



Pasquale Sibilio

● WORK EXPERIENCE

02/11/2022 – CURRENT

POSTDOCTORAL RESEARCHER IN BIOINFORMATICS DIPARTIMENTO DI INGEGNERIA INFORMATICA, AUTOMATICA E GESTIONALE (DIAG), SAPIENZA UNIVERSITY OF ROME

Main activity: Research activity in the fields of bioinformatics, network medicine and computational medicine. Scientific divulgation and teaching.

01/11/2019 – 01/11/2022 Roma, Italy

PHD STUDENT SAPIENZA UNIVERSITÀ DI ROMA

Position: PhD

Tutor: Professoressa Paola Paci

Main activity: Research activity in the fields of bioinformatics, network medicine and computational medicine. Scientific divulgation and teaching.

Results Obtained:

- Francesca Belardinilli, Carlo Capalbo, Umberto Malapelle, Pasquale Pisapia, Domenico Raimondo, Edoardo Milanetti, Mahdavian Yasaman, Carlotta Liccardi, Paola Paci, **Pasquale Sibilio** and Giuseppe Giannini. Clinical Multigene Panel Sequencing Identifies Distinct Mutational Association Patterns in Metastatic Colorectal Cancer. *Frontiers in oncology* (2020). <https://doi.org/10.3389/fonc.2020.00560>
- **Pasquale Sibilio**, Simone Bini, Giulia Fiscon, Marialuisa Sponziello, Federica Conte, Valeria Pecce, Cosimo Durante, Paola Paci, Rosa Falcone, Lorenzo Farina, Antonella Verrienti. In silico drug repurposing in COVID-19: A network-based analysis. *Biomedicine and Pharmacotherapy* (2021). <https://doi.org/10.1016/j.biopha.2021.111954>
- Conte, F.; Fiscon, G.; **Sibilio, P.**; Licursi, V.; Paci, P. An Overview of the Computational Models Dealing with the Regulatory ceRNA Mechanism and ceRNA Deregulation in Cancer. In *Methods in Molecular Biology* (2021). DOI:10.1007/978-1-0716-1503-4_10. pp.149-164.
- Conte F, **Sibilio P**, Grimaldi AM, Salvatore M, Paci P, et al. (2022) In silico recognition of a prognostic signature in basal-like breast cancer patients. *PLOS ONE* 17(2): e0264024. <https://doi.org/10.1371/journal.pone.0264024>.
- **Sibilio, P.**, Belardinilli, F., Licursi, V., Paci, P., Giannini, G. An integrative in-silico analysis discloses a novel molecular subset of colorectal cancer possibly eligible for immune checkpoint immunotherapy. *Biol Direct* 17, 10 (2022). <https://doi.org/10.1186/s13062-022-00324-y>
- Giulia Fiscon, **Pasquale Sibilio**, Alessio Funari, Federica Conte, Paola Paci. Identification of potential repurposable drugs in 2 Alzheimer's disease exploiting a bioinformatics analysis. *J. Pers. Med.* 2022, 12(10), 1731; <https://doi.org/10.3390/jpm12101731>.
- Federica Conte, **Pasquale Sibilio**, Fiscon Giulia, Paola Paci. A transcriptome- and interactome-based analysis identifies repurposable drugs for human breast cancer subtypes. *Symmetry* 2022, 14(11), 2230; <https://doi.org/10.3390/sym14112230>.

01/04/2022 – 01/09/2022 Boston, United States

VISITING PHD BRIGHAM AND WOMEN'S HOSPITAL - CHANNING NETWORK MEDICINE DIVISION - HARVARD MEDICAL SCHOOL

Main activity: Development of a network based approach to integrate transcriptomic and epigenomics data on COPD disease. Research activity in the fields of bioinformatics, network medicine and computational medicine.

15/06/2020 – CURRENT Roma, Italy

RESEARCHER ASSOCIATE ISTITUTO DI ANALISI DEI SISTEMI ED INFORMATICA (IASI), NATIONAL RESEARCH COUNCIL (CNR)

Main activity: Research activity in the fields of bioinformatics, network medicine and computational medicine. Scientific divulgation and teaching.

