Jago Van Dam, PhD

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EDUCATION

PHD IN MEDICINE | 2017–2020 | UNIVERSITY OF ADELAIDE

- Project title: 'Towards characterising neurophysiological and neuroendocrine function in adolescents born to women with gestational diabetes mellitus'
- Multidisciplinary research primarily in the fields of neurophysiology, endocrinology, and obstetrics
- Used transcranial magnetic stimulation, electrophysiology, immunohistochemistry, cognitive assessment and statistics

BACHELOR OF HEALTH SCIENCES (HONOURS) | 2016 | UNIVERSITY OF ADELAIDE

- Honours, First Class
- Explored the effects of gestational diabetes on cortical development, endocrine function in children; pharmacogenetic analyses of metformin
- GPA: 7.000 | Graduated with highest marks in the discipline

BACHELOR OF SCIENCE | 2012–2015 | UNIVERSITY OF ADELAIDE

- Double Major in Genetics and Psychology
- GPA: 6.083

COMMUNICATION

- Advanced technical and scientific writing
- Experienced in online writing for general audiences
- Experienced in presenting scientific data and research at national and international conferences
- Experienced in clinical research administration including recruitment and patient management
- Excellent written and oral communication skills
- Experienced in tertiary teaching and assessment

TRAINING

DATA AND COMPUTER SCIENCE

- Full-stack Web Development with React (Specialization) – Coursera (2021)
- Introduction to Cyber Security (Specialization) – New York University/Coursera (2021)
- Cloud Application Development Foundations (Professional Certificate) – IBM (2021)
- Modern Big Data Analysis with SQL (Specialization) – Cloudera (2020)
- SQL and Database Design – Udemy (2020)
- Machine Learning A-Z (R/Python) – Udemy (2019)
- Data Scientist with Python – DataCamp (2019)
- CS50 Introduction to Computer Science – HarvardX (2019)
- Python for Data Science – University of California San Diego (2018)
- Advanced statistics, R, and research methods coursework – University of Adelaide (2012–2015)

AWARDS

- Australian Society for Medical Research (ASMR) Robison Research Award (Best Presentation) 2017
- Perinatal Society of Australia and New Zealand Early Career Researcher Travel Award 2017
- Healthy Development Adelaide/Channel 7 Children's Research Foundation (top-up) scholarship 2017
- Research Training Program/Australian Postgraduate Award 2017
- Faculty of Sciences Outstanding Academic Achievement Award 2015
- Faculty of Sciences Outstanding Academic Achievement Award 2014

LEADERSHIP

- Leading multidisciplinary biomedical research projects
- Principal researcher, Metformin in Gestational diabetes (MiG) trial follow-up studies
- Directing research design, recruitment, data collection, database management, data analysis, publication and dissemination of data
- Supervising junior researchers and research assistants; lecturing, tutoring, and assessing 3rd year university students

RELEVENT EMPLOYMENT & EXPERIENCE

SENIOR STATISTICIAN/DATA ANALYST | CHILD DEATH AND SERIOUS INJURY REVIEW COMMITTEE | 2020–PRESENT

- Responsible for all quantitative analysis, statistical reporting and research in an independent statutory body
- Working with complex, semi-structured data requiring significant transformation, aggregation, and integration with other sources (e.g. ABS data)
- Modernised the annual reporting process by developing an interactive website for the annual report (previously PDF) using HTML, CSS, JavaScript, and Plotly
- Converted data extraction workflow from legacy system (Cognos) to Power BI, inc. extensive ETL and data modelling with SQL Server
- Managed and implemented the transition from legacy SQL Server database to a custom electronic data capture and reporting system (REDCap) hosted on Azure – inc. extensive negotiation with ICT and Cyber Security departments and technical configuration
- Developed interactive web apps for blog posts
- Performed qualitative work inc. case review, collaboration with NGOs to promote policy change

LECTURER (CASUAL) | UNIVERSITY OF ADELAIDE | 2017–PRESENT

- Tutorial & workshop delivery, assignment marking

RESEARCH ASSISTANT (CASUAL) | UNIVERSITY OF ADELAIDE | 2017–2020

- Neurophysiology research – data collection, analysis, publication

TECHNICAL SKILLS

- Advanced statistics and modelling using Python & R
- Data wrangling, cleaning, and manipulation using pandas (Python) and the tidyverse (R)
- Data visualization using matplotlib & seaborn (Python) and ggplot2 & Plotly (R)
- Interactive data visualization and dashboarding using Tableau, Power BI, Plotly, and Shiny
- Web and app development using HTML, JavaScript, CSS, jQuery, React, PHP
- Advanced machine learning, inc. classification and prediction models using scikitlearn (Python)
- Advanced querying, database design, ETL using SQL (SQL Server, SSMS, MySQL, MySQL Workbench)
- Big data analysis with SQL using Hive and Impala
- Cloud computing with Google Cloud Platform, Azure, and IBM Cloud
- Software engineering and general programming using Python, JavaScript, C#, PHP
- Development of databases and data capture systems (e.g. REDCap), inc. project design and implementation, back-end engineering (JavaScript & PHP), and cloud integration (Azure)
- Interacting with systems and databases using APIs
- Software: MS Office, Jupyter, RStudio, VS Code, Spyder, REDCap, Objective, SSMS, Power BI, Docker

PUBLICATIONS

Van Dam, J. M., *et al.* (2021). Cortical Plasticity and Interneuron Recruitment in Adolescents Born to Women with Gestational Diabetes Mellitus. *Brain Sci.*, *11*(3), 388; doi.org/10.3390/brainsci11030388

Van Dam, J. M., *et al.* (2018). Variability of the cortisol awakening response and morning salivary oxytocin in late adolescence. *J Neuroendocrinol*, e12645. doi:10.1111/jne.12645

Van Dam, J. M., *et al.* (2018). Reduced cortical excitability, neuroplasticity, and salivary cortisol in 11–13-year-old children born to women with gestational diabetes mellitus. *EBioMedicine, 31*, 143-149. doi: 10.1016/j.ebiom.2018.04.011

Van Dam, J. M., *et al.* (Under review). Larger average cortisol awakening response is associated with

poorer executive function and processing speed in healthy adolescents.

Van Dam, J. M., Goldsworthy, M. R., Hague, W. M, Coat, S., Pitcher, J. B. (Under review). Lower total morning cortisol secretion in adolescents born to women with gestational diabetes mellitus.