

UNIVERSITÀ DEGLI STUDI DI MILANO

selezione pubblica per n. 1 posto di Ricercatore a tempo determinato ai sensi dell'art.24, comma 3, lettera a) della Legge 240/2010 per il settore concorsuale 06/N1 - Scienze delle Professioni Sanitarie e delle Tecnologie Mediche Applicate, settore scientifico-disciplinare MED/46 - Scienze Tecniche di Medicina di Laboratorio presso il Dipartimento di SCIENZE CLINICHE E DI COMUNITÀ (avviso bando pubblicato sulla G.U. n. 94 del 01/12/2020) Codice concorso 4510.

Federica Collino
CURRICULUM VITAE

INFORMAZIONI PERSONALI

COGNOME	COLLINO
NOME	FEDERICA
DATA DI NASCITA	[21, settembre, 1981]

EDUCATION

From 2011 to 2014:

Post-graduation specialty in Clinical Biochemistry at the University of Torino, Italy.
Major Area: Biochemistry / Subarea: Clinical Biochemistry

2005-2008:

PhD fellowship in Medical Pathophysiology at the Department of Internal Medicine, University of Torino, San Giovanni Battista, Torino, Italy.
Major Area: Biological Sciences, Regenerative Medicine / Subarea: Stem cells and kidney biology.
Direction: Prof. Giovanni Camussi

In 2005:

Research Fellowship, Department of Discipline Ginecologiche ed Ostetriche, Sant'Anna hospital, Torino.
Major Area: Biological Sciences / Subarea: Tumor biology
Direction: Prof. Alberto Revelli and Prof. Benedetta Bussolati

2003-2005:

Degree in Molecular Biotechnology Sciences, Course of Molecular Biotechnologies, University of Torino (UNITO), Torino, Italy Score: 110/110 cum laude with distinction.
Major Area: Biotechnologies/ Subarea: Cellular and Molecular biology.

2000-2003:

Degree in Biotechnology Sciences, Course of Biotechnologies, University of Torino (UNITO), Torino, Italy Score: 109/110.

Major Area: Biotechnologies/ Subarea: Cellular and Molecular biology.

POSITIONS

Senior Researcher and Laboratory Coordinator

Laboratory of Translational Research in Paediatric Nephro-urology, IRCCS Fondazione Ca' Granda, Policlinico of Milano (May 2020-now). Major areas: renal pathology/ paediatric nephrology/ cancer microenvironment

Projects:

- Identification of the key molecules accounting for the physiopathology of steroid 'sensitive' nephrotic syndrome (SSNS) and role of immune system.
- Development of an *ex vivo* model of human glomerulus for therapeutic drug screening and identification of non-invasive biomarkers for relapse prediction in nephrotic syndrome patients.
- Role of EVs and ECM in the tumor development and propagation to generate a personalized approach for fighting cancer.

Assistant professor (RTDa)

University of Padova, Dept. of Biomedical Sciences (December 2018- May 2020). Major areas: stem cells/ regenerative medicine/ cancer microenvironment.

Projects:

- In vivo models of CKD and acute kidney injury (AKI): definition of biomarkers (EVs and miRNAs) in blood and urine for the establishment and progression of the disease. (Collaborator Prof. Vieyra/ Prof. Lindoso, UFRJ).
- Complex models for studying tumor microenvironment interaction through EVs and possible therapeutic strategies (Collaborators Dr. Agostini, UNIPD/ Prof. Bussolati, UNITO).
- Use of EVs in regenerative medicine in nephropathies and heart diseases, Institute of Biophysics Carlos Chagas Filho, Federal University of Rio de Janeiro (UFRJ), Rio de Janeiro (Brazil) (Collaborator Prof. Campos de Carvalho, UFRJ).
- EVs as biomarkers of pathological state in transplanted children Paediatric Research Institute "Citta della Speranza", Padova, Italy (Collaborator Dr. Murer).
- EVs bio-distribution in vivo and in vitro/ Department of Medicine/ University of Padova/ UNIPD/ Italy (Collaborator Prof. Muraca, UNIPD).

Visiting professor and Senior researcher

Federal University of Rio de Janeiro, Institute of Biophysics Carlos Chagas Filho (2016-November 2018). Major areas: stem cells/ regenerative medicine/kidney pathophysiology

Project leader for the development of:

- *In vivo* models of chronic kidney disease (CKD): stem cells activity in the protection of renal and cardiac tissues in chronic rat models of hypertension.
- *In vivo* models of CKD and acute kidney injury (AKI): definition of biomarkers (EVs and miRNAs) in blood and urine for the establishment and progression of the disease.

Involved as **scientific collaborator** in the following projects:

- Definition of blood ncRNAs as biomarkers in patients with cardiometabolic syndrome.
- *In vivo* models of acute kidney injury induced by ischemia-reperfusion injury in rats: role of extracellular vesicles from different stem cell sources in the protection from kidney failure in acute models of kidney damage.
- Determination of the mitochondrial chain respiration activity in rats subjected to ischemia reperfusion injury and treated with stem cells and stem cells-related products.