Results Obtained:

- Francesca Belardinilli, Carlo Capalbo, Umberto Malapelle, Pasquale Pisapia, Domenico Raimondo, Edoardo Milanetti, Mahdavian Yasaman, Carlotta Luccardi, Paola Paci, **Pasquale Sibilio** and Giuseppe Giannini. Clinical Multigene Panel Sequencing Identifies Distinct Mutational Association Patterns in Metastatic Colorectal Cancer. *Frontiers in oncology* (2020). <https://doi.org/10.3389/fonc.2020.00560>
- **Pasquale Sibilio**, Simone Bini, Giulia Fiscon, Marialuisa Sponziello, Federica Conte, Valeria Pecce, Cosimo Durante, Paola Paci, Rosa Falcone, Lorenzo Farina, Antonella Verrienti. In silico drug repurposing in COVID-19: A network-based analysis. *Biomedicine and Pharmacotherapy* (2021). <https://doi.org/10.1016/j.biopha.2021.111954>
- Conte, F.; Fiscon, G.; **Sibilio, P.**; Licursi, V.; Paci, P. An Overview of the Computational Models Dealing with the Regulatory ceRNA Mechanism and ceRNA Deregulation in Cancer. In *Methods in Molecular Biology* (2021). DOI:10.1007/978-1-0716-1503-4_10. pp.149-164.
- Conte F, **Sibilio P**, Grimaldi AM, Salvatore M, Paci P, et al. (2022) In silico recognition of a prognostic signature in basal-like breast cancer patients. *PLOS ONE* 17(2): e0264024. <https://doi.org/10.1371/journal.pone.0264024>.
- **Sibilio, P.**, Belardinilli, F., Licursi, V., Paci, P., Giannini, G. An integrative in-silico analysis discloses a novel molecular subset of colorectal cancer possibly eligible for immune checkpoint immunotherapy. *Biol Direct* 17, 10 (2022). <https://doi.org/10.1186/s13062-022-00324-y>
- Giulia Fiscon, **Pasquale Sibilio**, Alessio Funari, Federica Conte, Paola Paci. Identification of potential repurposable drugs in 2 Alzheimer's disease exploiting a bioinformatics analysis (accepted at the *Journal of Personalized Medicine*, mdpi).
- Federica Conte, **Pasquale Sibilio**, Fiscon Giulia, Paola Paci. A transcriptome- and interactome-based analysis identifies repurposable drugs for human breast cancer subtypes. (under review at *Symmetry*, mdpi).

09/2018 – 07/2019 Rome, Italy

STUDENT TRAINEE ISTITUTO DI ANALISI DEI SISTEMI ED INFORMATICA (IASI), NATIONAL RESEARCH COUNCIL (CNR)

Supervisor: Paola Paci

- Multi-omics data analysis and integration to discover novel subgroups of Colorectal Cancer possibly eligible to immunotherapy

● EDUCATION AND TRAINING

01/11/2019 – 31/10/2022 Roma, Italy

PHD IN INNOVATIVE BIOMEDICAL TECHNOLOGY IN CLINICAL MEDICINE (INCLUDING BIOINFORMATICS) Department of Translational and Precision medicine, Sapienza Università di Roma

Website <https://web.uniroma1.it/dmtp/home> | **Field of study** Bioinformatics

29/07/2021

STATE EXAM TO EXERCISE THE PROFESSION OF BIOLOGIST

Final grade 50/50

01/10/2016 – 24/07/2019 Roma, Italy

MASTER DEGREE IN GENETICS AND MOLECULAR BIOLOGY Sapienza Università di Roma

Address Piazzale Aldo Moro 5, 00185, Roma, Italy | **Website** <https://www.uniroma1.it/> |

Final grade 110 cum laude/110 | **Thesis** Metanalysis of genomic data of patients suffering colorectal cancer

01/09/2017 – 01/07/2018 Madrid, Spain

ERASMUS + 2017/2018 Universidad Autonoma de Madrid

- I attended course of masters degree in Bioinformatics and Computational Biology.
- 43 ECTS(CFU) achieved in courses taught in english
- 30 ECTS(CFU) achieved in courses taught in spanish
- Spanish language course of 100 hours, level B2 at the Universidad Autonoma de Madrid

Address Piazzale Aldo Moro 5, 00185, Roma, Italy | **Website** <https://www.uniroma1.it/> | **Final grade** 109/110 |**Thesis** Analysis and characterization of circular RNA

07/2013

HIGH SCHOOL DIPLOMA Liceo Scientifico-Tecnologico IIS Cartesio-Luxemburg

LANGUAGE SKILLS

Mother tongue(s): **ITALIAN**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	B2	C1	B2	B2	C1
SPANISH	C1	C1	B2	B2	B2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

ADDITIONAL INFORMATION

EXPERTISE**Professional Skills**

- Extensive expertise in the the fields of Bioinformatics, Computational biology and computational medicine acquired during my working experience at Brigham and Women's Hospital, PhD in Innovative Biomedical Technology in clinical medicine, the Master degree in Bioinformatics and Computational Biology and the master degree in Molecular Biology and Genetics. In addition to the research activity carried out during the PhD, documented by publication in international peer review journal and attendance to international workshop
- BIONFORMAICS SKILLS: Metanalysis of genomic (DNA-seq,RNA-seq, Copy Number Variation) and epigenomic data (DNA-methylation and Chip-seq) starting from raw data through statistical analysis and interpretation of the results. Deep knowledge of the R programming language for the application and development of algorithm for the analysis of biological data. Deep knowledge about Network Medicine, hence network theory applied to biomedical field. Decent knowledge about Python and Bash programming languages.
- BIOLOGICAL EXPERTISE: Deep knowledge of Molecular Biology and Pathobiology obtained during the Master Degree in Genetics and Molecular Biology and the Bachelor degree in Biotechnology

Organizational and managerial skills

Good organizational and managerial skills testified by the role of theis advisor for the grad student of Bioinformatics.

