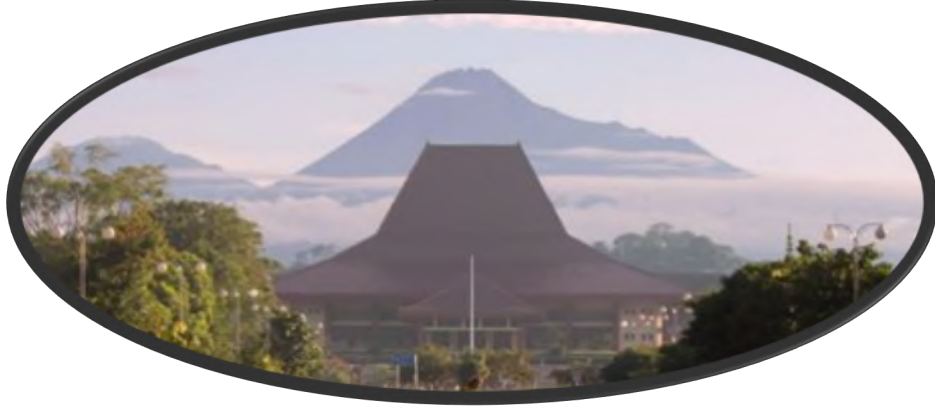


# INDONESIA



- 4<sup>th</sup> largest population in the world
- 16,056 islands; ~400tribes
- GINI: 0.382



## **Universitas Gadjah Mada (UGM)- Yogyakarta**

- The eldest university in Indonesia
- #402 world rank
- >50,000 students; 18 faculties+1 grad.+ 1 vocation



## **Faculty of Medicine UGM- Yogyakarta**

- The largest faculty of medicine in Indonesia
- 32 Departments, ~6000 students
- 2 affiliated academic hospitals
- Population based cohort, center for tropical medicine, biopaleoantropology repository, biobank



UNIVERSITAS  
GADJAH MADA



# BIOBANK FOR HEALTH RESEARCH IN UGM AND INDONESIA

Jajah Fachiroh

jajahfachiroh@ugm.ac.id

Faculty of Medicine, Public Health, and Nursing UGM (FKKMK UGM)

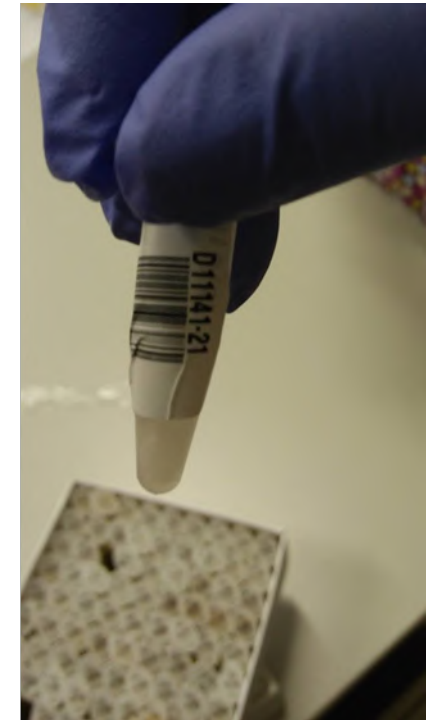


## Simplified understanding given to our stakeholders in the institution 2016-2018 about “biobank”

### BEFORE



### AFTER



The look of retrospective modelling for biobank (Fachiroh et al., 2019)



- Member of Bcnet (Biobank & Cohort network) WHO-IARC since 2015
- Member ISBER (International Society for Biological and Environmental Repositories) since 2016
- Coordinating of Indonesia Biobank Network since 2017



## Biobank Development team FKKMK UGM (Dean's decree 2015- current)

Coordinator : Vice Dean For Research and Development  
(Infrastructure : Vice Dean for Finance, admin. and HR)  
Head : Jajah Fachiroh (histology; coordination & external collaboration)

Member :

- Ery K Dwianingsih (Pathology; system)
- Lutfan Lazuardi (Health Policy; bioinformatics)
- Junaedy Yunus (Anatomy; infrastructure)
- Sunandar Hariyadi (IT, programmer)
- Amirah Wahdi (Biostatistics; sistem quality)

### Service (fulltime)

- F. Linda Pramatasari (senior technician & admin.)
- Efri Kurniawan (junior technician)
- Ferdicov Sitanggang (data manager)

October 2018

### Consultant:

Maimuna Mendy/ Zisis Kozlakidis (BCnet WHO-IARC)  
Bart Scheerders (UMCG Biobank/ Lifelines Belanda)

