

Yura Song

Bioinformatician
Université Libre de Bruxelles
Laboratory of Stem Cells and Cancer (Prof. Cédric Blanpain)
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EDUCATION

03/2018 – 04/2025

Université Libre de Bruxelles | Bruxelles, Belgium

Doctoral program, Faculty of Medicine

Supervisor: Cédric Blanpain, MD PhD

Laboratory of stem cells and cancer

Thesis: Deciphering the gene regulatory network and cell states induced by mechanical stress and oncogene in glandular epithelia

03/2016 – 02/2018

Ewha Womans University | Seoul, South Korea

MSc: College of Medicine, Department of Biochemistry

Thesis: [Analysis of inconsistent mutation calls for cell lines in next generation sequencing databases](#)
(Supervisor: Hyung-Lae Kim, MD PhD)

01/2014 – 05/2014

Colorado State University - Pueblo | Pueblo, CO, USA

Exchange Student Program – Department of Biology and Music (Flute)

03/2012 – 08/2015

Soongsil University | Seoul, South Korea

BSc: College of Natural Science, School of Systems Biomedical Science

Double concentration: Bioengineering and bioinformatics

Thesis: Identification of functional nucleotide and haplotype variants in the promoter of FGB gene
(Supervisor: Chaeyoung Lee, PhD)

Early Graduation of Academic Excellence (Graduation in 3.5 years)

CAREER: In-Field

04/2026 – Currently

Post-doctorate researcher | Laboratory of stem cells and cancer, Université Libre de Bruxelles, Belgium (On-site, Fulltime)

- Application of integrative single-cell, multi-omic and spatial transcriptomics analysis for understanding mechanisms related to:
 - Cellular infidelity and tumour heterogeneity in mammary glands upon oncogenic mutations and knock-out
 - Epithelial plasticity and cell competition in early cancer development in skin epidermis

03/2023 – 04/2026

Bioinformatician | Laboratory of stem cells and cancer, Université Libre de Bruxelles, Belgium (On-site, Fulltime)

- Prediction of gene regulatory network in single-cell scope:
 - Glandular epithelia: Cell fate transitions and cellular infidelity under mechanical and oncogenic stress
 - Skin epithelium: Homeostasis, differentiation, and initiation of basal cell carcinoma (BCC)

04/2015 – 02/2018

Associate Researcher | National Cancer Centre, South Korea

- Omics Core Lab
- Bioinformatician & Molecular Biologist

06/2012 – 03/2015

Undergraduate Researcher | Soongsil University, South Korea

- Laboratory of Statistical Genomics (Supervisor: Chae-young Lee)

CAREER: Translation (EN-KR)

07/2022 – 07/2023

Medical translator (EN-KR) | Biotasker, UK (Remote)

- Translation of medical brochure
- Translation of clinical trial report

10/2017

Translator (EN-KR) | Embry-Riddle Aeronautical University

- Campus open day in Seoul

03/2013 – 06/2014

Translator (EN-KR) | Eunsan Civil Engineering Corporate, South Korea (Remote)

- Translation of official documents to be sent to the sub-contractors based in Vietnam or Libya

CAREER: Others

09/2025 – Current

Representative of ULB | RSG Belgium, Belgium

- Organisation of events and conferences
 - Co-host of Beerformatics Brussel edition (Apr 2026, Brussels, Belgium)
 - Jury member of BioHackathon (Sep 2025, Leuven, Belgium)

04/2020 – 05/2021

Volunteer Researcher | COVID-19 Diagnosis Platform, Hôpital Erasme

- Data encode and IT support

11/2016 – 02/2018

Career Advisory | Soongsil University, South Korea

- Career development department

PUBLICATIONS

Please find full list via [Google Scholar](https://scholar.google.com/).

* indicates co-first author.

