RESUME

Dr. Delphine VINCENT

Scientist expert in Data Analysis

Melbourne area. Dual Citizenship: Australian and French.

Google Scholar
ORCID
LinkedIn
GitHub
Tableau Public
Website
email

Delphine Vincent

SNAPSHOT

- Now transitioning in **data science** **and** **data analytics** (certification acquired).
- **PhD** in Plants Science, 4 post-doctoral fellowships in biology, 10 years as a Senior Research Scientist
- 25 years expertise in biology and data analysis in academia and government
- 60 **publications** (34 peer-reviewed articles, 5 book chapters, 4 editorials, 18 conference papers, 2 patents, 1 preprint, 1 obituary) + 11 **datasets** in public repositories (MassIVE, Pride, (Giga)^{n}DB) + 20 GitHub **repositories** + 5 Tableau **vizzes**
- h-index 20, i10-index 27, cited 3,100 times
- in-depth expertise on experimental design, sample collection and preparation, data acquisition, **statistical analyses**, **data mining** and **visualisation**, as well as report **writing**, submission, revision, and publication
- Managerial and project **leading** experiences
- **Editor** and **reviewer** for multiple scientific journals

EMPLOYMENT HISTORY

Senior Research Scientist

- 2013-2023: Agriculture Victoria Research (AVR), Victorian Government, AgriBio Bundoora VIC 2083, Australia

Post-doctorates

- 2009-2011: Australian National University (ANU), Canberra ACT 0200, Australia
- 2007-2009: UMR BIOGECO INRA 69 route d'Arcachon, 33612 Cestas, France
- 2005-2006: UMR Genetique Vegetale, INRA, Ferme du Moulon, 91190 Gif-sur-Yvette, France
- 2003-2005: University of Nevada, Reno (UNR), 1664 North Virginia Street, Reno NV 89557 USA

EDUCATIONAL QUALIFICATION

PhD

- 1999-2003: "Proteomic analysis of response to water stress in maize based on cell differentiation". PhD doctorate granted with Highest Distinctions.

DATA SCIENCE SKILLS

Computer OS

Fully skilled with MS Windows software (Word, Excel, Powerpoint, Sharepoint, Teams, OneNote, Outlook, Power BI etc…); familiar with Mac OS systems.

Programming (code languages / IDE)

R/RStudio (tidyverse, readr, tidr, dplyr, ggplot2, Bioconductor), Python/JupyterLab (pandas, NumPy, scikit-learn, SciPy, statsmodels.api, wordcloud, IPython, matplotlib, seaborn), Bash Shell, Git, GitBash, GitHub, Structured Query Language (SQL)/SQLiteStudio, Hypertext Markup Language (HTML), javascript (JS), Cascading Style Sheet (CSS), Visual Studio Code, Anaconda navigator.

Statistical analyses

descriptive (means, SDs, quartiles, medians, box plots, histograms, etc..), univariates (linear models, ANOVA, correlation and regression) and multivariates (principal component analysis, partial least square, k-means, self-organising map, and hierarchical clustering analyses).

Bioinformatics and Data Mining

BLAST+, Jexpress, Cluster-Treeview, Blast2GO, Goblet, SignalP, TargetP, SecretomeP, ChloroP,NetCGly, GPI-SOM, Goanna PowerBI, Peptide atlas, protein atlas, cytoscape, UniprotKB, String, SwissModel, Apollo Jbrowser, Proteowizard, TransProteomics Pipeline, Pretzel, AgriGO, REVIGO, ShinyGO, Reactome, Pathway Tools, KEGG, Galaxy, BreadwheatCyc, Circos, MetaboAnalyst, DeconTools, EMBL, EBI InterPro, PDBeKB, RCSB PDB Archive, AlphaFold, ColabFold, Cn3D, Bio edit, Mega XI, BLAST, Expasy, Gene Ontology, OpenAI, PaintOmics, Mercator, Galaxy platforms, JBrowser, Integrated Genome Browser.

Data Visualisation

Circos plots, violin plots, word clouds, treemaps, treemap bars, histograms, line plots, bar plots, pie charts, scatterplots, donut charts, heat maps, box plots, volcano plots, Gantt chart, LM plots, density plots, join plots, pair plots, pair grid plots, etc.. using PowerBI, Tableau, R and Python.

Data interpretation and Storytelling

Attested by my published articles in which I summarise the process in a simplified schematic diagram, present all results with appropriate charts to facilitate interpretation, as well as by my Jupyter Notebooks and Tableau vizzes.

PUBLICATIONS AND SCRIPTS

Full article list on Google Scholar.

Python, SQL and HTM/CSS codes on GitHub.

Tableau dashboards on Public Tableau.

HTML and CSS code on website.

DATASETS ON PUBLIC REPOSITORIES

Mass Spectrometry Interactive Virtual Environment (MassIVE):

- 2016-2022: MSV000090572 DOI:10.25345/C53N20J8S, MSV000088253 DOI:10.25345/C5585Q, MSV000085379 DOI:10.25345/C5QQ6J, MSV000084216 DOI:10.25345/C5C95X, MSV000083970 DOI:10.25345/C56S7Z, MSV000083191 DOI:10.25345/C5HG7N, MSV000082070, MSV000081618, MSV000080036

Protein identification database (PRIDE)

- 2016: PXD002529

(Giga)^n DB

- 2023: Supporting data for "A community resource to mass explore the wheat grain proteome and its application to the Late Maturity Alpha-Amylase (LMA) problem"

Apollo Jbrowse

- 2024: Mapping of bread wheat genome, transcriptome and proteome (proteogenomics)

PROFESSIONAL DEVELOPMENT

CODECADEMY ONLINE COURSE

- 2024: Career Path: Data Scientist - Analytics Specialist (SQL, Python 3, Tableau, Excel, GitHub). Complete.
- 2024: Skill Path: Build a website with HTML, CSS and GitHub pages. Complete.

TEACHING AND STAFF MANAGEMENT

- 2013-2023: Manager of Science A staff at AVR.
- 2013-2020: Demonstrator and lecturer in the Systems Biology Workshop held yearly at AgriBio.
- 2010: Demonstrator in sessions of the Advances in Molecular Plant Science course for undergraduate students at ANU.
- 2007-2008: Guest lecturer in the Biochemistry Master at Bordeaux University (France).

OCCUPATIONAL HEALTH AND SAFETY (OHS), FIRST AID, WELLBEING, MENTORING

- 2013-2016: OHS Representative (HSR), designated first aider (DFA), wellbeing champion for AVR.
- 2022-2023: mentor for the national Young Indigenous Women's STEM Academy (YIWSA) program.

AUSTRALIAN AND INTERNATIONAL COMMITTEES

- 2019-2023: European Cooperation in Science and Technology Action "Protein Production in Photosynthetic Organisms (R3PO)"
- 2021-2023: Proteomics and Metabolomics Victoria (PMV) committee member

EDITORIAL BOARDS

- 2021-2023: BMC Plant Biology editor
- 2015-2023: Editor of the following Research Topics/Special Issues:
  How can secretomics help unravel the secrets of plant-microbe interactions?
  Secretomics: More Secrets to Unravel on Plant-Fungus Interactions. Vol 1
  Secretomics: More Secrets to Unravel on Plant-Fungus Interactions. Vol 2
  Proteomics: Technologies and Their Applications
  Plant Adaptation to Their Biotic and Abiotic Environment Through the Lens of Secretomics
  State-of-the-Art Molecular Plant Sciences in Australia
  Sowing the seed to ensure the future of plant proteomics: Commemorative Issue in Honor of Dr. Dominique Job (1947-2022)