

# Suvham Barua

## *Curriculum Vitae*

Molecular Biotechnology Center,  
Dipartimento di Biotecnologie Molecolari e Scienza dell Salute,  
Università degli Studi di Torino

Department of Translational Medicine,  
Università del Piemonte Orientale

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## Work Experience:

- **Researcher assistant:**

Department of Translation Medicine, Università del Piemonte Orientale, Novara, Piemonte, Italy.  
(May 2024-present)

- **PhD. Scholar:**

Molecular Biotechnology Center, Department of molecular biotechnology and health science.  
University of Turin, Turin, Piemonte, Italy. (Nov 2019 – Jan 2024).

- **Drug safety specialist:**

PharmaLex Pvt. Ltd., New Delhi, India (Jun 2019 – Oct 2019).

Managed safety cases, including case intake/triage, data entry, quality assessment, medical review and follow up activities following the applicable regulation made by European medicine agency.

- **Research trainee:**

Dabur Research Foundation, Ghaziabad, India (Nov 2018 – May 2019).

Designed strategies for drug development during preclinical studies, as well as analyzed the data generated from these studies.

Selection of lead candidates.

Dose response & quantitative measurement of drug substance in the biological samples from preclinical studies.

Hands-on experience in animal handling, culturing eukaryotic tissues, and harvesting and culturing organs and tissues, and administered drugs through various dosing methods.

## Education:

- **PhD. candidate**, Molecular Biotechnology center “Guido Tarone”, Università degli studi di Torino, Torino, Italy (Nov 2019 – Jan 2024).
- **Master of Science in Biotechnology**, Jamia Hamdard University, New Delhi, India (Jul 2016 – Jun 2018).
- **Bachelor of Science (Hons.) in Botany**, University of Delhi, New Delhi, India (Jul 2013 – Jun 2016)

## Projects:

During PhD I am working on two projects: cancer cachexia and defective muscle regeneration in aging

- “The PolgD257A “mutator” mice as model to investigate aging-associated defective skeletal muscle regeneration.” (MS Preparation )
- “Renal cell carcinoma in kidney specific Tsc1 knocked out mice cause cachexia in the skeletal Muscle.” (MS preparation)

Under the supervision of Prof. Andrea Graziani, Department of Molecular Biotechnology and health science, Molecular Biotechnology Center, Università degli studi di Torino, Italy. (Nov 2019 – Present).

## **Scientific skills and competence:**

- **Molecular Biology**:- Isolation, purification & quantification of genomic DNA, Plasmid DNA, RNA, miRNA & protein; Restriction digestion & ligation; Retro-transcription; PCR (genotyping); qRT PCR; stem-loop RT PCR; SDS-PAGE, Agarose gel electrophoresis; Molecular cloning.
- **Tissue/Cell Culture & Microbiology**:- 3D Eukaryotic cell culture; Primary tissue culture (MuSC); Growth, preparation of competent & transformation of bacteria.
- **Immunological Technique**:- Immunohistochemistry; Immunofluorescence; SA- $\beta$  Gal staining, Western blot; FACS; ELISA.
- **Instrument**:- Confocal microscopy; cryostat, UV-VIS spectrophotometer.
- **Chromatography**:- Paper chromatography; TLC; HPLC & TLC.
- **Animal Handling**:- Muscle functional test (Grip test); Muscle harvesting; Dosing Oral, IP, IV & Sub cut; Behavioural test; Transplant of MuSC.
- **Others**:- RNAi; FRET assays, Reporter gene Assays

## **Computational Skills:**

Microsoft office (Excel, PowerPoint, Outlook & word) & Adobe illustrator & inkscape  
ImagJ & Fuji and Leica microscopy software  
Bioinformatic tools : BLAST, FASTA, Clustal W, Clustal W, Primer Bank

## **Area of interest and topics:**

Muscle Biology, Ageing, Cancer Cachexia, Sarcopenia  
Stem cell regenerative biology, Tumor metabolism.

## **Publication:**

- **Impaired cAMP/CREB1 signalling drives mitochondrial dysfunction in skeletal muscle during cancer cachexia. (MS submitted)**  
Elia Angelino, Lorenza Bodo, Roberta Sartori , Nicolò Formaggio, Andrea Lauria, Valeria Malacarne, **Suvham Barua**, Simone Reano, Alessandra Murabito, Monica Nicolau, Fabiana Ferrero , Camilla Pezzini, Giulia Rossino, Francesco Favero, Nicoletta Filigheddu, Alessio Menga, Davide Corà, Vittorio Sartorelli, Alessandra Ghigo, Paolo E, Porporato, Daniela Talarico, Valentina Proserpio, Salvatore Oliviero, Marco Sandri, Giuseppina Caretti, Andrea Graziani.
- **Non-Autonomous Muscle Stem Cells mediated defective musculeregeneration in the accelerated ageing Polg Mutator Mouse Model. (Abstract)**  
**Suvham Barua**, E. Angelino, L. Bodo, A. Menga, D. Talarico, A. Graziani
- **Kidney-specific Tsc1<sup>-/-</sup> mice as renal cell carcinoma-induced cachexia model. (Abstract)**  
Sara Clerici, **Suvham Barua**, Michella Ferrara, Elia Angelino, Lorenza Bodo, Daniela Talarico  
Alessandra Boletta and Andrea Graziani.
- **The PolgD257A “mutator” mice as model to investigate aging-associated defective skeletal muscle regeneration. (Abstract)**  
**Suvham Barua**, Elia Angelino, Lorenza Bodo, Daneila Talarico and Andrea Graziani.

## **Congress and achievements:**

- **Poster Presented** in the 20<sup>th</sup> Interuniversity Institute of Myology in Assisi, Perugia. Oct 2023
- **Poster Presented** in the 7<sup>th</sup> Cancer cachexia conference Edinburgh, Scotland Sep 2023.
- **Poster Presented** in the 20<sup>th</sup> Interuniversity Institute of Myology in Perugia, Italy. 18<sup>th</sup> meeting Oct 2023
- **Poster Presented** in the 16<sup>th</sup> Society of Sarcopenia, cachexia and wasting disorder in Stockholm, Sweden June 2023.
- **Poster presented** in **EMBL** in Italy 2023: Chance and necessity-the indispensable role of curiosity-driven life sciences in Turin, Italy. May 2023
- Attendee in 33<sup>rd</sup> AICC annual conference: international meeting on cancer metabolism in Turin, Italy Nov 2021.
- **Short-talk** In the Interuniversity Institute of Myology in Perugia, Italy. 18<sup>th</sup> meeting Oct 2021.
- Won PhD grant from the university of Turin Nov 2019.
- **Qualified National level exam** conducted by **Biotec consortium of India** in India Nov 2018.

## **Languages:**

**English** – All levels of education done in English.

**Hindi** – Mother tongue

**Bangla** – Mother tongue

**Italian** – A2 level

## **References:**

### **Prof. Andrea Graziani (PhD)**

Prof. Biochemistry

Molecular Biotechnology Center Department of Molecular Biotechnology & Health Sciences

University of Torino Medical School Via Nizza 52, 10123 Torino, Italy Email-

[andrea.graziani@unito.it](mailto:andrea.graziani@unito.it)

### **Elia Angelino (PhD RDTA)**

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Email- [elia.angelino@unito.it](mailto:elia.angelino@unito.it)