



FINGENIOUS®

# Ikkuna Suomen biopankkiaineistoon ja biolääketieteelliseen tutkimukseen

**Sosiaalilääketieteen syysseminaari 19.11.2020**

Biopankkien Osuuskunta Suomi –FINBB

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# Improving R&D Productivity

Accelerated drug discovery  
and development



Shorter timespan from concept to discovery by  
Finnish biobanks services



- Millions of samples available from all hospital biobanks through one service
- Clinical data
- Pre-pooled study participants based on biobank consents
- Recontacting of patients
- University Hospitals' clinicians and their expertise

# Why Finland?

- Biobank Act since 2013
- Act on Secondary Use of Health and Social Care Data since 2020

- 100% penetration of electronic health records (EHR)
- Unique personal ID codes
- Population based high quality public health care

- All Finnish public biobanks accessible through one service, Fingenious®
- Over 11 million samples
- Nearly 500,000 samples genotyped
- Possibility for recontacting patients



# Finnish Biobank Cooperative – FINBB

- Our founding partners are six biggest Hospital Districts, six Universities and Finnish Institute for Health and Welfare (THL)
- FINBB offers a one-access-shop for easy access to Finnish biobank materials, biodata and study participants
- We serve researchers from both academia and industry
- We co-create services and products with our customers and founding partners
- We give value back to hospitals and universities in Finland

# Partnership and Collaboration

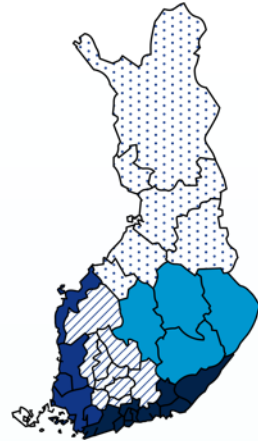
## FOUNDING UNIVERSITIES



## FOUNDING HOSPITALS



## FINNISH HOSPITAL DISTRICTS



## BIOBANKS



## STRATEGIC COLLABORATION



- + Patient, data and sample finding
- + Study set-up and single point of contact
- + Data and sample delivery and analytics

Researchers

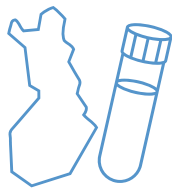


FINGENIOUS®

Your Digital Gateway to Finnish Biobanks and  
Biomedical Research

# What is Fingenious<sup>®</sup>?

A digital gateway to Finnish biobanks and biomedical research – *the 1<sup>st</sup> in class service in Europe*

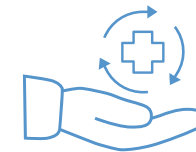


Built to serve academic and industry researchers and to advance medical research globally



A single point of contact for all public biobanks and their samples and data.

One contract with all the biobanks via FINBB.



# FinnGen – Great Performance by Finnish Biobanks



Goal: 500 000 participants by 2023

During FinnGen1 (3 years), the number of new consented samples in Finnish biobanks increased 30,000 → 253,000