Communicative and interpersonal skills

Very good communicative and interpersonal skills obtained during the PhD and the teaching experience at Sapienza University, in addition to other temporary jobs in the public relation area.

PUBLICATIONS IN PEER-REVIEWED INTERNATIONAL JOURNALS

2022

- Fiscon, G.; **Sibilio, P.**; Funari, A.; Conte, F.; Paci, P. Identification of Potential Repurposable Drugs in Alzheimer's Disease Exploiting a Bioinformatics Analysis. *J. Pers. Med.* **2022**, *12*, 1731. <https://doi.org/10.3390/jpm12101731>
- Conte, F.; **Sibilio, P.**; Fiscon, G.; Paci, P. A Transcriptome- and Interactome-Based Analysis Identifies Repurposable Drugs for Human Breast Cancer Subtypes. *Symmetry* **2022**, *14*, 2230. <https://doi.org/10.3390/sym14112230>
- Conte F, **Sibilio P**, Grimaldi AM, Salvatore M, Paci P, et al. (2022) In silico recognition of a prognostic signature in basal-like breast cancer patients. *PLOS ONE* 17(2): e0264024. <https://doi.org/10.1371/journal.pone.0264024>.
- **Sibilio, P.**, Belardinilli, F., Licursi, V., Paci, P., Giannini, G. An integrative in-silico analysis discloses a novel molecular subset of colorectal cancer possibly eligible for immune checkpoint immunotherapy. *Biol Direct* 17, 10 (2022). <https://doi.org/10.1186/s13062-022-00324-y>

2021

- Aug 2021- **Pasquale Sibilio**, Simone Bini, Giulia Fiscon, Marialuisa Sponziello, Federica Conte, Valeria Pecce, Cosimo Durante, Paola Paci, Rosa Falcone, Lorenzo Farina, Antonella Verrienti. In silico drug repurposing in COVID-19: A network-based analysis. *Biomedicine and Pharmacotherapy* (2021). <https://doi.org/10.1016/j.biopha.2021.111954>

2020

- May 2020 - Francesca Belardinilli, Carlo Capalbo, Umberto Malapelle, Pasquale Pisapia, Domenico Raimondo, Edoardo Milanetti, Mahdavian Yasaman, Carlotta Liccadi, Paola Paci, **Pasquale Sibilio** and Giuseppe Giannini. Clinical Multigene Panel Sequencing Identifies Distinct Mutational Association Patterns in Metastatic Colorectal Cancer. *Frontiers in oncology* (2020). <https://doi.org/10.3389/fonc.2020.00560>

BOOKS CHAPTES

Books Chapters

- June 2021 - Conte, F.; Fiscon, G.; **Sibilio, P.**; Licursi, V.; Paci, P. An Overview of the Computational Models Dealing with the Regulatory ceRNA Mechanism and ceRNA Deregulation in Cancer. In *Methods in Molecular Biology* (2021). DOI:10.1007/978-1-0716-1503-4_10. pp.149-164.

BIBLIOMETRIC INDICATORS

h-index

- 3 - Scopus

Number of citations

- 37 - Scopus

TEACHING ACTIVITY

a.a. 2022-2023

- Lecture series of Molecular Biology of 6 hours for the student of the course of Bioinformatics and Computational Medicine, Master degree in Statistical Sciences

a.a. 2021-2022

- Course of "Data analysis through R platform" of 36 hours for the students of the Bachelor degree in Bioinformatics, Facoltà di Farmacia e Medicina dell'Università degli Studi di Roma La Sapienza. Taught in English language. February 2022.
- Lecture series of Molecular Biology of 6 hours for the student of the course of Bioinformatics and Computational Medicine, Master degree in Statistical Sciences

- Course of "Data analysis through R platform" of 24 hours for the students of Bachelor degree in Bioinformatics, Facoltà di Farmacia e Medicina dell'Università degli Studi di Roma La Sapienza. Taught in English language. July 2021.
- Lecture series of Molecular Biology of 8 hours for the student of the course of Bioinformatics and Computational Medicine, Master degree in Statistical Sciences.

