

# The Essential Biodata Life Science Partner in Rare and Neurodegenerative Diseases

CENTOGENE (CNTG) Company Presentation  
September 2022



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For further information, please refer to the Risk Factors section in our Annual Report for the year ended December 31, 2020, on Form 20-F filed with the SEC on March 31, 2022, and other current reports and documents filed with the U.S. Securities and Exchange Commission (SEC). You may get these documents by visiting EDGAR on the SEC website at [www.sec.gov](http://www.sec.gov).

# CENTOGENE @ a glance



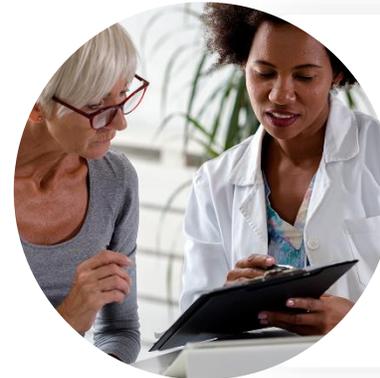
- Headquarters **Rostock, Germany** with locations in **Boston, MA, Berlin, Germany,** and **Rotkreuz, Switzerland**
- **~400 employees<sup>1</sup>**
- Listed on **Nasdaq** in November 2019 (Ticker: CNTG)



- **FY2021 revenues of €43.5 million**
- Guidance<sup>2</sup> 2022:
  - **Revenues of ~ €50 - €52 million**
  - YoY growth 15-20%

