# KWUANJIRA CHALEEKARN

## RESEARCH ASSISTANT

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100/10 Moo 2, Bang Phlap Subdistrict, Pak Kret District, Nonthaburi, Thailand

## *PROFESSIONAL SUMMARY*

Research Assistant with an M.Sc. in Biochemistry and Molecular Biology, specializing in cancer biology and 3D organoid models. Experienced in developing patient-derived cholangiocarcinoma organoids and applying organoid systems for disease modeling and drug screening, with current research focused on lung cancer. Previously conducted *ex vivo* studies to evaluate bioactive compounds. Interested in advancing precision medicine and exploring diverse oncological models to further support therapeutic research

## *EDUCATION*

**Master's Degree of Science** **2019 - 2023**

Master's Degree in biochemistry and molecular biology, Department of Biochemistry, Faculty of Medicine, Khon Kaen University, Khon Kaen, Thailand

**Bachelor's Degree of Science** **2014 - 2017**

Bachelor's Degree in Biotechnology, Department of Biotechnology, Faculty of Technology, Khon Kaen University, Khon Kaen Thailand

## *RESEARCH SKILLS*

- 2D/3D Cell Culture and Organoid Technology
- Co-culture Systems with Multiple Cell Phenotypes
- Tissue-Based Drug Screening and Human Cell-Based Assays
- Aseptic Techniques and Sterility Testing
- Cell Isolation and Viability Assessment
- FFPE Tissue Processing
- Immunofluorescence (IF)
- Hematoxylin and Eosin Staining (H&E)
- Masson's Trichrome Staining
- Brightfield and Fluorescence Microscopy

## *WORK EXPERIENCE*

**Research Assistant** **Oct 2025 - Present**

Dept. of Immunology, Faculty of Medicine Siriraj Hospital, Mahidol University · Bangkok, Thailand

- Establishment and Characterization of Cancer-Derived Organoids (CDOs) for Non-Small Cell Lung Cancer

**Sales Specialist** **Mar 2024 - Dec 2024**

- Conducted market research and identified scientific trends for precision medicine applications.
- Delivered product presentations and training to researchers, enhancing customer engagement.
- Coordinated with teams to produce scientific content and promotional materials

**Post-Master Researcher** **Jul 2023 - Jan 2024**

National Nanotechnology Center (NANOTEC), NSTDA

- Developed and predictive models to evaluate efficacy and safety of active compounds in anti-aging
- Utilized human ex vivo skin models for physiologically relevant compound screening.
- Applied ELISA to assess biomarkers of skin aging and toxicity.
- Contributed to refining testing platforms for translational skin health research and product development.

**Graduate Thesis Research (M.Sc. Program)** **2019 - 2023**

- Development of Three-Dimensional (3D) Cholangiocarcinoma Organoids Using a Tissue-Engineering Approach
- Established patient-derived cholangiocarcinoma (CCA) organoids as preclinical models.
- Developed and optimized 2D and 3D organoid cultures from patient-derived tissues.
- Performed tissue culture, immunofluorescence staining, and drug response assays to characterize organoid.

## *WORK EXPERIENCE*

**Teacher Assistant (TA)** **2020 - 2021**

- Prepared and calibrated instruments and equipment according to experimental protocols.
- Collaborated with scientists and supervised undergraduate laboratory activities.
- Managed documentation and coordinated scientific workshops.

**Research Assistant** **Nov 2018 - June 2019**

Faculty of Medicine, Khon Kaen University, Thailand

- Supported the Cholangiocarcinoma Screening and Care Program (CASCAP).
- Developed and applied in vitro organotypic culture techniques for 3D cholangiocarcinoma cell models.

**Workshop Staff & Organizer – Short Courses**

**Workshop Team**

- April 2019: Short Course in Clinical and Natural Product Metabolomics (CliNaP-M) – "Towards Precision Medicine"
- April 2020: Short Course in Clinical and Natural Product Metabolomics (CliNaP-M) – "Employing Foodomics for Biomedical Science"
- March 2021: Staff for the SEMS Program Camp and SCiUS Program
- @ Demonstration School of Khon Kaen University, Secondary Level
- April 2022: Short Course in Clinical and Natural Product Metabolomics (CliNaP-M) – "Foodomics"
- February 2023: Short Course in Clinical and Natural Product Metabolomics (CliNaP-M) – "Phenomics for Precision Medicine"

**Project in Biotechnology** **2018**

- Production of lignocellulose-degrading enzymes by fungal isolates for Napier grass

## *CERTIFICATIONS& AWARDS*

- The 1st International Reinventing University Roadmap for Phenomics (IRURP) Symposium 2023
  (Award of The 1st runner-up poster presentation
- Received travel grant at 81st Annual Meeting of the Japanese Cancer Association in Yokohama, Japan
- The 81st Annual Meeting of the Japanese Cancer Association. Pacific Convention Plaza Yokohama (PACIFICO Yokohama), Japan 2022
  (Award of poster presentation)

## *PUBLICATIONS*

- Techa-Ay S, Watcharadetwittaya S, Deenonpoe R, Intuyod K, Kaewlert W, Techasen A, Loilome W, Klanrit P, Suksawat M, **Chaleekarn K**, Sitthirak S, Thanee M.

Predicting cisplatin response in cholangiocarcinoma patients using chromosome pattern and related gene expression.
Scientific Reports, 2025; 15:20420. https://doi.org/10.1038/s41598-025-06851-8

- **Chaleekarn K**, Phetcharaburanin J, Namwat N, Loilome W, Jarearnrat A, Titapun A, Khuntikeo N, Klanrit P.

Optimizations of patient-derived cholangiocarcinoma explant culture for 3D organoid formation.
Proceedings of the 24th National Graduate Conference, 22 May 2023, Thailand.

- Phukhum P, Phetcharaburanin J, **Chaleekarn K**, Kittirat Y, Kulthawatsiri T, Namwat N, Loilome W, Khuntikeo N, Titapun A, Wangwiwatsin A, Khampitak T, Suksawat M, Klanrit P.

The impact of hypoxia and oxidative stress on proteo-metabolomic alterations of 3D cholangiocarcinoma models.
Scientific Reports, 2023 . https://doi.org/10.1038/s41598-023-30204-y