Teaching activities for post-graduate students.

Basic Researcher Coordinator

Fresenius Medical Care Italia and University of Torino (2013-2015). Major areas: Technology transfer and innovation between the University of Torino and Fresenius Medical Care in the field of stem cells/ regenerative medicine/cancer.

Project coordinator for the following projects:

- Isolation of different EV population by sucrose gradient and characterization of their content (miRNA and protein) and regenerative activity *in vitro* and *in vivo*.
- Education of mesenchymal stem cells (MSC) by EVs from renal cancer stem cells and their effects on tumor propagation.
- Renal regeneration of EVs derived from miRNA depleted MSC in a model of acute kidney injury induced by glycerol administration.
- Engineering of EVs to enhance their angiogenic and anti-tumor potentials.

Management activities associated with:

- design and analysis of pre-clinical studies.
- direction of quarterly reports, milestones and minutes preparation.
- gantt chart and budget organization.
- submission of International grants (American and European projects).

Research experience in association with Fresenius Medical Care (European Grant IAPP) to the London Metropolitan University (UK), supervisor Prof. Jameel Inal and to the University Medical Center Utrecht (Netherlands), supervisor Prof. Raymond Schiffelers.

Post-Doctoral Position

University of Torino, Italy (2008-2012). Major areas: Stem Cell Biology and Cancer

Involved as **Collaborator** in projects associated with:

- Analysis of EVs release by MSC and their regenerative function in different models of acute kidney injury. Definition of the molecular mechanisms *in vitro* and *in vivo*.
- miRNA profile of different sources of adult stem cells and analysis of their transfer through EVs and possible functions.
- Generation of MSC and hepatic liver progenitor cells knock down for DCR1 and over expressing specific miRNAs.

Collaboration University of Torino-Fresenius Medical Care.

TEACHING ACTIVITIES

November 2018:

Scientific qualification as “Professore di Seconda fascia in Patologia generale e patologia clinica mediche (06/A2)”, Ministero dell'Istruzione, dell'Università e della Ricerca (MIUR), Italy.

November 2017:

Scientific qualification as “Professore di Seconda fascia in Scienze delle Professioni Sanitarie e delle Tecnologie Mediche (06/N1)”, Ministero dell'Istruzione, dell'Università e della Ricerca (MIUR), Italy.

July 2017:

Scientific qualification as “Professore di Seconda fascia in Biology (05/F1)”, Ministero dell'Istruzione, dell'Università e della Ricerca (MIUR), Italy.

In 2017:

Visiting Professor (full time).

Course for PhD students and graduate students in Physiology and Biology at UFRJ (60 hours/year).

Institute of Biophysics Carlos Chagas Filho, Federal University of Rio de Janeiro (UFRJ), Rio de Janeiro (Brazil).

Macrosectors 05/F e 05/D: Physiology and Biological Sciences.

AA. 2009/2010, 2010/2011:

Teaching assistant in Nephrology for the Course of degree in Molecular Biotechnology Sciences, University of Torino, Italy. Lessons and exam assistant.

Macrosectors 06/D (MED/14): Medical Sciences, Nephrology.

Direction: Prof. Benedetta Bussolati

AA. 2008/2009, 2009/2010, 2010/2011:

Teaching assistant for the course “Contributi di Nefrologia” in Ricerca 1, for Master degree students in Scienze delle Professioni Sanitarie Tecniche Diagnostiche (10 hours/year). Lessons and exam assistant.

Department of Scienze della Sanità Pubblica e Pediatriche. Azienda Ospedaliera Universitaria, San Giovanni Battista hospital/University of Torino, Torino, Italy.

Macrosectors 06, MED/14: Medical Sciences, Nephrology.

Direction: Prof. Benedetta Bussolati.

From AA. 2011/2012, 2012/2013, 2013/2014:

Teaching assistant re-confirmed 2012, for the course “Methodology applied to nephrology research” in Ricerca 2, for Master degree in Scienze delle Professioni Sanitarie Tecniche Diagnostiche (10 hours/year). Department of Scienze della Sanità Pubblica e Pediatriche. Azienda Ospedaliera Universitaria, San Giovanni Battista hospital/University of Torino, Torino, Italy.

Macrosectors 06, MED/14: Medical Sciences, Nephrology.

Direction: Prof. Benedetta Bussolati.