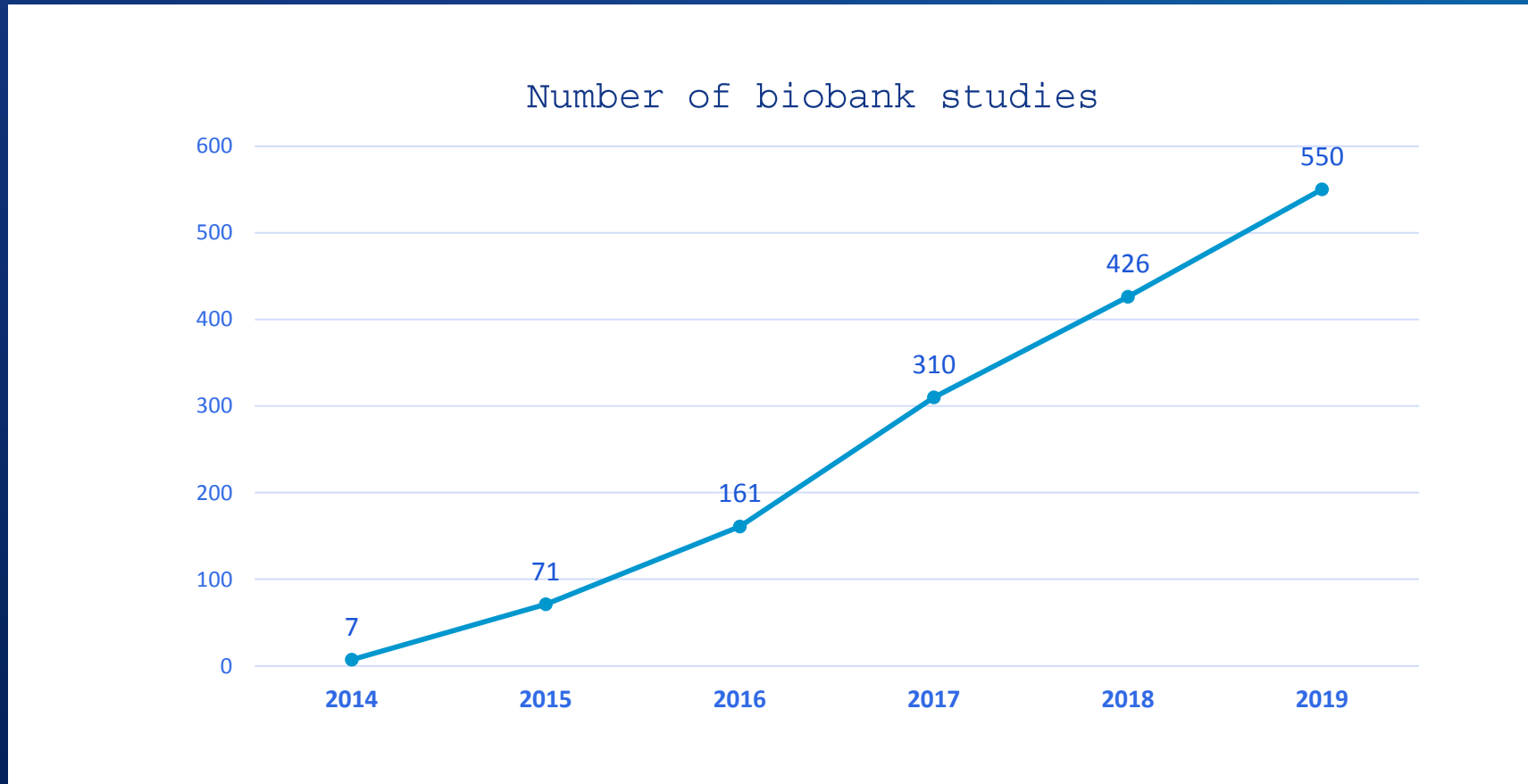
At the end of Aug 2020:

- 158,500 legacy samples
- 253,000 new samples
- ≈ Total of 411,500 available samples