ORAL CONTRIBUTION IN CONFERENCES AND WORKSHOP

2023

- June 21-23. 19th Annual Meeting of the Bioinformatics Italian Society, Bari, Italy. Oral contributions at the Symposium organized by YOUNG BITS, RSG-Italy & CINI Young-InfoLife with the title: "Procedural and parallel approaches to integrate and analyze multi-omics data of complex diseases and their application to different biological questions"

2021

- Sept 28-30, Mathematical Modelling and Control for Healthcare and Biomedical Systems (MCHBS 2021 Virtual Workshop) Italian National Research Council (CNR), Italy. Presentations of the article In silico drug repurposing in COVID-19: A network-based analysis

POSTER

10/12/2021 – 11/12/2021

2021

"Molecular Pathology: from bench to bedside" - SIPMeT Young Scientist Meeting, Perugia, Italy.

- Authors: **Sibilio, P.**, Belardinilli, F., Licursi, V., Paci, P., Giannini, G.
- Title: An integrative in-silico analysis discloses a novel molecular subset of colorectal cancer possibly eligible for immune checkpoint immunotherapy

NETWORKS AND MEMBERSHIPS

11/2022 – CURRENT Italy

Internal Committee member of Young InfoLife I'm part of the internal committee of Young InfoLife which promotes networking between young bioinformatics researchers in Italy

HONOURS AND AWARDS

01/04/2022

Mobility Grant – Sapienza University of Rome I was awarded by a Mobility Grant by Sapienza University to go to work as researcher at Brigham and Women's Hospital for 6 months.

RESEARCH PROJECTS

10/2021 – 11/2022

"Initiation to research" project at the University of Rome La Sapienza

Position : principal investigator

Title: Network Medicine: a new paradigm for immunotherapy in cancer patients.

Financing: 1000 euro

Protocol : n. AR12117A5C5DDA27

Duration: 12 months

Period of activity: 11/2021-11/2022

11/2022 – 11/2023

"Initiation to research type 2" project at the University of Rome La Sapienza

Position : principal investigator

Title: Implementation of a network-based methodology to study the chronic obstructive pulmonary disease (COPD)

Financing: 2000 euro

Protocol : n. AR22218163EFB2BC

Duration: 12 months

Period of activity: 11/2022-11/2023

CONFERENCES AND WORKSHOP

Conferences

- Jun 2023 June 21-23. 19th Annual Meeting of the Bioinformatics Italian Society, Bari, Italy.
- Dic 2021 "Molecular Pathology: from bench to bedside" - SIPMeT Young Scientist Meeting, Perugia, Italy.
- Sept 2021 - Mathematical Modelling and Control for Healthcare and Biomedical Systems (MCHBS 2021 Virtual Workshop) Italian National Research Council (CNR), Italy
- Apr 2021 - Second International Conference on Network Medicine and Big Data. 12-13 Aprile 2021 Virtual/Boston, MA, Brigham and Women's Hospital and Harvard Medical School.
- Jan 2020 - 4words, Le parole dell'innovazione in sanità. 4° Riunione annuale Forward. 30 Gennaio 2020, Roma, Italia. 4; 2 ECM conseguiti.

SCIENTIFIC COLLABORATION

Research institutes - University

- Istituto di Analisi dei Sistemi ed Informatica "A. Ruberti", Consiglio Nazionale delle Ricerche di Roma(IASI-CNR). July 2019 - current.
- Dipartimento di Medicina Molecolare dell'Università di Roma La Sapienza. October 2019 - current.
- IRCCS SDN, Via Emanuele Gianturco 113, 80143 Naples, Italy
- Brigham and Women's Hospital, Boston, Ma, United States. April 2022 - current.

International Peer reviewing

- Referee for Scientific reports
- Referee for Hindawi editor

POST GRADUATE COURSES

Academic courses

- May 2022 - Network science lectures at Channing division of Network Medicine, Brigham and Women's Hospital, Boston, USA.
- April 2022 - Multi-omics data analysis lectures at Channing division of Network Medicine, Brigham and Women's Hospital, Boston, USA.
- Oct-dec 2020 - Bioinformatics II, prof. Paola Paci, Dipartimento di biotecnologie cellulari ed ematologia, Università di Roma la Sapienza, Italia.
- Oct-dec 2020 - Bioinformatica e medicina computazionale, prof. Lorenzo Farina, Dipartimento di Scienze statistiche, Università di Roma la Sapienza, Italia.
- March-may 2020 - Algorithms, Dipartimento di biotecnologie cellulari ed ematologia, Università di Roma la Sapienza, Italia.
- Oct-dec 2019 - Bioingegneria per la Genomica, prof. Paola Paci, Dipartimento di scienze di base applicate per l'ingegneria, Università di Roma la Sapienza, Italia.

DRIVING LICENCE

Driving Licence: A

Driving Licence: B

TREATMENT OF PERSONAL DATA

Authorization

I authorize the processing of my personal data pursuant to Legislative Decree 30 June 2003, n. 196 "Code regarding the protection of personal data" and pursuant to EU Reg. 2016/679 (GDPR).