# Vision

**“for sustainable research”**

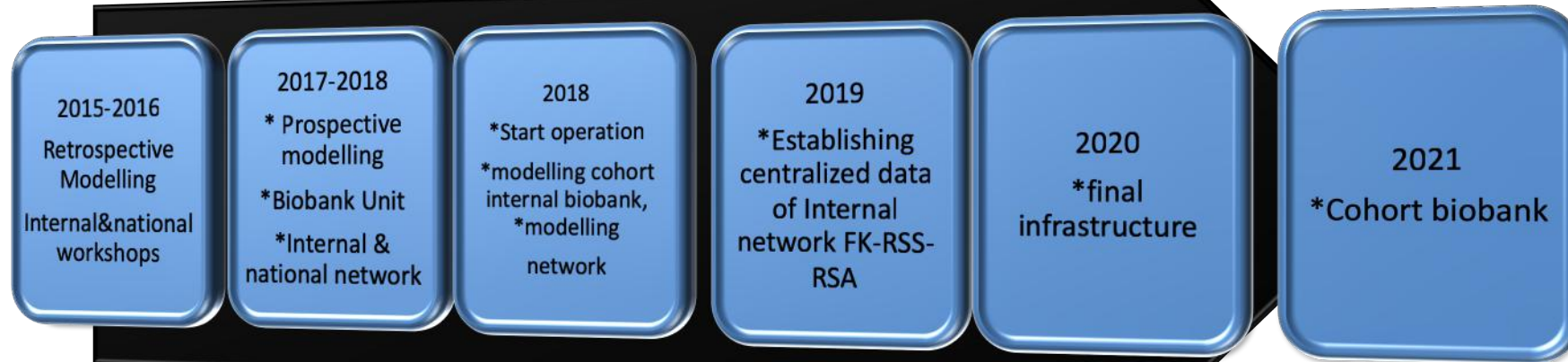
**Biobank is an infrastructure, and play active role in supporting research**

# Mission

- Providing service for standardized longterm storage for (bio)sampel and its parallel data
- To facilitate interdisciplinary/ interinstitution/ international research collaborations and increase the visibility of FKMK UGM research to the higher level.
- Support the increased of research reputation FKMK UGM national and international



## ROADMAP 2015-2021



### Current business :

Providing service for longterm storage for researchers in FKMK UGM and its affiliated hospitals (university funding and clients)

### Development phase:

1. System for Hospital based biobank with UGM Academic Hospital (Dept of Finance Republic of Indonesia)
2. Cohort Biobank with HDSS Sleman FKMK UGM (routine faculty funding; still looking for collaborators)

## Development Process for Biobank Service (2016-2018)

1. Retrospective (Fachiroh et al., 2019) and Prospective Modelling including own bioinformatics and website ([research.fk.ugm.ac.id/biobank](http://research.fk.ugm.ac.id/biobank))

We implement GCLP (good laboratory and clinical practice)

2. Trial for storage system (2018-2019)

3. Grand opening (August 20, 2019)

Storage system 8 ultrafreezers (for ~130,000 vials ) and 3 liquid nitrogen tanks

Processing unit for peripheral blood separation

(additional activities can be done in integrated research lab in the same building)



Grand opening by Vice Dean for research and development



labtour



## **Biobank for Health Research in Indonesia: SWOT analysis**

### **Strength:**

Health research in Indonesia is increasing

### **Weakness**

Concept of biobank is new, and “narrowly” understood

Issues in legal, ethic, datasharing, privacy, and technicality

### **Opportunity**

More field of research and collaboration including for biobank in to explore

Indonesia population and health problem are yet to explored vs large populations

### **Threat**

Internally: slow development in many aspects from the stakeholders

# Building Indonesia Biobank for Health Research

## Aim: build the same understanding and knowledge across Indonesia (1)

**1<sup>st</sup> Workshop (December 5, 2015) – UGM**  
**52 Participants**

**Topic :** “Building Biobank Network In Indonesia : Opportunity and Challenge”

**Aim:** identify stakeholders and current activities in biobanking for clinical services & research

### Conclusion

1. Inequality of understanding among different stakeholders and institution
2. Absence of regulation on biobank for research
3. Informal/ formal organization for biobank is required

**2<sup>st</sup> Workshop (November, 7-8 2016)-UGM**  
**45 participants**

**Topic :** “Building Biobank Network in Indonesia : Management and Practice of Biobank”

**Aim:** further discussion on details of biobank : ELSI, LIMS, SOP, safety,etc

### Conclusion:

Networking is needed to harmonize and accelerate the development of biobank in Indonesia

### Aim: build the same understanding and knowledge across Indonesia (2)

#### **3rd Workshop : “Strengthening The Research Biobank Network Through Capacity Building”**

Jakarta, 6-7 November 2017

Participants 32, 12 institutions

##### Activities

Producing white paper for pushing into legal rule for biobank in health research (existing: biobank for clinical service)

Strengthening network, by putting in working group program

#### **4th Workshop :” Defining Business Model of Institutional Biobank”.**

Padang- West Sumatera, 12-13 November 2018.

Participants : 25, from 7 institutions

##### Activities:

Election for network leadership for the next 2 years, UGM was appointed

UGM to make academic paper for the legal rule (Funding from the ministry)

UGM to start modelling for hospital based biobank (funding from ministry)



## **What do we need ?**

**Speed up the development of Biobank in our institution and across Indonesia through the network**

- **Identify the best-fit model for insitutional or hospital-based biobank**
- **Identify reference biobank fit to the development of biobank in LMIC**
- **Identify standard and method to achieve**
- **Mentorship program/ traineeship program?**
- **Grant fundings**