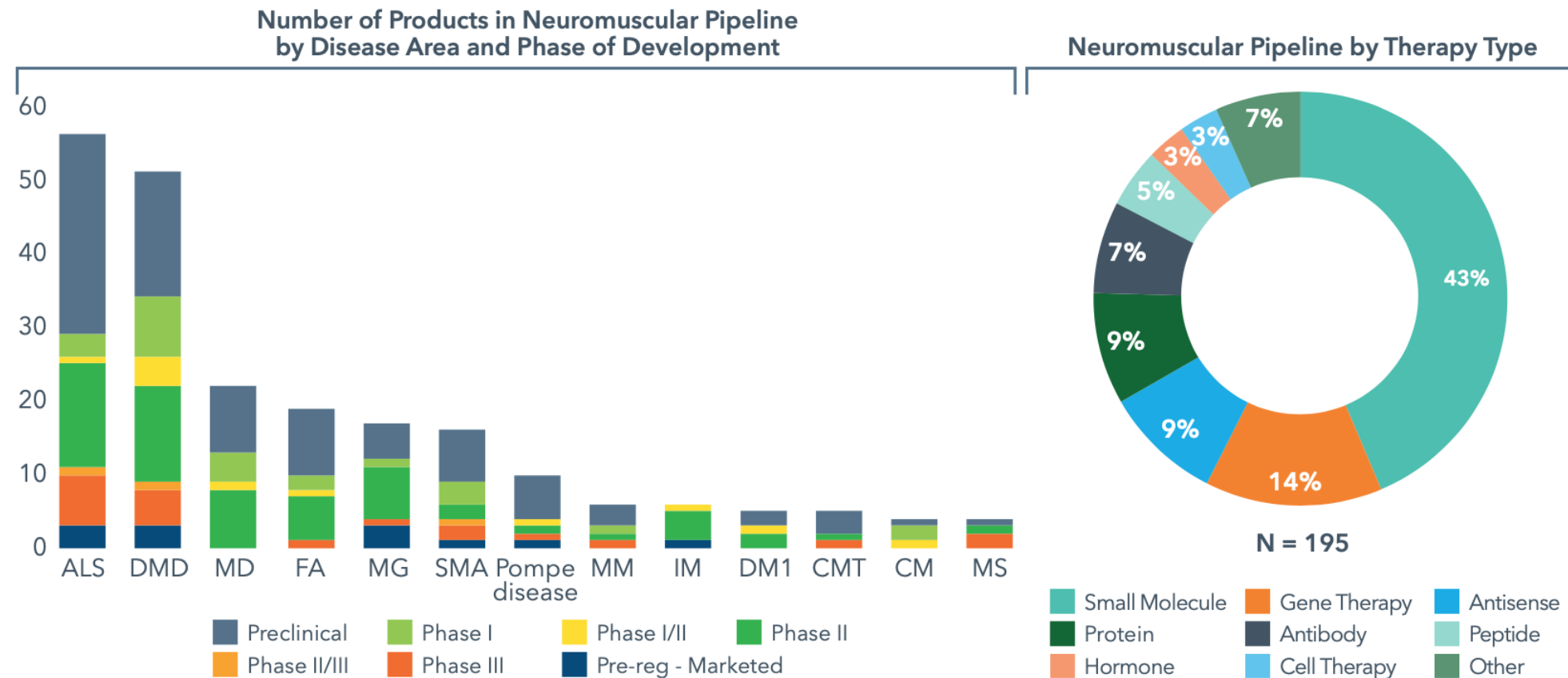


# Biobank Studies in Finnish Biobanks



# A broad pipeline is emerging across neuromuscular diseases across all phases with a concentration in ALS and DMD

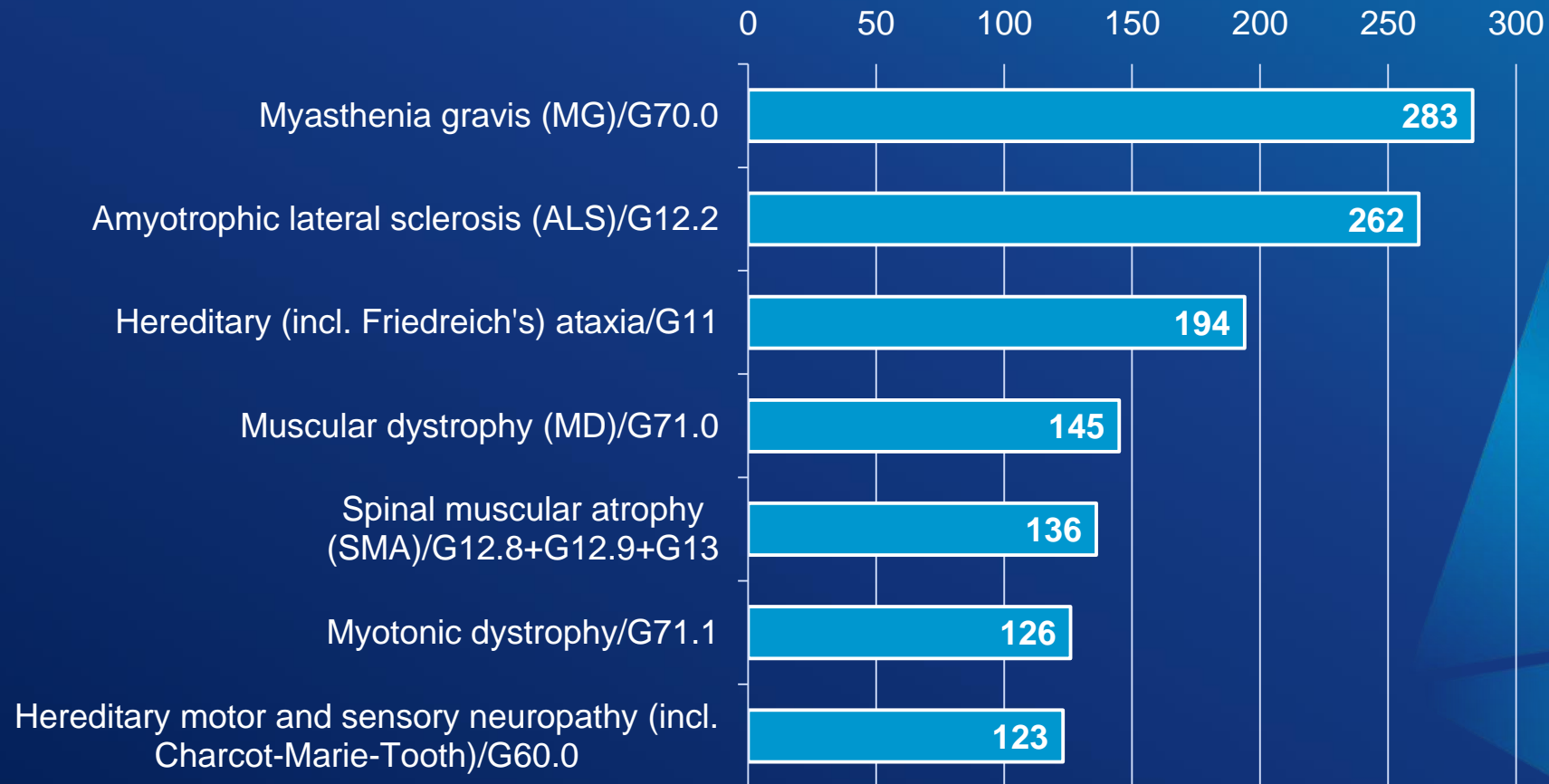
Exhibit 25: Neuromuscular Disease Pipeline by Phase and Type of Therapy



