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# LATERAL FLOW ASSAY (LFA) DEVELOPMENT & APTAMER DESIGN WORKSHOP 2026



Join this intensive hands-on workshop tailored for researchers, students, and innovators interested in rapid test kit development using **Lateral Flow Assay (LFA) technology and aptamer-based biosensors.**

## WORKSHOP TOPICS INCLUDE :

- ✓ Fundamentals of Lateral Flow Assay (LFA)
- ✓ Basic LFA Design and Strip Development
- ✓ Introduction to Aptamer Technology
- ✓ Aptamer Design using APTCAD Software
- ✓ Aptamer-Gold Nanoparticle Conjugation Chemistry



**12 - 13 August 2026**



**Malaysia Genome and Vaccine Institute,  
National Institutes of Biotechnology Malaysia,  
Jalan Bangi, 43000 Kajang, Selangor.**



### Registration Fee:

- **Malaysian participant: RM 1,500 / pax**
- **International participant: RM 3,000 / pax**

\* Fees include workshop handouts, LFA components, meals, certificate, and related workshop materials.

**REGISTER NOW  
(Closing Date : 30 July 2026)**



## FOR MORE INFORMATION :

- **Dr. Mohamad Shukri Sirat** (Email: [shukri.sirat@nibm.my](mailto:shukri.sirat@nibm.my))
- **Ts. Dr. Ummirul Mukminin Kahar** (Email: [ummirul@nibm.my](mailto:ummirul@nibm.my))
- **NIBM Business Development and Innovation Management Department** (Email: [bdc@nibm.my](mailto:bdc@nibm.my))



# WORKSHOP TENTATIVES

Day 1

12 August 2026 (Wednesday)

- 9:00 am – 9:30 am Registration and Welcome Remarks
- 9:30 am – 11:00 am** **Session 1 : Fundamentals of Lateral Flow Assay (LFA)**
- Overview of LFA design and applications.
  - Antibody selection and assay strategy.
- Trainer:
- Dr. Mohamad Shukri Sirat (Scientist, MGVI-NIBM)
- 11:00 am – 11:30 am Tea Break
- 11.30 am – 1.00 pm** **Session 2 : Basic LFA Design and Development (Part 1)**
- Hands-on session : Nanoparticle–biomolecule conjugation.
  - Demonstration of nanoparticle stability and aggregation behavior.
- Trainers:
- Dr. Mohamad Shukri Sirat (Scientist, MGVI-NIBM)
  - Ts. Dr. Iffah Izzati Zakaria (Scientist, MGVI-NIBM)
- 1:00 pm – 2:00 pm Lunch Break
- 2:00 pm – 5:00 pm** **Session 3 : Basic LFA Design and Development (Part 2)**
- Hands-on session : Techniques and tricks for accurate test and control line dispensing.
  - Hands-on session : Step-by-step integration of rapid test kit (RTK) components.
- Trainers:
- Dr. Mohamad Shukri Sirat (Scientist, MGVI-NIBM)
  - Ts. Dr. Ummirul Mukminin Kahar (Scientist, MGVI-NIBM)

Day 2

13 August 2026 (Thursday)

- 9:00 am – 11:00 am** **Session 4 : Biomarker and Target Identification for Aptamer Development**
- Hands-on session : Step-by-step workflow for biomarker and target identification.
- Trainer:
- Ts. Dr. Ummirul Mukminin Kahar (Scientist, MGVI-NIBM)
- 11:00 am – 11:30 am Tea Break
- 11.30 am – 1.00 pm** **Session 5 : Aptamer Design using APTCAD Software**
- Introduction to APTCAD software.
  - Hands-on session : Step-by-step guided aptamer design workflow.
- Trainer:
- Ms. Nor Aina Syahirah Nordin (Aptamer-Lead, Biogenes Technologies Sdn. Bhd.)
- 1:00 pm – 2:00 pm Lunch Break
- 2:00 pm – 4:00 pm** **Session 6 : Aptamer Design Using APTCAD (Continued)**
- Hands-on session : Step-by-step guided aptamer design workflow (continued).
- Trainer:
- Ms. Nor Aina Syahirah Nordin (Aptamer-Lead, Biogenes Technologies Sdn. Bhd.)
- 4:00 pm – 5:00 pm** **Session 7 : Aptamer Conjugation Chemistry with Gold Nanoparticles**
- Principles of aptamer–gold nanoparticle conjugation for biosensing applications.
  - Aptamer–gold nanoparticle conjugation chemistry.
- Trainer:
- Dr. Tam Yew Joon (Chief Scientific Officer, Biogenes Technologies Sdn. Bhd.)
- 5:00 pm – 5:30 pm Certificate Distribution and Closing Remarks.