

Sushant Parab, PhD

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EDUCATION

DEGREE	UNIVERSITY	DURATION	COUNTRY
PhD in Complex Systems for Life Sciences	University of Torino	2017 – 2021	Italy
Masters in Bioinformatics	Bharati Vidyapeeth Deemed University	2013 – 2015	India
Bachelors in Biotechnology	Mumbai University	2010 – 2013	India

RESEARCH AND TEACHING EXPERIENCE

2021 – 2025

Postdoctoral research fellow, Department of Oncology, University of Torino, Italy.
Project title: Digital tEchnology For Lung Cancer Treatment (DEFLeCT)
Tutor: Prof. Federico Bussolino

2017 – 2021

PhD student, Department of Oncology, University of Torino, Italy.
Project title: Control of Endothelial cells phenotypic switch by ncRNAs
Tutor: Prof. Federico Bussolino

2015 – 2017

Project Fellow, National Center for Cell Science (NCCS), India.
Project title: Role of gut microbiome in type 2 Diabetes
Tutor: Dr. Yogesh Shouche

2015 – 2017 (Teaching Experience)

Visiting Lecturer, Department of Bioinformatics, Bharati Vidyapeeth Deemed University (BVDU) of IT and Biotechnology, India.
Subjects: Next Generation Sequencing (NGS), PERL and Bioperl programming, R programming

SKILLS

- More than 8 years of experience in NGS technology, tool usage and data analysis.
- Good understanding of bioinformatics and biostatistics algorithms.
- Proficiency in programming (C, Java) and scripting (PERL, R and Python) languages.
- Can curate and manage large biological datasets for clinical related reporting.
- Familiar with genomic-, metagenomic- data assembly and annotation.
- Experience in developing and implementing pipelines/algorithms for the processing of high-throughput transcriptomic and genomic data.
- Good knowledge and understanding of the current progress in the applications of single cell/nuclei technology.
- Contributes research findings to abstracts in publications and presentations at conferences.
- Strong communication skills (both verbal and written) to discuss data with technical and non-technical audiences.
- Can work independently or as a member of a team having a successful track record of collaborations.
- Effective time-management and problem-solving skills in writing/editing/reviewing a technical and scientific manuscripts.

CONFERENCE PROCEEDINGS AND AWARDS

Oct. 2024	Second International Cancer Science Congress ICSC - 2024, Cagliari, Italy; oral presentation. "Single-nuclei transcriptome profiling reveals vascular Endothelial cell heterogeneity induced by VEGFA/BRAF targeting in murine melanoma model".
May 2024	International Workshop NO-CANCER 2024, Novara, Italy; oral presentation. "Single-nuclei transcriptome profiling reveals the architecture of tumor-microenvironment interface induced by VEGFA/BRAF targeting in murine melanoma model."
April 2024	AACR Annual Meeting 2024: San Diego Convention Center, San Diego, USA; poster presentation. "Deciphering the Crosstalk within the Tumor Microenvironment of NSCLC by a Virtual microdissection approach."
Oct. 2023	First International Cancer Science Congress ICSC - 2023, Sicily, Italy; oral presentation. "Deciphering the Crosstalk within the Tumor Microenvironment of NSCLC by a Virtual microdissection approach". Awarded as the Distinguished Young Cancer investigator.
Sept. 2023	NSW Cancer Conference 2023, Sydney, Australia; oral presentation. "Deciphering the Crosstalk within the Tumor Microenvironment of NSCLC by a Virtual microdissection approach".

- June 2023 EACR 2023 Congress: Innovative Cancer Science, Torino, Italy; **poster presentation**. “Virtual microdissection of non-small cell lung cancer identifies transcriptome-based tumor-specific and immune-specific molecular subtypes.”
- May 2023 International Workshop NO-CANCER 2023, Novara, Italy; **oral presentation**. “Virtual microdissection of non-small cell lung cancer identifies transcriptome-based tumor-specific and immune-specific molecular subtypes.”

