 2013 Jan 17;32(3):352-62 *Corresponding Author
 19. Alberghina L, Gaglio D, Gelfi C, Moresco RM, Mauri G, Bertolazzi P, Messa C, Gilardi MC, **Chiaradonna F** and Vanoni M. Cancer cell growth and survival as a system-level property sustained by enhanced glycolysis and mitochondrial metabolic remodeling. *Front Physiol*. 2012 Sep 12;3:362.
 20. Gaglio D, Metallo CM, Gameiro PA, Hiller K, Danna LS, Balestrieri C, Alberghina L, Stephanopoulos G, **Chiaradonna F**. Oncogenic K-Ras decouples glucose and glutamine metabolism to support cancer cell growth. *Mol Syst Biol*. 2011 Aug 16;7:523.
 21. **Chiaradonna F***, Moresco RM, Airoidi C, Gaglio D, Palorini R, Nicotra F, Messa C, Alberghina L. From cancer metabolism to new biomarkers and drug targets. *Biotechnol Adv*. 2011 Jul 23. *Corresponding Author
 22. Balestrieri C, Vanoni M, Hautaniemi S, Alberghina L, **Chiaradonna F***. Integrative transcriptional analysis between human and mouse cancer cells provides a common set of transformation associated genes. *Biotechnol Adv*. 2011 Jun 29. *Corresponding Author

23. Baracca A, **Chiaradonna F**, Sgarbi G, Solaini G, Alberghina L, Lenaz G. Mitochondrial Complex I decrease is responsible for bioenergetic dysfunction in K-ras transformed cells. *Biochim Biophys Acta*. 2010 Feb;1797(2):314-23.
24. Alfieri R, Barberis M, **Chiaradonna F***, Gaglio D, Milanese L, Vanoni M, Klipp E, Alberghina L. Towards a systems biology approach to mammalian cell cycle: modeling the entrance into S phase of quiescent fibroblasts after serum stimulation. *BMC Bioinformatics*. 2009 Oct 15;10 Suppl 12:S16. * First Co-authorship
25. Balestrieri C, Alberghina L, Vanoni M, **Chiaradonna F***. Data recovery and integration from public databases uncovers transformation-specific transcriptional downregulation of cAMP-PKA pathway encoding genes. *BMC Bioinformatics*. 2009 Oct 15;10 Suppl 12:S1. *Corresponding Author
26. Gaglio D, Soldati C, Vanoni M, Alberghina L, **Chiaradonna F***. Glutamine deprivation induces abortive s-phase rescued by deoxyribonucleotides in k-ras transformed fibroblasts. *PLoS One*. 2009;4(3):e4715. *Corresponding Author
27. **Chiaradonna F***, Balestrieri C, Gaglio D, Vanoni M. RAS and PKA pathways in cancer: new insight from transcriptional analysis. *Front Biosci*. 2008 May 1;13:5257-78. *Corresponding Author
28. **Chiaradonna F***, Gaglio D, Vanoni M, Alberghina L. Expression of transforming K-Ras oncogene affects mitochondrial function and morphology in mouse fibroblasts. *Biochim Biophys Acta*. 2006 Sep-Oct;1757(9-10):1338-56. *Corresponding Author
29. **Chiaradonna F**, Sacco E, Manzoni R, Giorgio M, Vanoni M, Alberghina L. Ras-dependent carbon metabolism and transformation in mouse fibroblasts. *Oncogene*. 2006 Aug 31;25(39):5391-404.
30. **Chiaradonna F**, Magnani C, Sacco E, Manzoni R, Alberghina L, Vanoni M. Acquired glucose sensitivity of k-ras transformed fibroblasts. *Biochem Soc Trans*. 2005 Feb;33(Pt 1):297-9.
31. Alberghina L, Chiaradonna F, Vanoni M. Systems biology and the molecular circuits of cancer. *Chembiochem*. 2004 Oct 4;5(10):1322-33.
32. Puccetti E, Obradovic D, Beissert T, Bianchini A, Washburn B, **Chiaradonna F**, Boehrer S, Hoelzer D, Ottmann OG, Pelicci PG, Nervi C, Ruthardt M. AML-associated translocation products block vitamin D(3)-induced differentiation by sequestering the vitamin D(3) receptor. *Cancer Res*. 2002 Dec 1;62(23):7050-8.
33. Alcalay M, Orleth A, Sebastiani C, Meani N, **Chiaradonna F**, Casciari C, Scirpi MT, Gelmetti V, Riganelli D, Minucci S, Fagioli M, Pelicci PG. Common themes in the pathogenesis of acute myeloid leukemia. *Oncogene*. 2001 Sep 10;20(40):5680-94.
34. **Chiaradonna F**, Fontana L, Iavarone C, Carriero MV, Scholz G, Barone MV, Stoppelli MP. Urokinase receptor-dependent and -independent p56/59(hck) activation state is a molecular switch between myelomonocytic cell motility and adherence. *EMBO J*. 1999 Jun 1;18(11):3013-23.
35. Franco P, Massa O, Garcia-Rocha M, **Chiaradonna F**, Iaccarino C, Correas I, Mendez E, Avila J, Blasi F, Stoppelli MP. Protein kinase C-dependent in vivo phosphorylation of prourokinase leads to the formation of a receptor competitive antagonist. *J Biol Chem*. 1998 Oct 16;273(42):27734-40.
36. Carriero MV, Del Vecchio S, Franco P, Potena MI, **Chiaradonna F**, Botti G, Stoppelli MP, Salvatore M. Vitronectin binding to urokinase receptor in human breast cancer. *Clin Cancer Res*. 1997 Aug;3(8):1299-308.
37. Franco P, Iaccarino C, **Chiaradonna F**, Brandazza A, Iavarone C, Mastronicola MR, Nolli ML, Stoppelli MP. Phosphorylation of human pro-urokinase on Ser138/303 impairs its receptor-dependent ability to promote myelomonocytic adherence and motility. *J Cell Biol*. 1997 May 5;137(3):779-91.

Books

De Vitto H, Palorini R, Votta G, **Chiaradonna F**. *Apoptosis and Beyond: The Many Ways Cells Die*. Nov 2018. Publisher: Wiley-Blackwell. DOI: 10.1002/9781119432463.ch2. ISBN: 978-1-119-43242-5.