

Riccardo Panella, Ph.D.

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RESEARCH EXPERIENCE

Desert Research Institute ***Assistant Research Professor***

Reno, NV
2020, present

- Coordinate a research group focused on relationship between cancer progression and metabolism
- Design, direct and managing of multiple projects on cancer genetics, particularly focused on non-coding RNAs, with the final goal of integrate data from human genetic studies into functional models that can help dissecting mechanisms of actions for human disease and can be used as tool for drug screenings and testing
- Coordinate a research group focused on NAFLD with the goal of finding new biomarkers, as well as disentangle the role of non-coding RNAs in the disease progression and develop the first therapeutic treatment for NAFLD
- Establish and coordinate prestigious collaborations with international groups focused on accelerate the project carried in my lab as well as promoting inter-institute exchanges of personnel, protocols and knowledge
- Mentoring for Post Doc, lab members, and students to form the next generation of scientists teaching them the rigor and the ethic needed to become a good researcher as well as the techniques required to carry on their projects

Resalis Therapeutics srl ***Co-Founder, Board of Directors member, Chief Biology Office***

Turin, ITA
2021, present

- Resalis Therapeutics is a biopharma company focused on the development of oligonucleotide anti-sense therapies to treat metabolic disorders, including MAFLD/NAFLD/NASH, obesity, and cancer. The company leverages on the scientific research of a team of internationally renowned scientists.
- Resalis Therapeutics is advancing its pipeline of first-in-class anti-miRNA compounds toward clinical validation, supported by robust preclinical evidence generated at Beth Israel Deaconess Medical Center (Harvard Medical School, Boston – US) and Aalborg University (Copenhagen, Denmark).
- Provide direction for the company development in terms of scientific milestones and future expansions. Govern the company by broad policies and objectives, formulated and agreed upon by the chief executive and employees, including to assign priorities and ensure the organization's capacity to carry out products/services/programs by continually reviewing its work
- Establish and execute the overall vision and strategy for the company while also overseeing research functions within the company like, but not limited to, data science, and data analytics.

Cancer center at Harvard Medical School ***Post Doctoral Fellow***

Boston, MA
2016-2020

- Developing of therapeutic RNA-based molecules to use in pre-clinical and clinical studies. Produce innovative therapeutic lines resulting in proof of viability for investors and customers. 3 patent applications are generated from this approach.
- Designing, directing and carrying on multiple projects on cancer genetics, mainly focused on non-coding RNA and their role in tumor development and maintenance. Investigating microRNA deregulation in cancer pathogenesis and maintenance, resistance to chemotherapy as well as metabolism and metastasis development in breast cancer, prostate cancer, hepatocellular carcinoma and Acute Myeloid Leukemia
- Mentoring for Ph.D. graduate students in the lab, teach them all the needed molecular techniques to lead their projects and lead them to a successful thesis.
- Establish strategic partnerships and collaborations with researchers and clinicians, from HMS and other prestigious international institutes, resulting in grant submissions (non-dilutive equity).
- Awarded with BCRF Foundation Grant in 2016, 2017, 2018 and 2019
- Multiple patent applications pending:
U.S. Provisional Application No.: WO2019/178410, entitled “*Micro-RNAs modulation in metabolic related diseases, orphan diseases and NASH*”
U.S. Provisional Application No.: PCT/US19/22351, entitled “*Designed and development of anti-miRNAs molecules for obesity and metabolic disorder treatment*”

Cancer Center at Harvard Medical School
Marie Curie Fellow

Boston, MA
2014-2016

- Carrying on research project investigating microRNA deregulation in cancer pathogenesis and maintenance. Understanding the molecular mechanisms that lead to tumor development and maintenance in order to better characterize the molecular basis of different cancer types as well as develop pharmacological and therapeutic relevant molecules for improving the standard of care and trying to reach a standard of cure.
- Awarded with BCRF Foundation Grant 2015

