



INBIOSIS WORKSHOP SERIES 2022

Advanced Transcriptomics: Concept & Practice

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 online 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**.

5-7 JULY 2022

[0900-1700 GMT+8]

VENUE: **ONLINE**

TRAINER

Assoc. Prof. Dr. Goh Hoe Han

FEE

MYR 300 (local)

USD 80 (International)

Register Now!

*Priority will be given to those who made payment before **30th Jun 2022**

Organised by



Further details

inbiosis.workshop@gmail.com

+603 8921 4557/4558/4549

TENTATIVE PROGRAMME

Day 1: 5 Jul (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 – Current developments of NGS</i>
1300	<i>Lunch Break</i>
1430	Practical 1: Data preprocessing/exploration Practical 2: Transcriptome assembly
1600	<i>Afternoon Break</i>
1615	<i>Participant flash talks</i> , Summary, discussion & wrap-up
1700	<i>End of Day 1</i>



Day 2: 6 Jul (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 3: Mining RNA-seq data with Excel
1230	<i>Technical talk 2 – Single-cell RNA-seq</i>
1300	<i>Lunch Break</i>
1430	Practical 4: WEGO & KEGG pathway analysis
1600	<i>Afternoon Break</i>
1615	<i>Participant flash talks</i> , Summary, discussion & wrap-up
1700	<i>End of Day 2</i>



Day 3: 7 Jul (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 5: Cluster analysis
1230	<i>Technical talk 3 – Applications of RNA-seq</i>
1300	<i>Lunch Break</i>
1430	Practical 6: Functional enrichment analysis
1600	<i>Afternoon Break</i>
1615	Summary, discussion & conclusion
1700	<i>End of Workshop</i>

