



# The Malaysian Cohort

Rahman Jamal  
MALAYSIA



THE  
**MALAYSIAN**  
C O H O R T

---

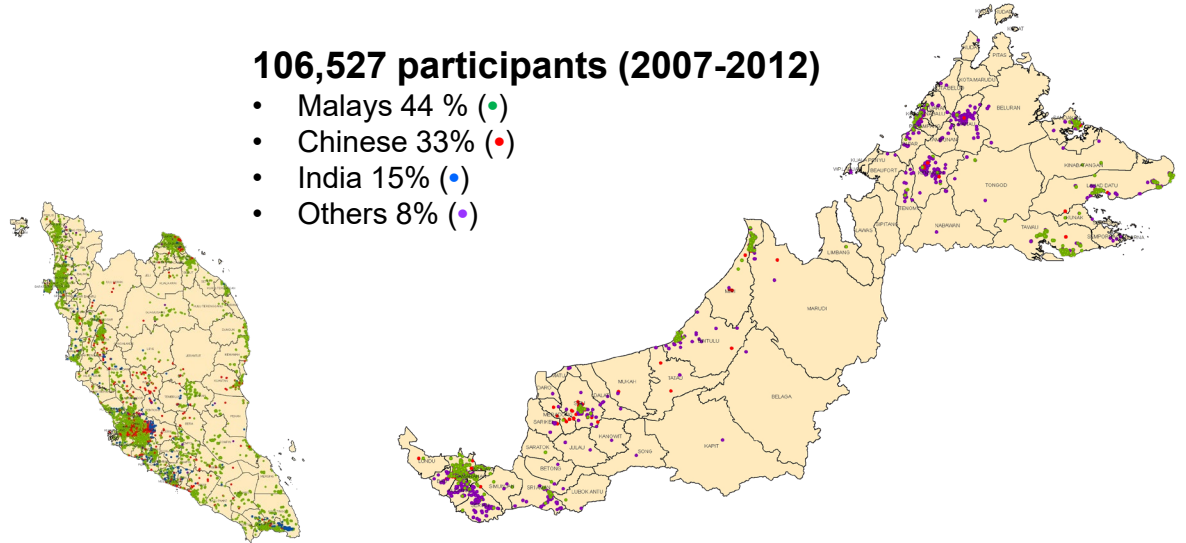
Our Gift To The Future Generation

# The Malaysian Cohort: Recruitment map & Biobank



**106,527 participants (2007-2012)**

- Malays 44 % (●)
- Chinese 33% (●)
- India 15% (●)
- Others 8% (●)



# The Malaysian Cohort: Summary Data

- **Total participants to date**
  - 119,671
- **Ethnic breakdown**
  - Malays 44%; Chinese 33%; Indians 15%; Others 8%
- **Data from questionnaire**
  - Demography, medical & surgical history, occupation, environmental exposure education, lifestyle, diet, mortality, etc.
- **Measurements**
  - Ht, Wt, BMI, Body Composition, BP, ECG, CAVI, Spirometry, Retinal scan, DEXA scan
- **Biospecimens and tests**
  - Blood (plasma, serum, MNC, whole blood, RBC), urine & stools
  - FBS, Lipid Profile, Renal Profile, FBC, HbA1c, Urine albumin
- **Mortality**
  - 7575 (6.3%) – since 2007



# Research potential: Type 2 Diabetes Mellitus

## Differences in prevalence of Type 2 diabetes

Malays	Chinese	Indians
19.1%	9.1%	28.4%

GWAS on Type 2 diabetes involving 3000 individuals with diabetes and 3000 normals:  
(Abdullah N, et al, 2015)



# Examples of research projects

- Completed
  - GWAS diabetes (with University of Newcastle, Australia)
  - Seroprevalence of Nipah and Zika virus (with Japan)
  - Community based seroprevalence of Hepatitis B and C (with the Ministry of Health)
- On-going
  - Adiposity studies using DEXA (with University of Oxford)
  - Diabetes study – CVD risk using retinal scan and genotyping (with University of Dundee)



# Challenges

- **Sustainability:** 5 year funding cycle
- **Lack of funding for large scale genotyping:** Current genotyping studies limited to 5-10K subjects
- **International collaboration:** Consent does not cover transfer of data or biospecimens abroad
- **Follow-up (dropout):** 60% successful follow-up and now the pandemic
- **Events at follow-up by self reporting:** Lack of electronic medical record system in Malaysia
- **Mortality cause:** 30% died at home hence will require verbal autopsy to validate cause of death