Source: Understanding Neuromuscular Disease Care: Current State and Future Prospects, IQVIA Institute for Human Data Science, Oct 2018

# Main Neuromuscular Diseases in Finnish Biobanks

Patients with neuromuscular disorders with GWAS analyzed samples (FinnGen DF6)





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| How to Access Samples and Data

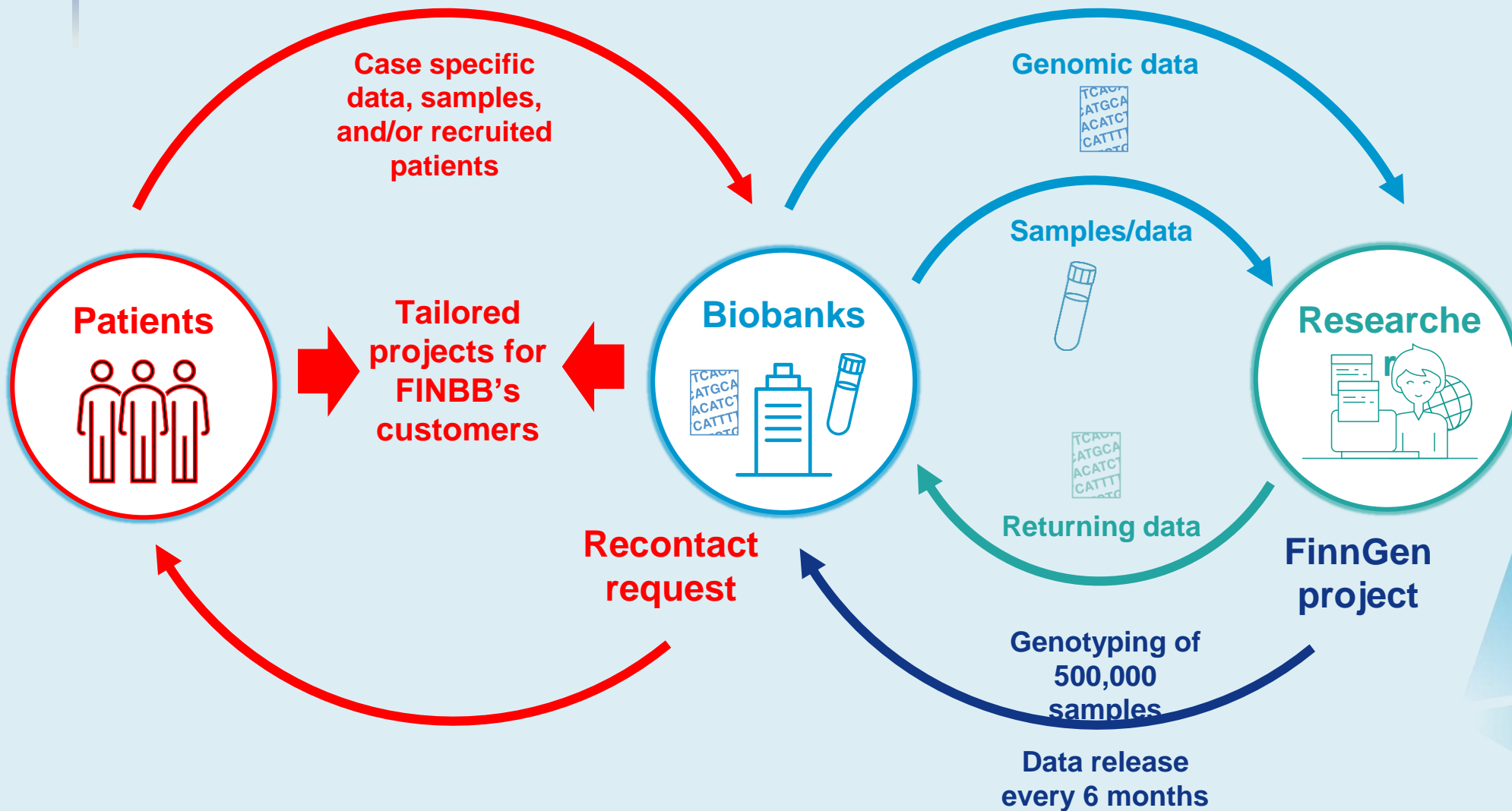
# FINBB Works Together with Biobanks for Fingenious®

