**Curriculum Vitae**

**MARCO RUSSO**

**Personal Information** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date of birth: April 5th, 1990

Place of birth: Palermo (PA) – Italy

Nationality: Italian

Home Address: Via Parisio, 11 – 40137 Bologna (BO), Italy

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Institutional e-mail: [marco.russo9@unibo.it](mailto:marco.russo9@unibo.it)

P**ersonal e-mail:** [russo.marco90@gmail.com](mailto:russo.marco90@gmail.com)

**Research Experience** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

February 2021 - **Postdoctoral Researcher**

Present Project: " R-loops and G4s: immunomodulatory effect of treatment with Topoisomerase I inhibitors"

Funded by: Progetto di Rilevante Interesse Nazionale (PRIN) "G-quadruplexes as modulators of genome stability"

FaBIT, University of Bologna, Bologna, Italy

Supervisors: Giovanni Capranico, Prof., Jessica Marinello, PhD

January 2020 - **Postdoctoral Researcher**

January 2021 Project: "A.I. analysis of genetic mutations in omic datasets of human tumors"

Funded by: Regione Emilia-Romagna project "Alte Competenze 2019"

FaBIT, University of Bologna, Bologna, Italy

Supervisor: Giovanni Capranico, Prof.

January 2019 - **Visiting** **Ph.D. Student**

May 2019 The Francis Crick Institute, London, UK

Project title: Identification of mutation in genes related to ‘nucleic acid immunity’ in cancer tissues

Supervisor: Ciccarelli Francesca, Prof.

November 2016 - **Ph.D. Student**

December 2019 FaBIT, University of Bologna, Bologna, Italy

Project title: Study of R-loop dynamics in cancer cells.

Supervisor: Giovanni Capranico, Prof.

March 2015 - **Post Graduate Trainee**

July 2015 University of Padova, Padova, Italy

Project title: Development and application of new technologies for structural analysis of genomes and transcriptomes.

Supervisor: Giorgio Valle, Prof.

**Education** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

November 2016 - **Ph.D. in Cellular and Molecular Biology**

October 2019 FaBIT, University of Bologna, Bologna, Italy

Thesis title: Multiomic characterization of the effects of G-quadruplex binders on R-loop homeostasis and innate immune response in human cancer cells.

Supervisor: Giovanni Capranico, Prof.

October 2012 - **Master’s degree in Molecular Biology**

February 2015 University of Padova, Padova, Italy

Final degree mark: 110/110

Thesis title: Development and application of new technologies for structural analysis of genomes and transcriptomes

Supervisor: Giorgio Valle, Prof.

September 2009 - **Bachelor’s degree in Molecular Biology**

September 2012 University of Padova, Padova, Italy

Final degree mark: 103/110

Thesis title: Identification of SNPs using exome sequencing and their verification using traditional methods

Supervisor: Alessandro Vezzi, Ph.D.

**Honors and Awards** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2019 **“Marco Polo Program” Grant – 3 month**

It aims to promote scientific training abroad for young researchers at the University of Bologna, offering the opportunity to conduct research in an international context.

2016 **Ph.D. in Cellular and Molecular Scholarship – 3 years**

Scholarship provided by the University of Bologna.

2015 **'Innovative Technologies for Next Generation Sequencing' Study award**

Prize awarded to recent graduates that have developed the best thesis on topic: 'Innovative Technologies for Next Generation Sequencing'. University of Padova, Padova, Italy.

**Publications** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

***JOURNAL ARTICLES***

\* Co-first authors

Miglietta,G.\*, **Russo,M**.\*, Duardo,R.C. and Capranico,G. (2021) G-quadruplex binders as cytostatic modulators of innate immune genes in cancer cells. Nucleic Acids Res., 49, 6673–6686.

Miglietta,G.\*, **Russo,M**.\* and Capranico,G. (2020) G-quadruplex–R-loop interactions and the mechanism of anticancer G-quadruplex binders. Nucleic Acids Res., 48, 11942–11957.