REVIEWER FOR IMPACT SCIENTIFIC JOURNALS

- ◆ From 2015: Journal of the American Society of Nephrology
- ◆ From 2015: Kidney International
- ◆ From 2014: Journal of Extracellular Vesicles
- ◆ From 2014: Stem Cells International
- ◆ From 2013: Plos One
- ◆ From 2015: BMC Genomics
- ◆ From 2017: Cytotherapy
- ◆ From 2017: Stem Cells Review and Reports.
- ◆ From 2017: STEM CELLS Translational Medicine
- ◆ From 2017: BIOMED RESEARCH INTERNATIONAL
- ◆ From 2017: Scientific Reports
- ◆ From 2017: BBA-Molecular Cell Research
- ◆ From 2017: Oncotarget
- ◆ From 2018: Cancerogenesis
- ◆ From 2019: European Journal of Pharmacology
- ◆ From 2019: Frontiers Bioengineering
- ◆ From 2019: Frontiers in Cell and Developmental Biology
- ◆ From 2019: Frontiers in Oncology

POST-GRADUATE COURSES

- ◆ AGPAM course “Metodica di base FISH/CISH”, December 2006, Università degli Studi di Torino, Torino, Italy.
- ◆ Course “Regulation of gene expression and application in qRT-PCR”, April 2007, MBC, Torino, Italy.
- ◆ Course “Research activity with laboratory animals”, MBC, November 2008, Torino, Italy.
- ◆ Course “in vivo imaging”, MBC, November 2009, Torino, Italy.
- ◆ Course “First aid at work”, July 2014, Torino, Italy.
- ◆ EMBO Practical Course, Single-cell gene expression analysis (EMBO Courses & Workshops), April 2015, Heidelberg, Germany.
- ◆ Nanomedicine course, July 2015, Utrecht, Netherlands.
- ◆ Mimetas workshop, Organ-on-a-chip workshop, January 2020, Leiden, Netherlands.

INTERNATIONAL AND NATIONAL SCIENTIFIC MEETINGS ATTENDANCE

- ◆ 9th Biotechnology National Congress “Translational models in biotechnology” MBC, Torino, 7-9 September 2006.
- ◆ III seminario nazionale della SIBBM dal titolo “Molecular Determinants of Cell Signalling”, Torino 25-27 July 2007.
- ◆ **Biochemical Society Workshop**, MicroRNAs and their targets promises and pitfalls. Charles Darwin House, London, UK, 2 November 2010, **Poster**.
- ◆ Exosomes and Microvesicles Conference, Orlando October 15-17, 2011.
- ◆ The ISEV 2013 meeting, Boston, April 18-21, 2013.
- ◆ The NIH kick-off meeting, Bethesda, September 2013.
- ◆ The ISEV 2014 meeting, Rotterdam, April 29-May 3, 2014, **Poster**.
- ◆ The NIH meeting, Bethesda, May 19-20, 2014, **Poster**.
- ◆ Meeting Frontiers in Regenerative Medicine, Torino, 19-20 February 2015. **Poster**.

- ◆ XX Congresso da SBTMO, Sociedade Brasileira de Transplante de Medula Óssea, Fortaleza, Brazil, 2016.
- ◆ 3D-cember, The Global 3D Cell Culture Event by MIMETAS B.V., Amsterdam, The Netherlands, December 3, 2019.
- ◆ Virtual ISEV workshop EV imaging in vivo, Paris, September 10-11th, 2020.

SELECTED ORAL COMMUNICATIONS AND INVITED LECTURES

- ◆ 20th Meeting of the European Renal Cell Study Group Gregynog Hall Newtown, Powys, WALES April 10th - 13th, 2008, **selected Oral communication** entitled: “Pre-clamptic sera induce nephrin shedding from podocytes through endothelin-1 release by endothelial glomerular cells”.
- ◆ Biochemical Society Workshop, MicroRNAs and their targets: promises and pitfalls. Charles Darwin House, London, UK, 2 November 2010, **selected Oral communication** entitled: “Microvesicles (MVs) derived from adult human bone marrow and tissue specific mesenchymal stem cells shuttle selected pattern of miRNAs”.
- ◆ The ISEV 2012 meeting, Göteborg, April 18-21, 2012. **selected Oral communication** entitled: “Microvesicles derived from human liver stem cells inhibit hepatoma tumor growth by delivering anti-tumor microRNAs”.
- ◆ The ISEV 2014 meeting, Rotterdam, April 29-May 3, 2014, **selected Oral communication** entitled: “Impaired expression of miRNAs in mesenchymal stem cell-derived EVs reduced their regenerative potential in a model of acute kidney injury”.
- ◆ ISEV RNA research seminar, New York, October 1-2, 2012. **Invited Lecture** entitled: “EVs derived from bone marrow and tissue resident stem cells induce kidney and liver regeneration through the transfer of specific mRNAs and miRNAs”.
- ◆ Meeting Extracellular vesicles as therapeutics, Providence, June 2014, **invited Lecture** entitled: “Extracellular Vesicles and microRNAs in Liver Stem-Cell Based Anti-Tumor Therapy”.
- ◆ UniGranRio University, **invited Lecture** entitled “Extracellulular vesicles and microRNAs in renal regeneration”, Rio de Janeiro, Brazil, September 2015.
- ◆ Charlos Chagas filho Institute, **invited Lecture** entitled “Extracellular vesicles mediators of Renal pathology and regeneration”, Rio de Janeiro, Brazil, October 2016.
- ◆ FeSBE meeting, **invited lecture** entitled “RNAs and Extracellular Vesicles: new players in renal regeneration and pathology”, Campo do Jordão, SP, Brazil, September 2017.
- ◆ Invitation as Reviewer of the EURAMET Review Conference 2018, Novotel Monte Carlo, Monaco, November 2018.
- ◆ 1st EVIta Symposium, **selected Oral communication** entitled “Extracellular vesicles from adipose mesenchymal stromal cells promote cardio-renal protection in DOCA-salt hypertensive model”, Palermo, Italy, November 2019.
- ◆ Virtual Annual International Meeting ISEV 2020, **selected Oral communication** entitled “Adipose mesenchymal stromal cell derived EVs foster cardio-renal protection in the DOCA-salt hypertensive rat model”, USA, 20-22 July 2020.