## Finnish Hospital Biobanks

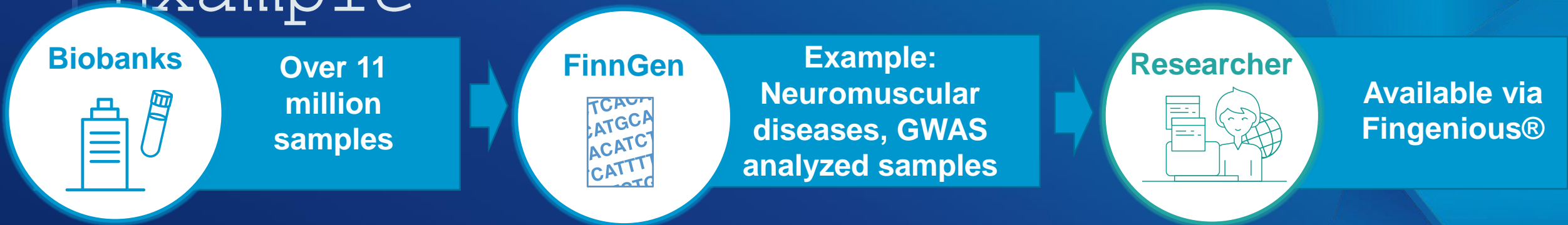
- 106 employees
- **Roles:**
  - administration
  - project management
  - research management
  - laboratory staff
  - sample teams
  - process teams
  - customer services teams
  - biobank pathologists
  - IT
- **Expertise in:**
  - modern biobanking
  - bioanalytics
  - real-world data
  - research
  - sample collection and storage
  - sample processing and sectioning
  - sample digitalization
  - H&E staining
  - tissue microarrays
  - TMA construction
  - DNA/RNA extraction
  - PBMC processing
  - disease model pathology
  - data management
  - data analytics
  - AI
  - ICT
  - legal aspects



