Johannes Nicolaus **Wibisana**

MSc Student

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Summary

I am a 2nd year MSc student at Osaka University majoring in Biology. I currently use single-cell omics and fluorescence imaging analysis to investigate the NF-κB transcription mediated transcriptional regulation in B cell. I am familiar with R, ImageJ macro and bash programming languages for image processing and analysis of multi-omics data. I also have experience with basic molecular biology experiments such as mammalian and avian cell culture, RNA-FISH, molecular cloning and qPCR. Being highly adaptable and flexible, I am keen and can quickly grasp new concepts that can be applied to my current and future research.

Education

Osaka University (Graduate School of Science) Osaka, Japan

M.Sc in Biological Sciences *Apr. 2020 – Mar. 2022*

- Awardee of the Honjo International Scholarship Foundation scholarship
- Thesis research: NF-κB transcriptional regulation in B-cell, Laboratory for Cell Systems (PI: Mariko Okada)
- Others: In charge of laboratory website and bioinformatics training of visiting researchers

Osaka University (School of Science) Osaka, Japan

B.Sc in Biological Sciences *Oct. 2016 – Mar. 2020*

- Awardee of the MEXT scholarship
- Thesis research: NF-κB transcriptional regulation in B-cell, Laboratory for Cell Systems (PI: Mariko Okada)
- Selected for the AEARU 2018 Summer Camp in Hefei China
- Qualified for early graduation

Publications

Research articles

- **Enhanced transcriptional heterogeneity mediated by NF-κB super-enhancers** BiorXiv (Under minor revision)

  JN Wibisana*, T Inaba, H Shinohara, N Yumoto, T Hayashi, M Umeda, M Ebisawa, I Nikaido, Y Sako, M Okada *2021*

- **ASURAT: functional annotation-driven unsupervised clustering of single-cell** BiorXiv (Under revision)

  K Iida, J Kondo, **JN Wibisana**, M Inoue, M Okada *2021*

Review articles

- **Encoding and decoding NF-kB nuclear dynamics** Accepted

  JN Wibisana*, M Okada *2021*

- **Prediction of transcriptional regulation in immune cells through single-cell analysis** Journal of Clinical and Experimental Medicine (Igaku no Ayumi)

  JN Wibisana, K Iida, M Okada *2021*

Book chapter

- **Quantitative imaging analysis of NF-κB for mathematical modelling applications** Methods in Molecular Biology (in press)

  JN Wibisana*, T Inaba, Y Sako, M Okada *2020*

Presentations

International

Nov. 2021	**Imaging and single-cell sequencing analysis of super-enhancer activation mediated by NF-κB in B cells** Cell Symposia: Biological Assemblies - Phase transitions and more (Poster presentation)	Online
May 2021	**NF-κB mediated transcriptional regulation in B cell** Cold Spring Harbor Laboratory Biology of Genomes 2021 (Poster presentation)	Online
Jan. 2020	**NF-κB mediated transcriptional regulation in B cell** Japan-Korea Bilateral Symposium between IPR and SNU on Advanced Analysis of Protein Function and Structure (Oral presentation)	Seoul, South Korea
Nov. 2019	**NF-κB mediated transcriptional regulation in B cell** International Conference of Systems Biology (Poster presentation)	Okinawa, Japan

Domestic

Nov. 2021	**Imaging and single-cell sequencing analysis of super-enhancer activation mediated by NF-κB in B cells** 19th IPR retreat (Poster presentation)	Online
Sep. 2020	**NF-κB mediated transcriptional regulation in B cell** The 58th Annual Meeting of the Biophysical Society of Japan (Poster presentation)	Online
Nov. 2019	**NF-κB mediated transcriptional regulation in B cell** 18th IPR retreat (Oral presentation)	Osaka, Japan

Honors and awards

Sep. 2020	**Poster presentation award.** The 58th Annual meeting of the Biophysical Society of Japan	Japan
Nov. 2018	**Bronze award.** BIOMOD 2018 Molecular Design Competition	U.S.A
Nov. 2017	**Bronze award.** BIOMOD 2017 Molecular Design Competition	U.S.A

Research experience

Laboratory for Cell Systems (PI: Mariko Okada), Osaka University — Osaka, Japan

Undergraduate – Master's student — *Feb. 2019 – Mar. 2022*

- Project: NF-κB mediated transcriptional regulation in B cell
- Performed quantitative imaging analysis of NF-κB nuclear translocation using confocal microscope and ImageJ
- Performed single-cell RNA-seq and single-cell ATAC-seq analysis to find the relationship between cis-regulatory elements and gene expression
- pattern
- Performed single-molecule RNA-FISH and qPCR for the confirmation of RNA-seq results
- Performed cloning for both transient and permanent expression of fluorescent-tagged protein of interest
- In charge of side projects concerning RNA-seq analysis and training of visiting researchers on RNA-seq analysis

Laboratory of Cellular Life Science (PI: Naotada Ishihara), Osaka University — Osaka, Japan

Research Intern — *Sep. 2018 – Feb. 2019*

- Project: Quantification of Mitochondrial Morphology
- Performed quantitative analysis of mitochondrial morphology using ImageJ
- Performed basic experiments such as mammalian cell culture and confocal imaging

Bio Medical Wet Robotics Laboratory (PI: Morishima Keisuke), Osaka University Osaka, Japan

Associate Project Leader for Osaka University BIOMOD 2017-2018 *2017-2018*

- Performed basic DNA origami experiments
- Performed 3D modeling and computer simulated DNA origami design

Laboratory of Science and Innovation for Pain, Osaka University Osaka, Japan

Research Assistant *Apr. 2018 – Feb. 2019*

- Performed mouse genotyping, RNA extraction and ELISA
- Performed image analysis of mouse MRI images
- In charge of laboratory cleanliness

Department of Biotechnology, Pelita Harapan University Tangerang, Indonesia

Research Intern *May 2016 – Sep. 2016*

- Project: Antibiotic susceptibility evaluation of *Bacillus amyloliquefaciens* isolated from local pig gastrointestinal tract as potentially probiotic candidate
- Performed basic microbiology techniques for antibiotic resistance assay

Other skills

Website development HTML, CSS, Jekyll. Built and designed laboratory website using HTML and CSS (Bootstrap) and Personal website using Jekyll.

3D printing and modeling Basic 3D modeling using Fusion360 and Maya. Familiar with basic 3D printing techniques.