

# R.H. Amanda Ng

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## PROFESSIONAL SUMMARY

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PhD Bioinformatics Scientist with 2+ years experience developing end-to-end analytical pipelines for bioimaging (Cell Painting) and spatial omics (COMET, CosMx, Visium, Stereo-CITE-Seq) and practical experience in full-stack application development. Proven track-record in translating biological and technical requirements into scalable software solutions, from high-performance computing (HPC) workflows to MERN-stack applications.

## EXPERIENCE

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### ImmunoQs | Bioinformatics Scientist

Singapore, Singapore

*(Biotechnology Company focused on Spatial Omics Data Hosting and Processing)*

Nov 2024 – Nov 2025

- Architected a modular, automated analysis pipeline (R/Shell) for ImmunoQs-MGI partnership, enabling scalable hosting and standardized processing for MGI's Stereo-CITE-Seq product.
- Developed generalized tools (Python/R) for bioimage data management—including CZI to OME-TIFF conversion—and standardized QC reporting, resulting in weekly efficiency gains for the Data Analytics Team.
- Built an automated web-reporting tool (R/Bootstrap) to streamline the delivery of QC metrics and raw data to clients.
- Managed the CosMx spatial transcriptomics infrastructure for a multi-institutional longitudinal study (CUHK, IMCB/A\*STAR); refactored legacy codebases to ensure 100% analytical reproducibility while executing end-to-end workflows, including cell-type annotation and pathway enrichment.

### Georg Winter Lab, Center for Molecular Medicine | Pre-Doctoral Research Fellow

Vienna, Austria

*(Research Laboratory focused on Chemical Biology, Cancer and Gene Control)*

Sep 2019 – Dec 2023

- Led the development of the “Isogenic Cell Painting assay”, the first high-throughput imaging approach for discovering molecular glues.
- Deployed automated image segmentation (cellpose v2) and feature extraction (CellProfiler) pipelines on high-performance computing clusters.
- Engineered a custom feature selection strategy employing Kendall's tau-b correlation coefficients to identify subtle morphological signatures; grounded the statistical model in the mechanism-of-action of molecular glues ensuring high-fidelity hit discovery.
- Developed a network analysis approach to compare morphological signatures of hit compounds, enabling the prioritization of candidates with unique biological profiles.
- Managed end-to-end data integrity and high-dimensional data visualization for the discovery of novel molecular glues, resulting in a first-author publication in ACS Chemical Biology and presentations to global scientific cohorts.

## EDUCATION

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### Medical University of Vienna

Vienna, Austria

*PhD working on Cell Morphology Analysis*

Oct 2019 – Sep 2024

- PhD Dissertation: Isogenic CPA: A morphological profiling approach for discovering molecular glues
- Symposium Organization: Organized and secured funding for the institute-wide Career Symposiums for PhD students in 2021 and 2022, and the Ubiquitin and Friends Symposium 2022.
- Organization Development & Compliance: Partnered with HR, faculty, PhD Representatives, and Postdoctoral Representatives to audit and enhance workplace infrastructure, directly resulting in the institute's accreditation with the European Commission's HR Excellence Research Award.

### National University of Singapore

Singapore, Singapore

*BSc with Honors (Life Sciences) | NUS Second Upper Honors equivalent | CAP 4.48/5.00*

Aug 2015 – Jun 2019

- Honors Dissertation: Identification and characterisation of par-1 suppressors in *Caenorhabditis elegans*
- Interdisciplinary Academic Programmes: University Scholar's Programme; Special Programme in Science.

## PERSONAL PROJECTS

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**TeaDex** | Link: [github.com/TangentialAlmond/teadex](https://github.com/TangentialAlmond/teadex)

Nov 2025 – Present

(Full Stack Tea Database Cataloguing Tea Origination, Production Methods and Types)

- Architected a full-stack Create, Read, Update, Delete (CRUD) application using the MERN stack to catalogue information on tea leaves and their processing workflow.
- Implemented secure file handling and storage using Multer and AWS S3 for visual documentation, and designed a systematic database schema in Mongoose for text documentation.
- Collated end user feedback from connections within the tea community.

## PUBLICATIONS

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[Degradome analysis to identify direct protein substrates of small-molecule degraders.](#) Jochem, M.; Schrempf A.; Wagner, L.-M.; Cisneros, J.A.; **Ng, A.**; Winter, G.E.; Krijgsvelf, J. Cell Chem Biol. 2025.

[Large-scale chemoproteomics expedites drug discovery and predicts ligand behavior in cells.](#) Offensperger, F.\*; Tin, G.\*; Duran-Frigola, M.\* *et al.*; **Ng, A.** [collaboration between CeMM and Pfizer] Science. 2024. \*equal contribution

[Discovery of molecular glue degraders via isogenic morphological profiling.](#) **Ng, A.\***; Offensperger, F.\*; Cisneros, J.A.\*; Scholes, N.; Malik, M.; Villanti, L.; Rukavina, A.; Ferrada, E.; Hannich, J.T.; Korean, A.; Kubicek, S.; Superti-Furga, G.; Winter, G.E. ACS Chem. Biol. 2023. \*equal contribution  
GitHub repository: <https://github.com/GWinterLab/IsogenicCPA/tree/main>

## CONFERENCES & SEMINARS

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**Dana Faber Targeted Protein Degradation Series**

**Remote**

*Invited speaker*

Feb 2024

Title: Isogenic CPA: A morphological profiling approach for discovering molecular glues

**Keystone Conference 2022: Modern Phenotypic Drug Discovery**

**Denver, USA**

*Poster presentation*

May 2022

Title: Identifying CRBN-dependent molecular glue degraders with novel targets via morphological profiling

## SKILLS, ACTIVITIES, & INTERESTS

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- **Languages:** English (Native), Mandarin (Intermediate), German (Beginner), Japanese (Beginner).
- **Web development:** MERN stack (MongoDB, Express.js, React, Node.js), Hugo, TailwindCSS/daisyUI, Bootstrap
- **Data Visualization & Analysis:** Python (Pandas/Polars, Seaborn/Matplotlib, Scikit-learn, Plotly, Networkx), R (tidyverse/ggplot2), Adobe Illustrator
- **DevOps & Tools:** Git, VS Code, Bash/Shell, Docker/Singularity
- **Interests:** Tea cultivation, processing and preparation; trained in Japanese tea cultivation and production at Kyoto Obubu Tea Farms, and co-founder and community manager of a growing tea community in Singapore [“SG Tea Friends”](#).