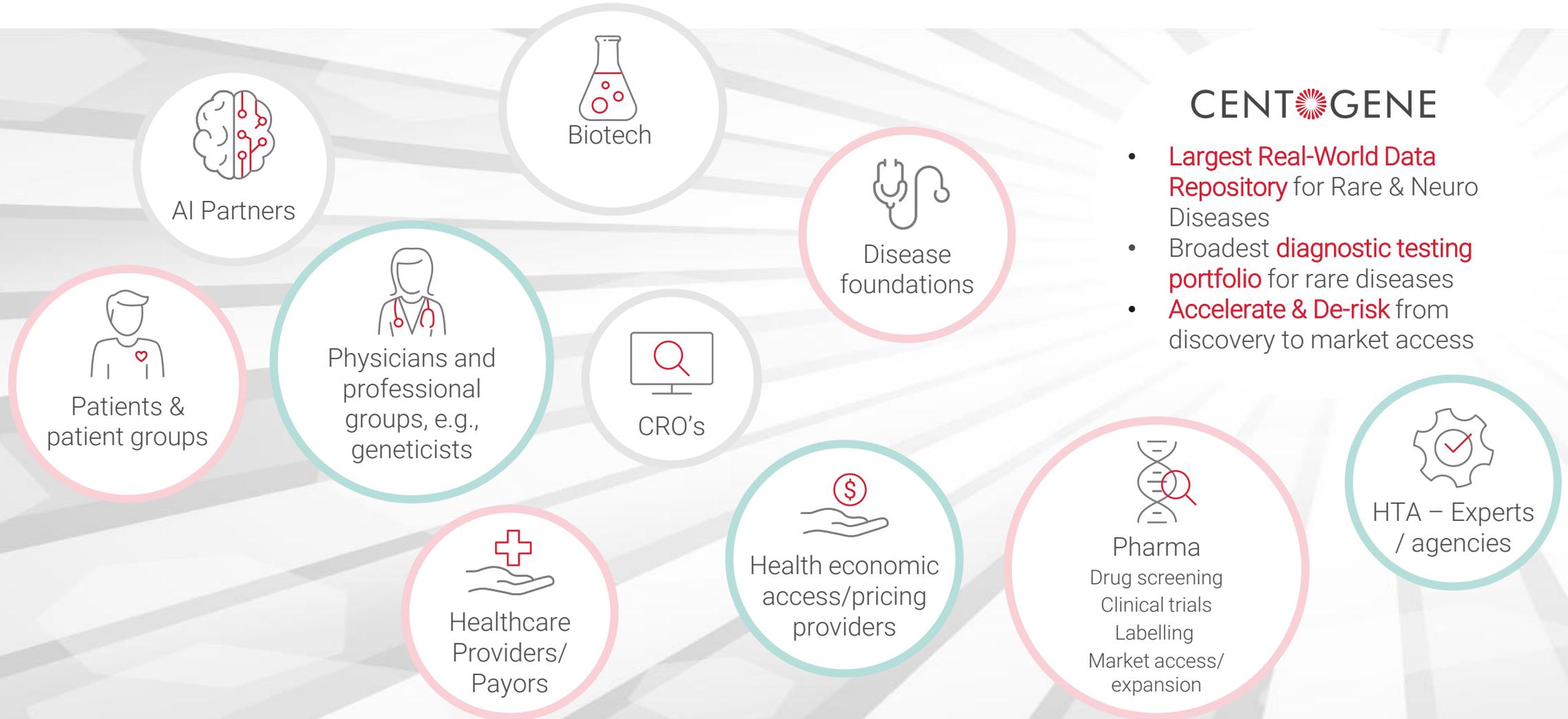


- **CENTOGENE Biodatabank**, the **world's largest real-world data repository** for rare and neurodegenerative diseases
- State-of-the-art **genomics and multiomics reference lab** (ISO, CAP, & CLIA certified)



- **>50 collaborations with biotech/biopharma partners**, covering over **46 rare diseases**
- **Market access and expansion, clinical development, target and drug screening**

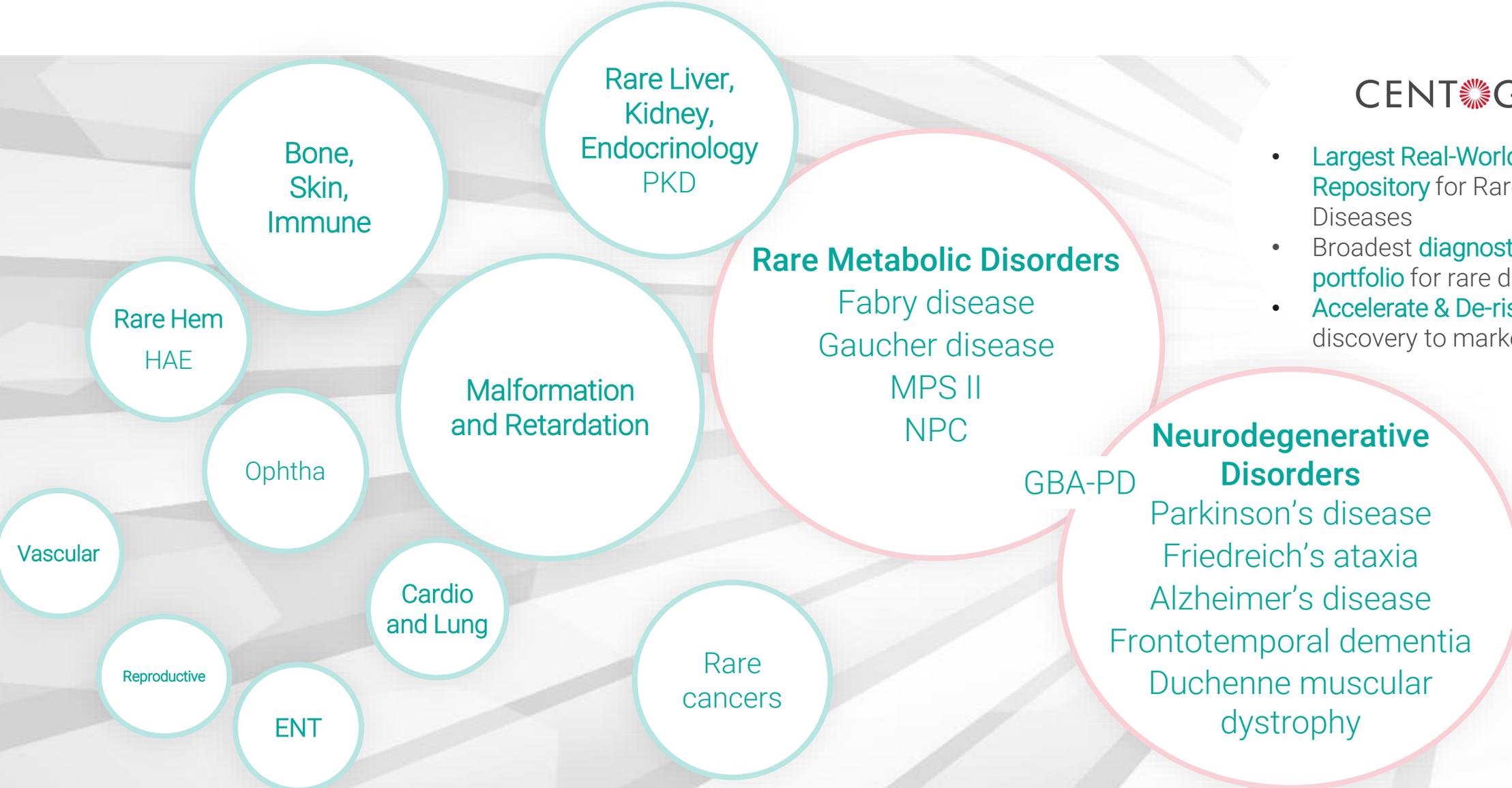
# Essential Life Science Partner in Rare and Neurodegenerative Diseases