**Russo,M.**, De Lucca,B., Flati,T., Gioiosa,S., Chillemi,G. and Capranico,G. (2019) DROPA: DRIP-seq optimized peak annotator. BMC Bioinformatics, 20, 414.

De Magis,A\*., Manzo,S.G.\*, **Russo,M.**, Marinello,J., Morigi,R., Sordet,O. and Capranico,G. (2019) DNA damage and genome instability by G-quadruplex ligands are mediated by R loops in human cancer cells. Proc. Natl. Acad. Sci. U. S. A., 116, 816–825.

**Conference Presentations \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

***Talks***

September 2018 *Analyses of genomic R-loop maps induced by G-quadruplex ligands in human cancer cells*. Talk presented at the XV FISV Congress, Rome, Italy

***Posters***

April 2021 **Russo,M**., Miglietta,G. and Capranico,G. (2021) *Abstract 1234: G4 binders as potential immunostimulatory compounds for cancer therapy*, presented at AACR Annual Meeting 2021; April 10-15, 2021 and May 17-21, 2021; Philadelphia, PA

June 2019 Miglietta G., **Russo M**., Capranico G., *G4 binders as new potential immunostimulatory compounds in cancer therapy by micronuclei induction and cGAS-STING pathway activation,* presented at SIBBM 2019 – Frontiers in Molecular Biology, Bologna, Italy

June 2019 **Russo M**., Ciccarelli F., Capranico G., *Innate Immune Response Genes In Human Cancers: A Pancancer Survey.* presented at SIBBM 2019 – Frontiers in Molecular Biology, Bologna, Italy

September 2018 De Magis A., Manzo S.G., Miglietta G., Marinello J., **Russo M.**, Sordet O., Morigi R. and Capranico G., *R-loops and micronuclei mediate cellular effects of G-quadruplex ligands in human cancer cells,* presented at 3rd Conference Nucleic Acids, Immunity and Genome Defence, Brno, Czech Republic

April 2018 De Magis A., Manzo S.G., **Russo M.**, Sordet O., Morigi R. and Capranico G., *R loop-driven genome instability by G-quadruplex binders in BRCA2-silenced human cancer cells,* presented at AACR Annual Meeting 2018 Chicago, Illinois, USA

November 2017 Capranico G., De Magis A., **Russo M**., Sordet O., Manzo S. G., Marinello J., Morigi R., Locatelli A. and Rambaldi M., *G-quadruplex and R loop interactions can affect genome stability in human cancer cells,* presented at the meeting "DNA Damage and Repair: Computations Meet Experiments", Leiden, The Netherlands.

February 2017 Delcuratolo M., Marinello J., **Russo M**., Capranico G., *DNA topoisomerase II-b depletion causes genomic DNA cleavage and nuclear R-loop increase*, presented at 2° FaBIT Scientific Retreat 2017, Bologna, Italy

May 2014 Targon R., Telatin A., **Russo M**., Marchioretto L., Valle G., *Development Of A Novel Method For High Quality Full-Length Sequencing Of Long Individual Molecules Of Nucleic Acids UsingCurrent Sequencing Technology*, presented at BioPh.D. Day 2014, Padova, Italy

**Educational Activities \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Student Supervisor**

March 2021 - Student: Francesca Collini

July 2021 Bachelor’s Degree in Genomics

Thesis supervisor: Prof. G. Capranico

University of Bologna

Thesis: Structural rearrangement detection in PDS treated cells using gene fusion detection tools

March 2020 - Student: Sara Morelli

March 2021 Master’s Degree in Pharmaceuticals Biotechnology

Thesis supervisor: Prof. G. Capranico

University of Bologna

Thesis: Functional characterization of innate immune genes in human lung cancers through genomic data analyses

January 2017 - Student: Bruno de Lucca

March 2018 Visiting student in Molecular Biology

Supervisor: Prof. G. Capranico

University of Bologna

Project: Development of software for R-loop genomic annotation.