HONOURS

- ◆ Participation in the list of the authors of best abstracts presented by young authors

and top 20% abstracts at the World Congress of Nephrology ERA-EDTA (WCN, Milano, May 2009). Title: Human mesenchymal stem cell-derived microvesicles protect from acute tubular injury.

- ◆ Best poster selected for Oral Communication at the Biochemical Society Workshop (London, UK, 2010) Title: Microvesicles (MVs) derived from adult human bone marrow and tissue specific mesenchymal stem cells shuttle selected pattern of miRNAs.
- ◆ Participation in the list of the authors of the eight best abstracts of ERA-EDTA (Prague, June 2011) Title: The plasticity of human renal CD133+ progenitors is modulated by hypoxia through oct4/mir-145 balance.
- ◆ Participation in the list of authors of the best oral communication at the ISEV 2015 (Boston, April 2015) Title: “Mesenchymal stromal cell-derived extracellular vesicles inhibit in vitro and in vivo tumor cell proliferation”. Boston, USA.
- ◆ Participation as collaborator to the best work awarded at the 8ª Semana de Integração Acadêmica da UFRJ 8ª SIAC/UFRJ-2017. Student presenting: Teby Melo. Orientator: Rafael Lindoso.

SKILLS

- ◆ **Languages:** Italian, English and Portuguese
- ◆ **Communication skills:** University lessons, oral presentation and poster presentation at International congresses, International lectures.
- ◆ **Organizational/managerial skills:** writing and submission of National and International projects, project coordination, quarterly reports direction, milestones and minutes preparation, Gantt chart organization.
- ◆ **Technical/computer skills:** good command of Microsoft office suite, Graphic Design Programs (Photoshop, Illustrator, Corel Draw), programs to design and analyze gene data (Panther, David GO analysis, Funrich, miRNA-mRNA align system, Metacore etc), statistical analysis programs (Graph Pad and SPSS).
- ◆ **Laboratory skills:** primary cells isolation, primary and stable cells culture, isolation of mesenchymal stem cells from adipose tissue, bone marrow and organs, stem cells culture immunomagnetic selection and cell sorting, cancer stem cells isolation and culture, cells cryopreservation, FACS analysis, immunofluorescence, immunohistochemistry, FISH, RNA purification, DNA purification, PCR, Real time PCR, Micro Arrays, western blot, immunoprecipitation, zymography, ELISA, transient and stable transfection techniques, RNAi techniques, migration, invasion, tube formation assay, spheroid cell culture, lentiviral vectors production, measurement of membrane ATPase, orthotopic mouse models of tumor growth, animal injection routes, tumor measurement, preclinical rat and mouse models of acute and chronic kidney damage (glycerol injection, ischemia-reperfusion injury, nephrectomy models etc).

INTERNATIONAL PROJECTS PARTICIPATION

- ◆ **2019-2020:** PI of the Starting Grant “Contribution of extracellular vesicles (EVs) from different stem cells sources to the brain-kidney crosstalk in a model of hypertension-induced CKD”. Department of Medical Bioscience (Italian project).
- ◆ **From 2018:** Scientific component of the Project, founded by Carlos Chagas Filho Research Support Foundation of the State of Rio de Janeiro (FAPERJ), entitled: Use of extracellular vesicles in regenerative medicine in nephropathies and heart

