



INBIOSIS WORKSHOP SERIES 2024

Perseus-Powered Transcriptomics: Omics Insights Made Easy

This workshop will **focus** on topics ranging from **basic experimental design** to **advanced downstream analyses** of RNA-seq data as well as **tips to publish in high-impact journals**.

Upon the completion of this **3-day hybrid hands-on workshop**, participants will be **capable** of the following:

- **Conceptualising** a transcriptome **experiment** with different **considerations**
- **Understanding** a complete **workflow** of RNA-seq data acquisition, processing, assembly, functional annotation, analysis, and interpretation
- **Aware** of the different analysis workflows and **software** packages in RNA-seq analysis
- **Exposure** to different approaches for **integrating** transcriptomics with other **omics** towards **systems understanding**
- **Network opportunity** with other researchers in the field & **sharing of knowledge** via voluntary **flash talks**
- Hands-on in **de novo transcriptomic analysis** and **mining** data
- Hands-on in downstream **functional analyses**: WEGO, KEGG pathway, clustering, functional enrichment

Why should you attend

- ✓ You're a **researcher, academician, or student** interested in transcriptomics and its applications.
- ✓ You're interested in **advanced skills** in RNA-seq analysis.
- ✓ You want **user-friendly platforms** for the interpretation of RNA-seq data.
- ✓ You got the transcriptome **results** from the sequencing vendor but not sure how to **interpret** them.
- ✓ You wish to **analyse** the transcriptome data **hands-on**, especially as a biologist instead of a data scientist.
- ✓ You want to learn on how to mine for **biological knowledge** from transcriptome data **without programming/coding**.
- ✓ You work on a transcriptomic project and want to learn on how to **publish** your results as a **high-impact** journal article.

This workshop is opened to **local & international** participants, from **beginner** to **advanced researchers** in **molecular biology / omics**. The **content** of this workshop is **transferable** to other omics studies such as **proteomics**.

25-27 JUN 2024

[0900-1700 GMT+8]

VENUE: **HYBRID**

TRAINER

Assoc. Prof. Dr. Goh Hoe Han

FEE

Online

MYR300

USD80 (International)

On-site INBIOSIS

MYR750

Register Now!

*Priority will be given to those who made payment before **14th Jun 2023**

Organised by



Further details

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TENTATIVE PROGRAMME

Day 1: 25 Jun (Tue)

| Time | Activity/Event |
|------|---|
| 0830 | Registration |
| 0900 | Introduction |
| | Lecture 1: Principles of transcriptomics |
| 1030 | <i>Morning Break</i> |
| 1045 | Lecture 2: A crash course on RNA-seq analysis |
| 1230 | <i>Technical talk 1</i> |
| 1300 | <i>Lunch Break</i> |
| 1400 | Practical 1: Perseus for data pre-processing/exploration |
| 1600 | <i>Afternoon Break</i> |
| 1615 | <i>Participant flash talks</i> , Summary, discussion & wrap-up |
| 1700 | <i>End of Day 1</i> |

Day 2: 26 Jun (Wed)

| Time | Activity/Event |
|------|--|
| 0900 | Introduction to Day 2 & Recap |
| 0910 | Lecture 3: Exploring RNA-seq analysis for biological discovery (Functional Annotation, DEG & Downstream Analyses) |
| 1030 | <i>Morning Break</i> |
| 1045 | Practical 2: Statistical analysis with Perseus |
| 1230 | <i>Technical talk 2</i> |
| 1300 | <i>Lunch Break</i> |
| 1400 | Practical 3: Advanced statistical analysis: Multiple testing correction and FDR |
| 1600 | <i>Afternoon Break</i> |
| 1615 | <i>Participant flash talks</i> , Summary, discussion & wrap-up |
| 1700 | <i>End of Day 2</i> |

Day 3: 27 Jun (Thu)

| Time | Activity/Event |
|------|---|
| 0900 | Introduction to Day 3 & Recap |
| 0910 | Lecture 4: RNA-seq downstream analyses using Perseus |
| 1030 | <i>Morning Break</i> |
| 1045 | Practical 4: Cluster analysis and visualisation |
| 1230 | <i>Technical talk 3</i> |
| 1300 | <i>Lunch Break</i> |
| 1400 | Practical 5: Functional enrichment analysis |
| 1600 | <i>Afternoon Break</i> |
| 1615 | Summary, discussion & conclusion |
| 1700 | <i>End of Workshop</i> |

LOCATION MAP

