

PERSONAL INFORMATION

Stefania Bruno



📍 University of Torino, Italy

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Sex F | Date of birth 11/11/1974 | Nationality Italian

Enterprise	University	EPR
☐ Management Level	☐ Full professor	☐ Research Director and 1st level Technologist / First Researcher and 2nd level Technologist
☐ Mid-Management Level	☒ Associate Professor	☐ Level III Researcher and Technologist
☐ Employee / worker level	☐ Researcher and Technologist of IV, V, VI and VII level / Technical collaborator	☐ Researcher and Technologist of IV, V, VI and VII level / Technical collaborator

WORK EXPERIENCE

March 2022 – until now

Associate Professor of Laboratory Medicine (Med-46)

University of Torino, Department of Medical Sciences, Laboratory of Translational Research, Città della Salute e della Scienza, Molinette Hospital

- Isolation and characterization of extracellular vesicles from different sources and their application in different *in vitro* and *in vivo* models of renal and hepatic fibrosis

October 2020 - February 2022

Assistant Professor of Laboratory Medicine (Med-46)

University of Torino, Department of Medical Sciences, Laboratory of Translational Research, Città della Salute e della Scienza, Molinette Hospital.

- Isolation and characterization of extracellular vesicles from different sources of stem cells and their application in different experimental animal models of renal and hepatic fibrosis

December 2017 – September 2020

Assistant Professor of Nephrology (Med-14)

University of Torino, Department of Medical Sciences, Laboratory of Renal Immunopathology, Molinette Hospital, Città della Salute e della Scienza.

- *In vitro* and *in vivo* models of hepatic fibrosis to test anti-fibrotic activity of extra-cellular vesicles

October 2011 – November 2017

Assistant Professor of Nephrology (Med-14)

University of Torino, Department of Molecular Biotechnology and Healthy Science, Stem Cell Laboratory, Molecular Biotechnology Center.

- Role of extracellular vesicles from different sources in tissue regeneration in different models of acute injuries of kidney and liver
- Anti-tumor activity of stem cell extra-cellular vesicles
- Immunomodulation capacities of hepatic stem cells
- Engineering of stem cell-derived extra-cellular vesicles to increase their regenerative capacity

2008 – 2011

Co.Co. Pro with Sis. Ter S.p.A.

University of Torino, Department of Internal Medicine, Molecular Biotechnology Center

- Role of the human bone marrow mesenchymal stem cells in tissue regeneration after induction of experimental acute kidney injury

2003 – 2007

PostDoctoral Fellowship

University of Torino, Department of Internal Medicine, Laboratory of Renal Immunopathology, Molinette Hospital.

- Isolation and characterization of stem cells from different human tissues and tumors

EDUCATION AND TRAINING

2007 – 2011

Specialization in Clinical Biochemistry

University of Torino, Italy

- Microvesicles derived from human adult bone marrow mesenchymal stem cells protect against ischemia-reperfusion-induced acute and chronic kidney injury.

2000 - 2004

PhD in Human Oncology

University of Torino, IRCC, Candiolo (TO).

- Megakaryocyte reconstitution: comparison between CD34+ cells from umbilical cord blood and ex-vivo expanded stem cells

1993 - 1999

Degree in Biological Science

University of Torino, IRCC, Candiolo (TO).

- Cytofluorimetric evaluation of hematopoietic stem cells from umbilical cord blood capable of *in vivo* repopulation

capacity: relevance of ex-vivo expansion.

PERSONAL SKILLS

Job-related skills

Cell culture techniques

Extracellular vesicles purification and characterization with different techniques

Flow cytometric analyses of different cell populations and of extra-cellular vesicles

Molecular biology techniques: protein, DNA and RNA purification, RNA retro-transcription, PCR and real time PCR analyses, western blot analyses

Analyses of histological slides with different staining techniques

Invited presentations

- Gordon Conference 2016, Sunday River, Newry, ME, USA: "Mesenchymal stromal cell derived extracellular vesicles facilitate the repair of renal injury".
- 7th meeting of the forum of Italian Researchers on MSC 2016, Milano, Italy: "Effects of mesenchymal stromal cell-derived extra-cellular vesicles on tumor growth"
- Select Biosciences Conference on Extracellular Vesicles", 2017, Cambridge UK: "Renal Regenerative Potential of Different Extracellular Vesicle Populations Derived from BM-MSCs".
- Joint International Xenotransplantation Association and Cell Transplant and Regenerative Medicine Society", Virtual Congress, 2021: "Extracellular vesicles to repair the diseased liver".
- Gordon Conference, 2022, Sunday River, Newry, ME, USA: "Extracellular vesicles derived from human liver stem cells attenuate chronic renal injury in two different animal models of chronic kidney disease"
- Annual Conference 2022 of the Italian Group of Mesenchymal Cells (GISM): "Translational lab-to-clinic hurdles in therapy with MSC-EVs".