- diseases. Principal investigator: Prof. Antonio Campos de Carvalho (Brazilian project).
- ◆ **From 2017:** Scientific component of the Project, founded by Carlos Chagas Filho Research Support Foundation of the State of Rio de Janeiro (FAPERJ), entitled: Preclinical studies to understand the mechanisms involved in chronic kidney diseases associated with age: diagnostic and therapeutic strategies. Principal investigator: Prof. Adalberto Vieyra. (Brazilian project).
 - ◆ **From 2016:** Scientific component of the Project of the Brazilian Research National Council (CNPq) Universal 01/2016 (421916/2016-8) (Brazilian Grant). Project title: miRNAs modification in extracellular vesicles from adipose-derived MSC submitted to hypoxia and their role in renal regeneration. Principal investigator: Prof. Rafael Soares Lindoso (Brazilian project).
 - ◆ **2015-2016:** Scientific component of the Project CNPq for Visiting Researchers entitled: Role of extracellular vesicles in the progression of acute and chronic kidney damage: miRNA involvement in the pathology. Principal investigator: Prof. Adalberto Vieyra (Brazilian project).
 - ◆ **2015-2016:** collaborator in the project founded by the Italian Association for Cancer Research (AIRC) (Italian Grant) entitled: "Targeting renal cancer stem cells with engineered extracellular vesicles". Principal investigator: Prof. Giovanni Camussi (Italian project).
 - ◆ **2013-2016:** Scientific component and supervisor of the Grant from the National Institutes of Health, 1UH2TR000880-01, entitled: Regulation of renal and bone marrow injury by extracellular vesicle non-coding RNA. Principal investigator: Dr. Peter Quesenberry. (American project).
 - ◆ **2013-2015:** Scientific component and supervisor of the European research grants Industry-Academia Partnerships and Pathways (IAPP), FP7 PEOPLE-2013-IAPP, Marie Curie projects, entitled: Definition of the optimal "RNA-protein Healing" shuttled by stem cell-derived vesicles (EVs) in different murine models of kidney injuries. Principal investigator: Dr. Ciro Tetta (European project).
 - ◆ **2011-2013:** Scientific component in the project founded by the Italian Association for Cancer Research (AIRC) (Italian Grant) entitled: Role of microvesicles in microenvironment modulation by renal cancer stem cells. Principal investigator: Prof. Giovanni Camussi (Italian project).
 - ◆ **2009-2011:** Scientific component in the project founded by the Italian Association for Cancer Research (AIRC) focused on the investigation whether microvesicles derived from human MSC of different sources can modulate tumor angiogenesis and growth and whether they may reprogram tumor cells to a non-tumorigenic or a less aggressive phenotype.
 - ◆ **2010-2013:** Scientific component of the Biotechnology Platform, UE/Regione Piemonte, MBC consortium, PiStem project, subgroup coordinated by Prof. Giovanni Camussi.

STUDENT SUPERVISION AND FORMATION

- ◆ **Co-supervisor of master's degree students in Biotechnologies:**
 - Dr. Marika Salafia. Thesis title: "Effect of Drosha depletion on healing properties of mesenchymal stem cells and derived extracellular vesicles in acute kidney injury". 2015. Medical Biotechnologies - University of Torino

- Dr. Margherita Pomatto. Thesis title: Phenotypical and functional characterization of extracellular vesicles derived from human mesenchymal stromal/stem cells. 2015. Medical Biotechnologies - University of Torino
 - Dr. Giulia Aghemo. Thesis title: Hypoxia modulates the undifferentiated phenotype of human renal inner medullary CD133+ progenitors through Oct4/miR-145 balance. 2011. Medical Biotechnologies - University of Torino.
 - Dr. Elisa Gerbaudo. Thesis title: Preeclamptic sera induce nephrin shedding from podocytes through endothelin-1 release by endothelial glomerular cells. 2008. Medical Biotechnologies, University of Torino.
- ◆ **Co-supervisor of bachelor's degree students:**
 - Dr. Margherita Pomatto. Thesis title: Mesenchymal stem cells and tumor: dual activities between promotion and inhibition. 2013-Medical Biotechnologies - University of Torino.
 - ◆ **Co-supervisor of post-graduation master's degree students:**
 - Dr. Alecia Lopes. Master title: Mitochondrial respiration chain regulation in tubular epithelial cells after extracellular vesicles administration. 2018-Master in Biophysics - Federal University of Rio de Janeiro, RJ.
 - Dr. Sarah Tassinari. Doctorate title: Extracellular matrix and tumor microenvironment: role of extracellular vesicles. In progress-PhD in Biomedical Sciences -University of Torino, Italy.

LIST OF ALL PUBLICATIONS

(<https://www.ncbi.nlm.nih.gov/pubmed/?term=collino+federica>)

Scopus 2020: numero di pubblicazioni: 44. H-index = 22. Citazioni totali: 3711.