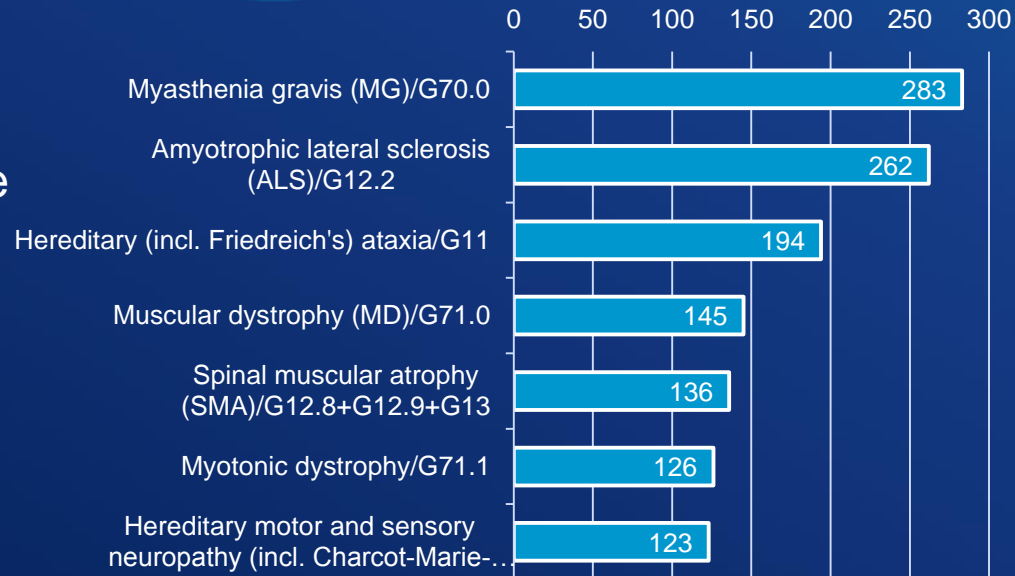
# Continuously Enriching Base Data: FINBB's Services Strengthened by FinnGen



# Data Enrichment: A Practical Example



- Includes FFPE samples
- The majority of samples are legacy samples
- New samples coming in continuously



- FinnGen data returned to biobanks every six months
- Data returned from other biobank studies
- Available together with samples, clinical and other longitudinal health record data