PUBLICATIONS (# - equal author, * - lead bioinformatician)

1. **Parab, S.***; Sarlo, V.; Capellero, S.; Palmiotto, L.; Bartolini, A.; Cantarella, D.; Turi, M.; Gullà, A.; Grassi, E.; Lazzari, C.; et al. Single-Nuclei Transcriptome Profiling Reveals Intra-Tumoral Heterogeneity and Characterizes Tumor Microenvironment Architecture in a Murine Melanoma Model. *Int. J. Mol. Sci.* **2024**, *25*, 11228.
2. Gravina, T.; Favero, F.; Rosano, S.; **Parab, S.**; Diaz Alcalde, A.; Bussolino, F.; Doronzo, G.; Corà, D. Integrative Bioinformatics Analysis Reveals a Transcription Factor EB-Driven MicroRNA Regulatory Network in Endothelial Cells. *Int. J. Mol. Sci.* **2024**, *25*, 7123.
3. Middonti E, Astanina E, Vallariello E, Hoza RM, Metovic J, Spadi R, Cristiano C, Papotti M, Allavena P, Novelli F, **Parab S***, Cappello P, Scarpa A, Lawlor R, Di Maio M, Arese M, Bussolino F. A neuroligin-2-YAP axis regulates progression of pancreatic intraepithelial neoplasia. *EMBO Rep.* 2024 Feb 27. doi: 10.1038/s44319-024-00104-x. Epub ahead of print. PMID: 38413734.
4. **Parab S***, Setten E, Astanina E, Bussolino F, Doronzo G. The tissue-specific transcriptional landscape underlines the involvement of endothelial cells in health and disease. *Pharmacol Ther.* **2023** Jun;246:108418. doi: 10.1016/j.pharmthera.2023.108418. Epub 2023 Apr 22. PMID: 37088448.
5. Manganaro L, Bianco S, Bironzo P, Cipollini F, Colombi D, Corà D, Corti G, Doronzo G, Errico L, Falco P, Gandolfi L, Guerrera F, Monica V, Novello S, Papotti M, **Parab S**, Pittaro A, Primo L, Righi L, Sabbatini G, Sandri A, Vattakunnel S, Bussolino F, Scagliotti GV. Consensus clustering methodology to improve molecular stratification of non-small cell lung cancer. *Sci Rep.* **2023** May 12;13(1):7759. doi: 10.1038/s41598-023-33954-x. PMID: 37173325; PMCID: PMC10182023.
6. Rosano S[#], **Parab S^{#*}**, Noghero A, Corà D, Bussolino F. Long Non-Coding RNA LINC02802 Regulates In Vitro Sprouting Angiogenesis by Sponging microRNA-486-5p. *Int J Mol Sci.* **2022** Jan 31;23(3):1653. doi: 10.3390/ijms23031653. PMID: 35163581; PMCID: PMC8836176.
7. Rosano S, Corà D, **Parab S***, Zaffuto S, Isella C, Porporato R, Hoza RM, Calogero RA, Riganti C, Bussolino F, Noghero A. A regulatory microRNA network controls endothelial cell phenotypic switch during sprouting angiogenesis. *eLife.* **2020** Jan 24;9:e48095. doi: 10.7554/eLife.48095. PMID: 31976858; PMCID: PMC7299339.

BOOK CHAPTERS

8. **Parab, S.**, Corà, D., Bussolino, F. (2022). Comparative Genomics of Actinobacteria. In: Dharumadurai, D. (eds) Methods in Actinobacteriology. Springer Protocols Handbooks. Humana, New York, NY. https://doi.org/10.1007/978-1-0716-1728-1_31.
9. **Parab, S.**, Corà, D., Bussolino, F. (2022). Mining Genomes of Actinobacteria. In: Dharumadurai, D. (eds) Methods in Actinobacteriology. Springer Protocols Handbooks. Humana, New York, NY. https://doi.org/10.1007/978-1-0716-1728-1_30.
10. **Parab, S.**, Corà, D., Bussolino, F. (2022). Transcriptome Profiles of *Streptomyces* sp.. In: Dharumadurai, D. (eds) Methods in Actinobacteriology. Springer Protocols Handbooks. Humana, New York, NY. https://doi.org/10.1007/978-1-0716-1728-1_42.
11. **Parab, S.**, Bussolino, F. (2021). Multi – Omics: Overview, Challenges and Applications. In: Dharumadurai, D. (eds) Microbiome – Host Interactions. CRC Press. Taylor and Francis Group. DOI: 10.1201/9781003037521-2.

REFREES

1. Prof. Federico Bussolino, MD, PhD

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2. Davide Corà, PhD

Associate Professor
Molecular Biology and Bioinformatics
Department Of Translational Medicine
CAAD – Center for translational research on Autoimmune and Allergic Disease
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3. Prof. Luca Primo, PhD

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