1. De Acetis M, Notte A, Accornero F, Selvetella G, Brancaccio M, Vecchione C, Sbroggiò M, **Collino F**, Pacchioni B, Lanfranchi G, Aretini A, Ferretti R, Maffei A, Altruda F, Silengo L, Tarone G, Lembo G. Cardiac overexpression of melusin protects from dilated cardiomyopathy due to long-standing pressure overload. *Circ Res*. 2005 Jul 8;97(1): e5. PubMed PMID: 15860758
2. Bruno S, Bussolati B, Grange C, **Collino F**, Graziano ME, Ferrando U, Camussi G. CD133+ renal progenitor cells contribute to tumor angiogenesis. *Am J Pathol*. 2006 Dec;169(6):2223-35. PubMed PMID: 17148683
3. **Collino F**, Bussolati B, Gerbaudo E, Marozio L, Pelissetto S, Benedetto C, Camussi G. Preeclamptic sera induce nephrin shedding from podocytes through endothelin-1 release by endothelial glomerular cells. *Am J Physiol Renal Physiol*. 2008 May; 294(5): F1185-94. Epub 2008 Feb 20. PubMed PMID: 18287402
4. Bussolati B, **Collino F**, Camussi G. I meccanismi del danno cronico renale nelle nefropatie e la loro possibile reversibilità. *Giornale italiano di nefrologia / anno 25 s-44, 2008 / pp. s3-s10.*
5. Hauser PV, **Collino F**, Bussolati B and Camussi G. Nephrin and Endothelial Injury. *Curr Opin Nephrol Hypertens*. 2009 Jan;18(1): 3-8. PubMed PMID: 19077682
6. Bruno S, Bussolati B, Grange C, **Collino F**, Verdun Cantogno L, Herrera MB, Biancone L, Tetta C, Segoloni G, Camussi G. Isolation and characterization of resident mesenchymal stem cells in human glomeruli. *Stem Cells Dev*. 2009 Jul-Aug;18(6): 867-80. PubMed PMID: 19579288

7. Bruno S, Grange C, Deregibus MC, Calogero RA, Saviozzi S, **Collino F**, Morando L, Busca A, Falda M, Bussolati B, Tetta C, Camussi G. Mesenchymal stem cell-derived microvesicles protect against acute tubular injury. *J Am Soc Nephrol.* 2009 May;20(5): 1053-67. Epub 2009 Apr 23. PubMed PMID: 19389847
8. **Collino F**, Revelli A, Massobrio M, Katsaros D, Schmitt-Ney M, Camussi G, Bussolati B. Epithelial-mesenchymal transition of ovarian tumor cells induces an angiogenic monocyte cell population. *Exp Cell Res.* 2009 Oct 15;315(17): 2982-94. Epub 2009 Jun 16. PubMed PMID: 19538958
9. Sterpone L, **Collino F**, Camussi G. Analysis and Clustering of MicroRNA Array: A New Efficient And Reliable Computational Method. In: Arabnia H, ed. *Software Tools and Algorithms for Biological Systems* (book series, *Advances in Experimental Medicine and Biology*, AEMB), Springer (The Netherlands), 2010. ISBN: 978-1-4419-7045-9.
10. **Collino F**, Deregibus MC, Bruno S, Sterpone L, Aghemo G, Viltono L, Tetta C, Camussi G. Microvesicles derived from adult human bone marrow and tissue specific mesenchymal stem cells shuttle selected pattern of miRNAs. *PLoS One.* 2010 Jul 27;5(7): e11803. PubMed PMID: 20668554
11. Grange C, Tapparo M, **Collino F**, Vitillo L, Damasco C, Deregibus MC, Tetta C, Bussolati B, Camussi G. Microvesicles released from human renal cancer stem cells stimulate angiogenesis and formation of lung premetastatic niche. *Cancer Res.* 2011 Aug 1;71(15): 5346-56
12. Bussolati B, Moggio A, **Collino F**, Aghemo G, D'Armento G, Grange C, Camussi G. Hypoxia modulates the undifferentiated phenotype of human renal inner medullary CD133+ progenitors through Oct4/miR-145 balance. *Am J Physiol Renal Physiol.* 2012 Jan;302(1): F116-28
13. **Collino F**, Bruno S, Deregibus MC, Tetta C, Camussi G. MicroRNAs and mesenchymal stem cells. *Vitam Horm.* 2011; 87: 291-320. Book Chapter.
14. Bussolati B, **Collino F**, Camussi G. CD133+ cells as a therapeutic target for kidney diseases. *Expert Opin Ther Targets.* 2012 Feb; 16(2):157-65
15. Bruno S, Grange C, **Collino F**, Deregibus MC, Cantaluppi V, Biancone L, Tetta C, Camussi G. Microvesicles derived from mesenchymal stem cells enhance survival in a lethal model of acute kidney injury. *PLoS One.* 2012; 7(3): e33115
16. Fonsato V*, **Collino F***, Herrera MB, Cavallari C, Deregibus MC, Cisterna B, Bruno S, Romagnoli R, Salizzoni M, Tetta C, Camussi G. Human liver stem cell-derived microvesicles inhibit hepatoma growth in SCID mice by delivering antitumor microRNAs. *Stem Cells.* 2012 Sep; 30(9): 1985-98. doi: 10.1002/stem. 1161.* equally contributed
17. Bruno S, **Collino F**, Tetta C, Camussi G. Dissecting Paracrine Effectors for Mesenchymal Stem Cells. *Adv Biochem Eng Biotechnol.* 2012 Sep 7. PubMed PMID: 22968371
18. Bruno S*, **Collino F***, Deregibus MC, Grange C, Tetta C, Camussi G. Microvesicles derived from human bone marrow mesenchymal stem cells inhibit tumor growth. *Stem Cells Dev.* v.22, p.758-771, 2013. *equally contributed.
19. Bussolati B, Lauritano C, Moggio A, **Collino F**, Mazzone M, Camussi G. Renal CD133(+)/CD73(+) progenitors produce erythropoietin under hypoxia and prolyl hydroxylase inhibition. *J Am Soc Nephrol.* 2013 Jul;24(8): 1234-41
20. **Collino F**, Grange C, and Camussi G. Release of microRNA-containing vesicles can stimulate angiogenesis and metastasis in renal carcinoma. *MicroRNAs In Medicine.* Chapter 37, 2013. Online ISBN: 9781118300312, DOI: 10.1002/9781118300312.
21. **Collino F.**, Bruno S, Lindoso RS, Camussi G. miRNA expression in Mesenchymal Stem Cells. *Current Pathobiology Reports*, September 2014, Volume 2, Issue 3, pp 101-107