University of Perugia
Research Fellow
Ph.D. Fellow

Perugia, Italy
2013-2014
2009-2013

- Investigating the molecular pathogenesis and genetics of cancer and leukemia, and how this process can be led by an aberrant protein-protein interaction.
- Leading the design and the development of a panel of small peptide that can interfere with the leukomogenic interaction between MLL and Menin in MLL-fusion protein driven leukemia to use them as therapeutic tool.
- Establish good and productive collaborations with international groups from US and Europe mainly focusing on drug design and development as well as on different and innovative ways for drug delivery and cell specific targeting

EDUCATION

Boston Children Hospital / Harvard Medical School
Commercializing Technology Course

Boston, MA
October/December 2019

- Interdisciplinary 2 months long course from Steven Munevar, Ph.D., M.B.A. based on how to create new companies starting from a patent application. All phases of building a startup were analyzed and applied in this course in which participants, divided in teams, create their own mock startup analyzing all the different aspects such as Value Proposition, Customer Segment, Cost Structure and Revenue Streams. Each team pitch its startup in front of a committee composed by Venture Capitalists that would evaluate the final results of each team. The committee prize for the most valuable Startup was win by the team that I was leading.

Harvard Graduate Business School
Mini MBA

Cambridge, MA
July 2016

- Study case based class, to learn and improve how to analyze your business model and implement your strategic vision in global business, understand financial statements and make management decisions, develop and deliver marketing strategies, lead change and effectively manage conflict, leverage the impact of digital technologies on business

University of Perugia
Ph.D., Oncology
M.S., Chemical-Industrial Biotechnology (Summa cum Laude)
B.S. Biotechnology

Perugia, Italy
February 2013
September 2008
September 2006

- Research: Initiated 2 independent research programs; Recruited, trained and mentored research students (2-4 students/year)
- Achievements: 2 grants; 1 Marie Curie fellowships; Elected Student Government President and Treasurer (2009-2012), 1 Pending Patent "*Small Peptides molecules for AML treatment*"

ADDITIONAL INFORMATION

- **Professional Membership:** 2015~present Ludwing Cancer Center at Harvard Medical School
2014~present American Association for Cancer Research (AACR)
2015~present American Association for the Advancement of Science (AAAS)
- **Professional Service:** *Peer Reviewer for PLOS-ONE (2019~present)*
Peer Reviewer for Life Science Journal (2016~present)
2015 – Present: *Member of American Association for the Advancement of Science*
2017- 2019: *Member of Harvard Medical School Initiative for RNA medicine*
2018-Present: *Member of RNA society*
2019 – Present: *Peer reviewer for PLOS-ONE*
2016 – Present: *Peer reviewer for Life Science Journal*
2021 - Present: *Peer reviewer for Molecular Therapies, Nucleic Acid*
2020 – Present: *Member of Editorial Board for Edizioni Minerva Medica*
- **Skills:** Quantitative and qualitative data analysis; Technical and grant writing
- **Software:** Microsoft Office Suite, ImageJ, AdobeSuite, FlowJo, Prism

BIBLIOGRAPHY

MANUSCRIPTS UNDER-REVIEW AND IN-PREPARATION:

1. **Panella R.**, Petri A., Berry K., Desai B.H., Wagshal A., Näär A.M., Vlachos I.S., Maratos-Flier E., Kauppinen S., Pandolfi P.P.
miR-22 is a master regulator of energy homeostasis and a critical therapeutic target towards the development of a RNA therapy of obesity. Manuscript under review.
2. **Panella R.**, Victor J.A., Maymi V.A., Best S., Lee S., Batalini F., Vlachos I.S., Clohessy J.G., Pandolfi P.P. *An RNA Therapy for Advanced Metastatic Breast Cancer.* Manuscript under review
3. **Panella R.**, Belloni M., Mitchell C., Sarchi M., Mugoni V., Pandvel N., Clohessy J.G., Pandolfi P.P. *MAPK activation as a mechanism of resistance in mIDH2 leukemia thought miR-22-TET2 axis.* Manuscript in preparation.
4. **Panella R.**, Pandolfi P.P. *microRNA role in human cancer and obesity,* Manuscript in preparation.

