

Kuek Wei Cheng David

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PROFESSIONAL EXPERIENCE

National University Hospital, Singapore

Sep 2022 - Present

Medical Technologist

- Perform molecular-based clinical diagnostic assays/tasks in Genetic Mutations, Infectious Diseases and Oncology according to established operational procedures
- Operates automated nucleic acid extractors or perform manual nucleic acid extractions, program end-point or real-time PCR temperature profiles before assay analysis
- Analyze tests with molecular techniques such as DNA and RNA extraction, cDNA synthesis, PCR, RT- PCR, PCR/RFLP, fragment analysis/gene mapper, DNA sequencing and next generation sequencing (NGS) DNA sequencer (Illumina MiSeq, iSeq100)
- Experience with bioinformatics in analyzing NGS results: Linux command line and environment, Ubuntu, conversion of FASTQ files to BAM and VCF files using an array of tools such as FastQC, BWA, SAMtools, PISCES; annotate variants using different softwares such as ANNOVAR, VEP and snpEff.
- Experience in variant interpretation and reporting based on ACMG guidelines
- Registered with the National Transplant Registry System (NTRS)

Evonik, Singapore

Sep 2021 - Nov 2021

Research Assistant

- Plan, implement and perform cell culture and biological in vitro assays, and support current research by providing expertise in the field of cell culture to relevant projects
- Take part in design and execution of cell culture experiments, cell and molecular biology assays Preparation of cell culture media and ingredients as well as laboratory instruments, solutions, stains, assays and other supplies as instructed for research experiments
- Perform analysis, documentation and write reports on research findings

Rong Yao Fisheries

Apr 2016 - Aug 2016

Lab Assistant (Internship)

- Research on genetically modified fish hatchlings' immune system and their growth rate
- Assisted in general housekeeping, fish grading, sterilization of quarantine area and fish feed counting

EDUCATION

University of Adelaide, Australia

Jul 2019 - Jul 2021

Bachelor of Science, Major in Genetics and Microbiology and Immunology

- Subcloning of RecDNA: Restriction enzymes, DNA ligation, transformation of plasmid to the cell, gel electrophoresis, streak and spread plating, pipetting and dilutions, viable count, culture inoculation, plasmid mini-prep, digestion, Sephadex column and Bradford assay, Ion Exchange Chromatography. Molecular analysis of bacteria virulence factors and selection of bacteriophage resistance mutants to study LPS: ELISA, PCR microscopy, antibiotic susceptibility testing, sensitivity spot assay, agglutination testing.
- Dissection and processing mouse spleen, loading a haemocytometer, FACS Labelling, Immunohistochemistry, Mitogenesis Assay, Flow Cytometry, Luciferase Assay, RNA extraction, cDNA synthesis, Immunofluorescence
- FISH of Human X and Y Centromere-Associated Sequences to Metaphase Chromosomes
- Experience with BLAST, Geneious Prime, NEB cutter (restriction enzyme analysis tools), ORF finder, Motif Search, NCBI, Sequence Manipulation Suite, Multalin

Republic Polytechnic, Singapore
Diploma in Environmental Science

May 2014 - May 2017

PUBLICATIONS

Houge, G., Bratland, E., Aukrust, I., Tveten, K., Žukauskaitė, G., Sansovic, I., Brea-Fernández, A.J., Mayer, K., Paakkola, T., McKenna, C., Wright, W., Markovic, M.K., Lildballe, D.L., Konecny, M., Smol, T., Alhopuro, P., Gouttenoire, E.A., Obeid, K., Todorova, A., Jankovic, M., Lubieniecka, J.M., Stojiljkovic, M., Buisine, M.-P., Haukanes, B.I., Lorans, M., Roomere, H., Petit, F.M., Haanpää, M.K., Beneteau, C., Pérez, B., Plaseska-Karanfilska, D., Rath, M., Fuhrmann, N., Ferreira, B.I., Stephanou, C., Sjursen, W., Maver, A., Rouzier, C., Chirita-Emandi, A., Gonçalves, J., **Kuek, W.C.D.**, Broly, M., Haer-Wigman, L., Thong, M.-K., Tae, S.-K., Hyblova, M., den Dunnen, J.T. and Laner, A., 2024. Comparison of the ABC and ACMG systems for variant classification. *Eur J Hum Genet* 32, 858–863 (2024). doi: 10.1038/s41431-024-01617-8

Kuek, W.C.D., Chai, C.N., Tham, W.M.J., Ng, A.Y.J, Lau, D.S.N., Loo, J.Y.Q., Van, D.T., Tan, J.K.M., Lee, C.K., Yan, B. and Chan, H.M., 2024. Development of a tagmentation-based next-generation sequencing clinical assay as an alternative to capillary electrophoresis-based sequencing, *Mol Genet Genomic Med.* 12(11) (2024) doi: 10.1002/mgg3.70035

COMMITTEES

ClinGen, National Institutes of Health (United States)

Low Penetrance/Risk Allele Working Group

Member

TP53 Variant Curation Expert Panel (VCEP)

Member

POSTER

Kuek, W.C.D., Loo, J.Y.Q., Lee, C.K., Chan, H.M., Van, D.T., Lau, D.S.N., Tham, W.M.J., Tan, J.K.M., Ng, L.J., Yan, B., Tay, S., Wang, F., Low, J.M., Shetty, S.S. and Chin, H.L., 2024. Newborn Screening for Spinal Muscular Atrophy in Singapore. Poster presented at International Allied Health Conference 2024, Singapore.

CONFERENCES

International Allied Health Conference 2024	1 - 5 November 2024
15th International Symposium on Variants in the Genome (HUGO) 2024	13 - 15 May
6th NUHS - Harvard BIDMC Internal Medicine Conference 2022	28 - 29 October 2022

SKILLS AND HOBBIES

- Proficient in English and Mandarin
- Proficient in Microsoft Words, PowerPoint, Excel
- Grade 8 Piano with ABRSM
- Enjoys soccer, badminton and jazz

VOLUNTEER EXPERIENCE

Chinese South Australia Christian Church (CSACC)	Aug 2020 - Jul 2021
<ul style="list-style-type: none">● Worship Singer, Pianist, Treasurer	

Community Involvement Program (Vietnam)	2012
<ul style="list-style-type: none">● Activity Planner: Organised events such as item donation, skit performance at a local orphanage	

Food from the Heart, Harmony@Senja (Singapore)	2010 and 2013
<ul style="list-style-type: none">● Distribution of food and necessities to the needy	