22. Lindoso RS, **Collino F**, Bruno S, Araujo DS, Sant'Anna JF, Tetta C, Provero P, Quesenberry PJ, Vieyra A, Einicker-Lamas M, Camussi G. Extracellular vesicles released from mesenchymal stromal cells modulate miRNA in renal tubular cells and inhibit ATP depletion injury. *Stem Cells Dev.* 2014 Aug 1;23(15): 1809-19. doi: 10.1089/scd.2013.0618. Epub 2014 May 20
23. Grange C, **Collino F**, Tapparo M, Camussi G. Oncogenic micro-RNAs and Renal Cell Carcinoma. *Front Oncol.* 2014 Mar 17;4: 49. doi: 10.3389/fonc.2014.00049. eCollection 2014. Review. PubMed PMID: 24672771; PubMed Central PMCID: PMC3956040
24. Camussi G., **Collino F.**, Deregibus MC. Extracellular Vesicle-Mediated Epigenetic Reprogramming of Cells. *Extracellular Vesicles in Health and Disease.* May 2014. (Book Chapter).
25. Bruno S, **Collino F**, Iavello A, Camussi G. Effects of mesenchymal stromal cell-derived extracellular vesicles on tumor growth. *Front Immunol.* 2014 Aug 11;5: 382. doi: 10.3389/fimmu.2014.00382. eCollection 2014. Review. PubMed PMID: 25157253; PubMed Central PMCID: PMC4127796
26. **Collino F.**, Bruno S., Incarnato D., Dettori D., Neri F., Provero P., Pomatto M., Oliviero S., Tetta C., Quesenberry P. and Camussi G. Acute kidney injury recovery induced by extracellular vesicles carrying miRNAs, *J Am Soc Nephrol.* v.26, p. 2349 - 2360, 2015.
27. Lindoso RS *, **Collino F.** * and Camussi G. Extracellular vesicles derived from renal cancer stem cells induce a pro-tumorigenic phenotype in mesenchymal stromal cells. *Oncotarget* v.6, p.7959-7969, 2015.
28. Lindoso RS, Sandim V, **Collino F**, Carvalho AB, Dias J, Da Costa MR, Zingali RB, Vieyra A. Proteomics of cell-cell interactions in health and disease. *Proteomics (Weinheim. Print).* v.16, p. 328-344, 2016.
29. Wen S, Dooner M, Cheng Y, Papa E, Del Tasso M, Pereira M, Deng Y, Goldberg L, Aliotta J, Chatterjee D, Stewart C, Carpanetto A, **Collino F**, Bruno S, Camussi G, Quesenberry P. Mesenchymal stromal cell-derived extracellular vesicles rescue radiation damage to murine marrow hematopoietic cells. *Leukemia* 2016.
30. Chiabotto G, Bruno S, **Collino F**, Camussi G. Mesenchymal Stromal Cells Epithelial Transition Induced by Renal Tubular Cells-Derived Extracellular Vesicles. *PLoS One* 2016, 11(7): e0159163. doi: 10.1371/journal.pone.0159163.
31. **Collino F**, Pomatto M, Bruno S, Lindoso RS, Tapparo M, Sicheng W, Quesenberry P, Camussi G. Exosome and Microvesicle-Enriched Fractions Isolated from Mesenchymal Stem Cells by Gradient Separation Showed Different Molecular Signatures and Functions on Renal Tubular Epithelial Cells. *Stem Cell Rev.* 2017. doi: 10.1007/s12015-016-9713-1.
32. Pathan M et al. A novel community driven software for functional enrichment analysis of extracellular vesicles data. *Journal of Extracellular vesicles*, 2017 VOL. 6, 1321455. doi: 10.1080/20013078.2017.1321455.
33. Bruno S, Tapparo M, **Collino F**, Chiabotto G, Deregibus MC, Soares Lindoso R, Neri F, Kholia S, Giunti S, Wen S, Quesenberry P, regenerative potential of different extra-cellular vesicle populations derived from Camussi G. Renal bone marrow mesenchymal stromal cells. *Tissue Eng Part A.* 2017 May 4. doi: 10.1089/ten.TEA.2017.0069.
34. Cavallari C, Ranghino A, Tapparo M, Cedrino M, Figliolini F, Grange C, Giannachi V, Garneri P, Deregibus MC, **Collino F**, Rispoli P, Camussi G, Brizzi MF. Serum-derived extracellular vesicles (EVs) impact on vascular remodeling and prevent muscle damage in acute hind limb ischemia. *Sci Rep.* 2017 Aug 15;7(1):8180. doi: 10.1038/s41598-017-08250-0.