PUBLISHED PEER REVIEWED ARTICLES:

- Quemener A., Centomo ML, Sax S. and **Panella R.** “**Small Drugs, Huge Impact: The Extraordinary Impact of Antisense Oligonucleotides in Research and Drug Development**”; *Molecules* 2021, 26, 10.3390/molecules27020536
- Maroni G., Bassal M.A., Krishnan I., Wai F.C., Savona V., Zilionis R., Maymi V., Pandell N., Csizmadia E., Zhanh J., Storti B., Castano J., **Panella R.**, Li J., Gustafson C., Fox S., Levy R.D., Meyerovitz C.V., Tramontozzi P.J., Vermilya K., De Rienzo A., Crucitta S., Basseres D.S., Weetall M., Branstrom A., Giorgetti A., Ciampi R., Del Re M., Danesi R., Bizzarri R., Yang H., Kocher O., Klein A.M., Welner R.S., Bueno R., Magli M.C., Clohessy J.G., Ali A., Tenen D.G. & Levantini E.: “**Identification of a targetable KRAS-mutant Epithelial population in non-small cell lung cancer**” *Nature Communications biology*, March 2021. doi.org/10.1038/s42003-021-01897-6
- Guarnerio J, **Panella R**, Zhang Y, Cheloni G, 1, Katon J M, Simpson M, Matsumoto A, Papa A, Loretelli C, Petri A, Kauppinen S, Garbutt C, Nielsen G P, Deshpande V, Castillo-Martin M, Cordon-Cardo C, Dimitrios S, Clohessy J.G, Batish M and Pandolfi PP. *Intragenic antagonistic roles of protein and circRNA in tumorigenesis* *Cell Research*

2019 June 17. doi.org/10.1038/s41422-019-0192-1

- Mugoni V, **Panella R**, Cheloni G, Chen M, Pozdnyakova O, Stroopinsky D, Guarnerio J, Monteleone E, Lee JD, Mendez L, Menon AV, Aster JC, Lane AA, Stone RM, Galinsky I, Zamora JC, Lo-Coco F, Bhasin MK, Avigan D, Longo L, Clohessy JG, Pandolfi PP. *Vulnerabilities in mIDH2 AML confer sensitivity to APL-like targeted combination therapy. Cell Research 2019 April 25.* doi: 10.1038/s41422-019-0162-7.
- Bolloni C., **Panella R.**, Pedetti M., Frascella A.G., Gambelunghe C., Piccoli T., Maniaci G., Brancato A., Cannizzaro C., Diana M. *Bilateral Transcranial Magnetic Stimulation of the Prefrontal Cortex Reduces Cocaine Intake: A Pilot Study Front Psychiatry. 2016*

CONFERENCE PRESENTATIONS:

1. **Panella R.** (2021, April) *mir-22 represents a key regulator of lipid homeostasis and a therapeutic target in NAFLD and obesity*, NHI/NCI RNA Biology Symposium,
2. **Panella R.** (2020, February) *miR-22, a master player in cancer and obesity, a therapeutic approach*. Invited speaker, Novo Nordisk Foundation, NASH Research Challenge group, Keystone Symposium, Banff, Alberta (CA)
3. **Panella R.** (2019, May) *RNA therapy for advanced metastatic breast cancer*. Invited Speaker, Oligonucleotide Therapeutics Society Local Delivery Network, Targeted delivery to cancer cells: an emerging aspect of oligo-therapeutic, Center for National Research (CNR) Naples, Italy
4. **Panella R.** (2018, July) *miR-22 role in obesity, from genetic to therapy*. Invited Speaker, internal seminar, Molecular Biotechnology Center (MBC) Turin, Italy
5. **Panella R.** (2017, January) *Coding and non-coding area in cancer, a genetic approach*. Invited Speaker at i-MOVE, i-share Marie Curie final meeting. Perugia. Italy