Patents

-International patent: Bruno Stefania, Herrera Maria Betariz, Fonsato Valentina, Camussi Giovanni, Tetta Ciro. (2011). "Microvesicles (MVs) derived from adult stem cells for use in the therapeutic treatment of a tumor disease". WO2011107437 (A1)

-International patent: Camussi Giovanni, Bruno Stefania, Bussolati Benedetta (2011). "Isolated multipotent mesenchymal stem cells from human adult glomeruli (HGL-MSC), a method of preparing thereof and uses thereof in the regenerative medicine of the kidney". US2011256111 (A1), EP2186883 (A1)

ADDITIONAL INFORMATION

Total number of publications in peer-review journals last 10 years: 44

Total Impact Factor (IF) (average IF/paper) last 10 years: 266 (6/paper)

Total number of citations: 6713

H index: 45

Relevant Publications

1. Herrera MB, Fonsato V, **Bruno S**, Grange C, Gilbo N, Romagnoli R, Tetta C, Camussi G. Human liver stem cells improve liver injury in a model of fulminant liver failure. *Hepatology*. 2013 Jan;57(1):311-9. doi: 10.1002/hep.25986.
2. Collino F*, **Bruno S***, Incarnato D, Dettori D, Neri F, Provero P, Pomatto M, Oliviero S, Tetta C, Quesenberry PJ, Camussi G. AKI Recovery Induced by Mesenchymal Stromal Cell-Derived Extracellular Vesicles Carrying MicroRNAs. *J Am Soc Nephrol*. 2015;26(10):2349-60. (*equally contributed). doi: 10.1681/ASN.2014070710.
3. Hasmim M*, **Bruno S***, Azzi S, Galleme C, Michel JG, Chiabotto G, Lecoz V, Romei C, Spaggiari GM, Pezzolo A, Pistoia V, Angevin E, Gad S, Ferlicot S, Messai Y, Kieda C, Clay D, Sabatini F, Escudier B, Camussi G, Eid P, Azzarone B, Chouaib S. Isolation and characterization of renal cancer stem cells from patient-derived xenografts. *Oncotarget*. 2016;7(13):15507-24. (*equally contributed). doi: 10.18632/oncotarget.6266.
4. **Bruno S**, Grange C, Tapparo M, Pasquino C, Romagnoli R, Dametto E, Amoroso A, Tetta C, Camussi G. Human Liver Stem Cells Suppress T-Cell Proliferation, NK Activity, and Dendritic Cell Differentiation. *Stem Cells Int*. 2016;2016:8468549. doi: 10.1155/2016/8468549.
5. Ranghino A, **Bruno S**, Bussolati B, Moggio A, Dimuccio V, Tapparo M, Biancone L, Gontero P, Frea B, Camussi G. The effects of glomerular and tubular renal progenitors and derived extracellular vesicles on recovery from acute kidney injury. *Stem Cell Res Ther*. 2017; 7;8(1):24. doi: 10.1186/s13287-017-0478-5.
6. **Bruno S**, Tapparo M, Collino F, Chiabotto G, Deregibus MC, Soares Lindoso R, Neri F, Kholia S, Giunti S, Wen S, Quesenberry P, Camussi G. Renal Regenerative Potential of Different Extracellular Vesicle Populations Derived from Bone Marrow Mesenchymal Stromal Cells. *Tissue Eng Part A*. 2017 Jun 13. doi: 10.1089/ten.TEA.2017.0069.
7. *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). (*equally contributed). doi: 10.3390/ijms20102381.
8. **Bruno S**, Herrera Sanchez MB, Pasquino C, Tapparo M, Cedrino M, Tetta C, Camussi G. Human Liver-Derived Stem Cells Improve Fibrosis and Inflammation Associated with Nonalcoholic Steatohepatitis. *Stem Cells Int*. 2019 Jun 2;2019:6351091. doi: 10.1155/2019/6351091.
9. **Bruno S**, Pasquino C, Herrera Sanchez MB, Tapparo M, Figliolini F, Grange C, Chiabotto G, Cedrino M, Deregibus MC, Tetta C, Camussi G. HLSC-Derived Extracellular Vesicles Attenuate Liver Fibrosis and Inflammation in a Murine Model of Non-alcoholic Steatohepatitis. *Mol Ther*. 2020 Feb 5;28(2):479-489. doi: 10.1016/j.ymthe.2019.10.016.
10. Chiabotto G, Ceccotti E, Tapparo M, Camussi G, **Bruno S**. Human liver stem cell-derived extracellular vesicles target hepatic stellate cells and attenuate their pro-fibrotic phenotype. *Front Cell Dev Biol*. 2021 Nov 2;9:777462. <https://doi.org/10.3389/fcell.2021.777462>