35. Lindoso RS, **Collino F**, Vieyra A. Extracellular vesicles as regulators of tumor fate: crosstalk among cancer stem cells, tumor cells and mesenchymal stem cells. *Stem Cell Investig.* 2017 Sep 16;4: 75. doi: 10.21037/sci.2017.08.08. eCollection 2017.
36. Brossa A, Papadimitriou E, **Collino F**, Incarnato D, Oliviero S, Camussi G and Bussolati B. Role of CD133 molecule in Wnt response and renal repair. *STEM CELLS Translational Medicine.* (2018 accepted, In press).
37. **Collino F**, Rossi MID and Lindoso RS. Cancer stem cells concepts and their association with diagnostic and therapeutic strategies. In *Researches on new generation tumor markers.* Book chapter (2018 accepted).
38. Lindoso, R. S., Kasai-Brunswick, T. H., Monnerat Cahli, G., **Collino, F.**, Bastos Carvalho, A., Campos de Carvalho, A. C., & Vieyra, A. (2019). Proteomics in the World of Induced Pluripotent Stem Cells. *Cells*, 8(7), 703. doi.org/10.3390/cells8070703.
39. Tapparo M, Bruno S, **Collino F**, Togliatto G, Deregibus MC, Provero P, Wen S, Quesenberry PJ, Camussi G. Renal Regenerative Potential of Extracellular Vesicles Derived from miRNA-Engineered Mesenchymal Stromal Cells. *Int J Mol Sci.* 2019 May 14;20(10). pii: E2381. doi: 10.3390/ijms20102381.
40. **Collino F**, Lopes JA, Corrêa S, Abdelhay E, Takiya CM, Wendt CHC, de Miranda KR, Vieyra A, Lindoso RS. Adipose-Derived Mesenchymal Stromal Cells Under Hypoxia: Changes in Extracellular Vesicles Secretion and Improvement of Renal Recovery after Ischemic Injury. *Cell Physiol Biochem.* 2019;52(6):1463-1483. doi: 10.33594/000000102.
41. Soares Lindoso R., Lopes JA., Binato R., Abdelhay E., Maeda Takiya C., Rocha de Miranda K., Silva Lara L., Viola A., Bussolati B., Vieyra A. and **Collino F.** Adipose Mesenchymal Cells-Derived Extracellular Vesicles Alleviate DOCA-salt-Induced Hypertension by Promoting Cardio-Renal Protection. *Mol Ther Methods Clin Dev.* 2019; 16:63-77. Published 2019 Nov 15.
42. **Collino F**, Lopes JA, Tortelote GG, Tapparo M, Brunswick THK, Lopes GMC, Almeida DB, Skovronova R, Wendt HCC, de Miranda KR, Bussolati B, Vieyra A. and Lindoso RS, Extracellular vesicles derived from induced pluripotent stem cells promote renoprotection in acute kidney injury model. *Cells* 2020.
43. D'Angelo E, Soares Lindoso R., Sensi F., Pucciarelli S., Bussolati B., Agostini M. and **Collino F.** Extracellular matrix and vesicles: effectors and targets of Epithelial-Mesenchymal Transition in cancer. *Front Oncol.* 2020 Jul 24; 10:1122.
44. Tapparo M, Pomatto MAC, Deregibus MC, Papadimitriou E, Cavallari C, D'antico S, **Collino F.** and Camussi G. Serum derived extracellular vesicles mediated delivery of synthetic miRNAs in human endothelial cells. *Frontiers in Molecular Biosciences*, section Protein and RNA Networks, Under submission.

Data

10/12/2020

Luogo

Milano