# Three Steps Designed to Serve Researchers

## 1. Fingenious® Catalogue



**ICD-10 Catalogue**

**Sketch your study faster**

## 2. Fingenious® Feasibility



**Feasibility request**

**Plan your study smarter with less effort and wide outreach**

## 3. Fingenious® Access



**Access request**

**Start your study with less paperwork**

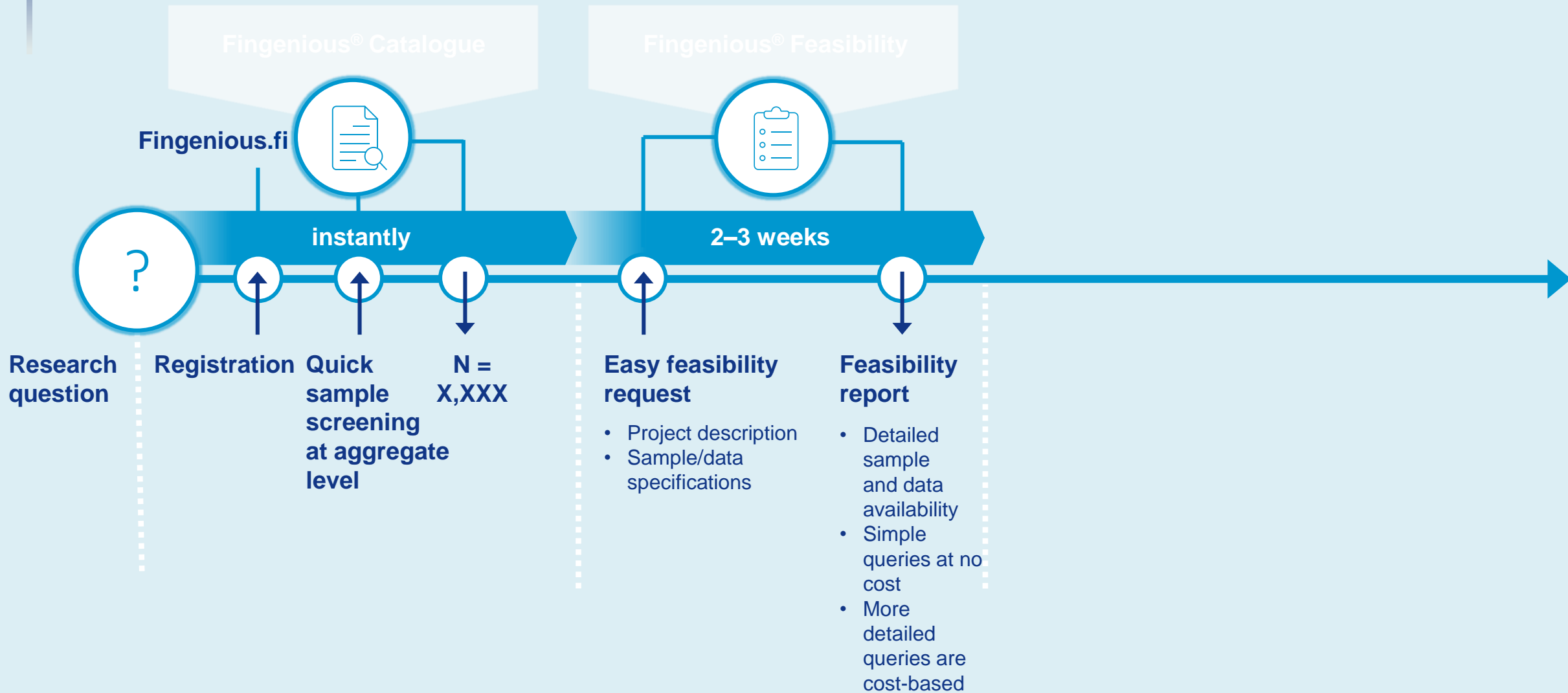


**Further development ongoing**

# Step 1

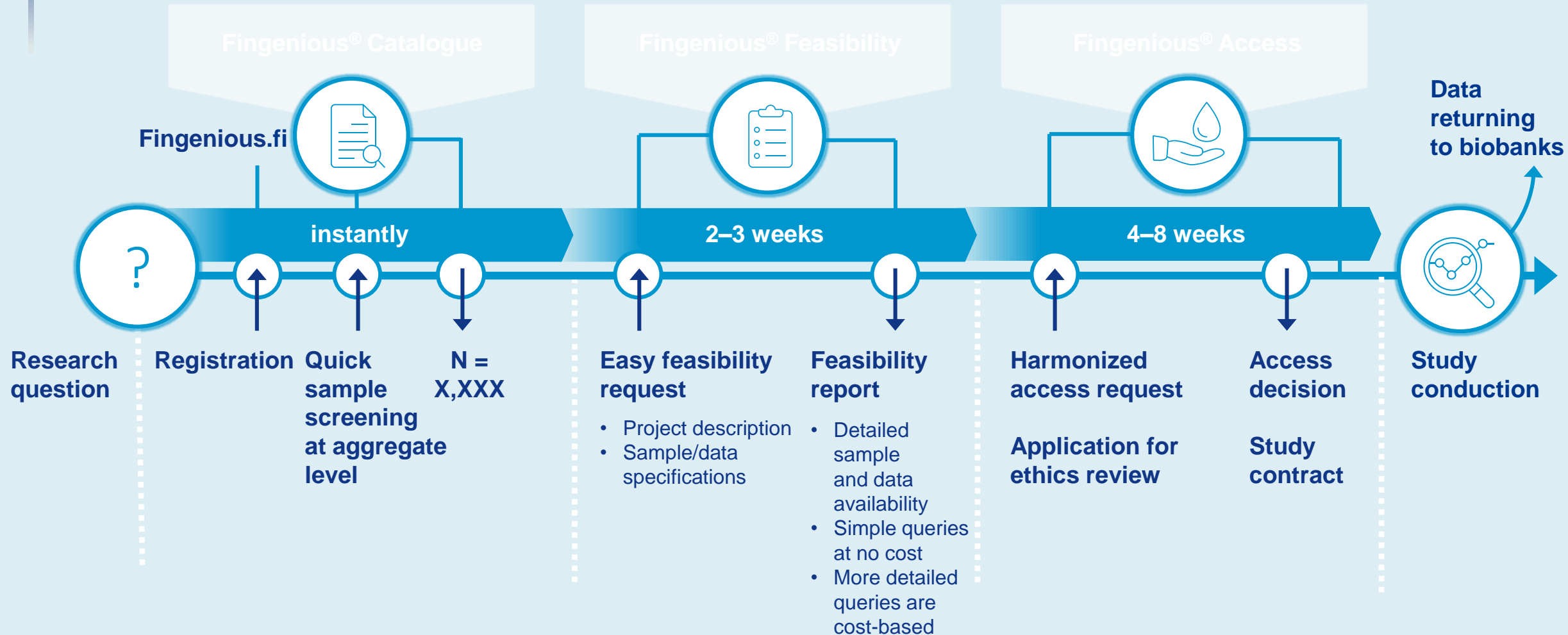


# Step 2





# Step 3



# Fingenious<sup>®</sup> and Your Research Needs



Choose your desired combination of data and service

1



2



Trial participant recontacting service

# Take home messages

- Access to unique Finnish biobank data
- FinnGen creates new international research opportunities
- **Registration at [fingenious.fi](https://fingenious.fi)**