- **Innate immunity and the NF- κ B pathway control prostate stem cell plasticity, reprogramming and tumor initiation (Cover article)**
Jiang C*, **Song Y***, Rorive S, ... , Sifrim A, Blanpain C. *Nature Cancer* 10.1038/s43018-025-00994-3 (2025).
- **Collagen signaling and matrix stiffness regulate multipotency in glandular epithelial stem cells in mice**
Jiang C*, Centonze A*, **Song Y***, Chrisnandy A, ... , Sifrim A, Blanpain C. *Nature Communications* 15 (1) 10482 (2024).
- **Dynamic regulation of tissue fluidity controls skin repair during wound healing**
Sarate RM, Hochstetter J, Valet M, Hallou A, **Song Y**, ... , Simons BD, Blanpain C. *Cell* S0092-8674(24) 00825-0 (2024).
- **The extracellular matrix dictates regional competence for tumour initiation**
Bansaccal N, Vieugue P, Sarate R, **Song Y**, ... , Sifrim A, Blanpain C. *Nature* 623, 828-835 (2023).
- **Pharmacological targeting of netrin-1 inhibits EMT in cancer**
Lengrand J, Pastushenko I, Vanuytven S, **Song Y**, ... , Blanpain C. *Nature* 620, 402-408 (2023).
- **Cell type and stage specific transcriptional, chromatin and cell-cell communication landscapes in the mammary gland**
Song Y*, Fioramonti M*, Bouvencourt G, Dubois C, Blanpain C, Van Keymeulen A. *Heliyon* 9, e17842. (2023).
- **Fat1 deletion promotes hybrid EMT state, tumour stemness and metastasis.**
Pastushenko I, Mauri F, **Song Y**, ... , Blanpain C. *Nature* 589, 448–455 (2021).
- **Heterotypic cell–cell communication regulates glandular stem cell multipotency.**
Centonze A, Lin S, Tika E, Sifrim A, Fioramonti M, Malfait M, **Song Y**, ... , Voet T, Blanpain C. *Nature*. 2020 Aug 26; 584, 608–613.
- **Mechanisms of stretch-mediated skin expansion at single-cell resolution.**
Aragona M, Sifrim A, Malfait M, **Song Y**, ... , Voet T, Simons BD, Blanpain C. *Nature*. 2020 Jul 13; 584, 268–273.

LECTURES

- **Innate immunity and the NF- κ B pathway control prostate stem cell plasticity, reprogramming and tumor initiation**
10/2025, Korea University, Seoul, South Korea (Virtual)
A part of lecture series IV, College of Medicine (Invited by Prof. Hyunji Lee)

TALKS AND PRESENTATIONS

- **Innate immunity and the NF- κ B pathway control prostate stem cell plasticity, reprogramming and tumor initiation**
09/2025, The BACR Annual Meeting 2025, Leuven, Belgium – Selected abstract
08/2025, Biological Research Information Center (BRIC), South Korea (Virtual)
07/2025, Chungnam National University, Daejeon, South Korea (Virtual)
Invited by Prof. In-Soo Kim (Department of Pharmacology)
- **Collagen signaling and matrix stiffness regulate multipotency in glandular epithelial stem cells in mice**
01/2025, Biological Research Information Center (BRIC), South Korea (Virtual)
- **Cell type and stage specific transcriptional, chromatin and cell-cell communication landscapes in mammary gland**
08/2024, The Europe-Korea Conference on Science and Technology (EKC). Coventry, United Kingdom

- **Collagen signalling and matrix stiffness regulate multipotency in glandular epithelial stem cells**
11/2023, BeSSCR, Brussels, Belgium – Selected abstract
- **Defining the cellular and molecular mechanisms of tissue repair upon lineage ablation in the skin epidermis.**
03/2023, Soongsil University, South Korea
Invited by Prof. Chaeyoung Lee (Soongsil University)
- **NR2F2 controls malignant squamous cell carcinoma state by promoting stemness and invasion and repressing differentiation**
08/2023, The Europe-Korea Conference on Science and Technology (EKC). München, Germany
11/2022, K-bioX, Korea and USA
11/2022, Korean Scientist and Engineers Association in Belgium, Belgium
- **Fat1 deletion promotes hybrid EMT state, tumour stemness and metastasis**
03/2023, Centre for Genome Engineering, Institute of Basic Science (IBS). South Korea
Invited by Dr. Hee-Tak Lee (IBS)
07/2022, EKC 2022, France
08/2021, Korean Canadian Scientists of Toronto, Canada
- **Mechanisms regulating tumour transition states**
03/2020, Soongsil University, South Korea
- **Clinical implications of proliferation activity in T1 or T2 male gastric cancer patients**
12/2015, National Cancer Center, South Korea

CONFERENCE ORGANISATION AND CHAIRING

- **Impact, Innovation and Connectivity for Transforming Tomorrow Together**
01/2025 – 08/2024, Verein der koreanischen Wissenschaftler und Ingenieure in Österreich (Vienna, Austria)
Conference executive board – Programme division chairs
Medical science & Engineering (ME) division
- **Impact, Innovation and Connectivity for Transforming Tomorrow Together**
02/2024 – 08/2024, The Korean Scientists and Engineers Association in the UK (Coventry, UK)
Conference executive board – Registration committee
Session Chair – Life science and health
- **Innovative Global Cooperation in Academy and Industry**
02/2023 – 08/2023, Verein Koreanischer Naturwissenschaftler und Ingenieure in der BRD e.V. (München, Germany)
Conference executive board – Registration committee
- **Pathways to Sustainability: The Role of Emerging Technologies**
02/2022 – 07/2022, Association des Scientifiques Coréens en France (Marseille, France)
Conference executive board – Registration committee
Program organiser – Summer science school for Kids
- **Role of Science, Technology and Innovation for Achieving Sustainability and Global Goals 2030**
02/2021 - 10/2021, The Europe-Korea Conference on Science and Technology (EKC)
Conference executive board – Registration committee
- **ULB single-cell Meetup**
06/2021, IRIBHM, Université Libre de Bruxelles, Belgium
Co-host with Dr. Sumeet Pal Singh

HONORS AND AWARDS

08/2023

The Korean Federation of Science and Technology Societies | Seoul, South Korea
Presidential Award – commendation

11/2022

K-bioX | Seoul, South Korea / California, USA
Outstanding speaker

12/2015

National Cancer Centre | Ilsan, South Korea
Outstanding speaker

08/2015

Soongsil University | Seoul, South Korea
Graduation with Honors

09/2012, 02/2013

Soongsil University | Seoul, South Korea
Academic Excellence

FUNDING

03/2023 – 02/2024

Walloon Region Research Program | La Recherche en Wallonie
48,434.40 Euros/year

04/2021 – 03/2023

Télévie Grant | F.R.S – FNRS
27,570.24 Euros/year

03/2019 – 03/2021

Télévie Grant | F.R.S – FNRS
26,633.28 Euros/year

03/2018 – 03/2019

Fond d'Erasmus | Université Libre de Bruxelles
23,575.44 Euros

04/2014 – 08/2015

Korea Student Aid Foundation (KOSAF) | South Korea

Governmental scholarship

3-semester of full-scholarship (12,600,000 KRW)

SKILLS

- **Single-cell omics and spatial transcriptomics**
Single-cell transcriptomics analysis
Chromatin landscape in single-cell scope
Single-cell multiomics analysis
Spatial transcriptomics analysis (10X Xenium)
- **NGS data processing**
Copy Number Variant (CNV) analysis
Coding and non-coding transcriptome analysis
Chromatin landscape with ChIP-seq and ATAC-seq
NGS cancer panel analysis
- **Downstream analysis**
Epigenome analysis
Geneset Enrichment Analysis
Pathway analysis
Transcription factor prediction from chromatin or gene expression data
Gene and protein network definition
Gene regulatory network prediction
Cell-cell communication prediction
- **Computational language**
Perl and Shell-based programming
Intermediate level of python
R toolkit
- **Further Skills**
Basic level of computer aided-drug discovery
Pipeline design on HPC system
Visualization of data
Statistical analysis and interpretation

LANGUAGE

- **Korean – Native language**
- **English – Bilingual proficiency**
Qualified translator (KOR – ENG): 07/2014, Korean Society of Translators
- **Mandarin Chinese – Limited working proficiency**
- **French – Intermediate proficiency**
DEL F B1: 06/2023, Alliance Française
- **Italian – Basic proficiency**
- **Flemish (Belgian Dutch) – Basic proficiency**