# Insights to 2,500 Rare and Neurodegenerative to Support Breakthrough Therapies

CENTOGENE

- Largest Real-World Data Repository for Rare & Neuro Diseases
- Broadest diagnostic testing portfolio for rare diseases
- Accelerate & De-risk from discovery to market access



# The Opportunity: By 2024, 18% of Rx Worldwide Expected to Target Rare Diseases

## Significant Need Rare Diseases

- ~350 million people affected by rare genetic diseases, ~90% undiagnosed
- Estimated 80% of ~7,000 rare diseases are genetic in origin: ~5,600<sup>1</sup>
- Public datasets are ~80% of European descent<sup>7</sup>
- <5% of rare diseases have meaningful therapies

## Growing Market for Rare Rx

- Rare diseases market expected to grow 11+% to 2024<sup>3</sup>
- By 2024 rare disease products expected ~18% R sales<sup>4</sup>
- FDA have approved 23 gene/cell therapies to date<sup>5</sup>
- >50% of FDA approvals in 2021 were orphan drugs<sup>6</sup>

## Stakeholder Pressure to Act

- Regulatory/payor scrutiny raises standards for approval, access and entry
- Patient engagement for new RD, NDD & gene therapies; even with premium priced products
- Stratification and patient profiling can improve labelling, pricing optimization and success

# Near-term opportunities in addressing key stakeholder challenges



# Our ambition is to be the essential biodata life science partner in rare and neurodegenerative diseases

Fueling revenues, growing CENTOGENE Biodatabank, and building biopharma partnerships

## 3 STRATEGIC PILLARS

### 1 DIAGNOSTICS

Highly differentiated testing portfolio

Easy logistics via CentoCard & CentoCloud

WES/WGS

Multiomics

Network of ~29,000 active physicians

### 2 CENTOGENE BIODATABANK

Fuel CENTOGENE Biodatabank with biomaterial, multiomics, as well as clinical data

Productize CENTOGENE Biodatabank (data monetization)

### 3 BIOPHARMA PARTNERSHIPS

#### MARKET ACCESS & EXPANSION

Real world Registry

Early Access Programs

Patient Stratification, Genetic & Biomarker Profiling, Modelling

Patient Identification & Diagnostics

#### CLINICAL DEVELOPMENT

Observational Studies (e.g., epidemiology, patient finding, genetic & biomarker profiling)

#### POC/ Ph II/III:

Patient Multiomic Profiling, Stratification, Modelling, Efficacy Marker

Patient Identification & Diagnostic

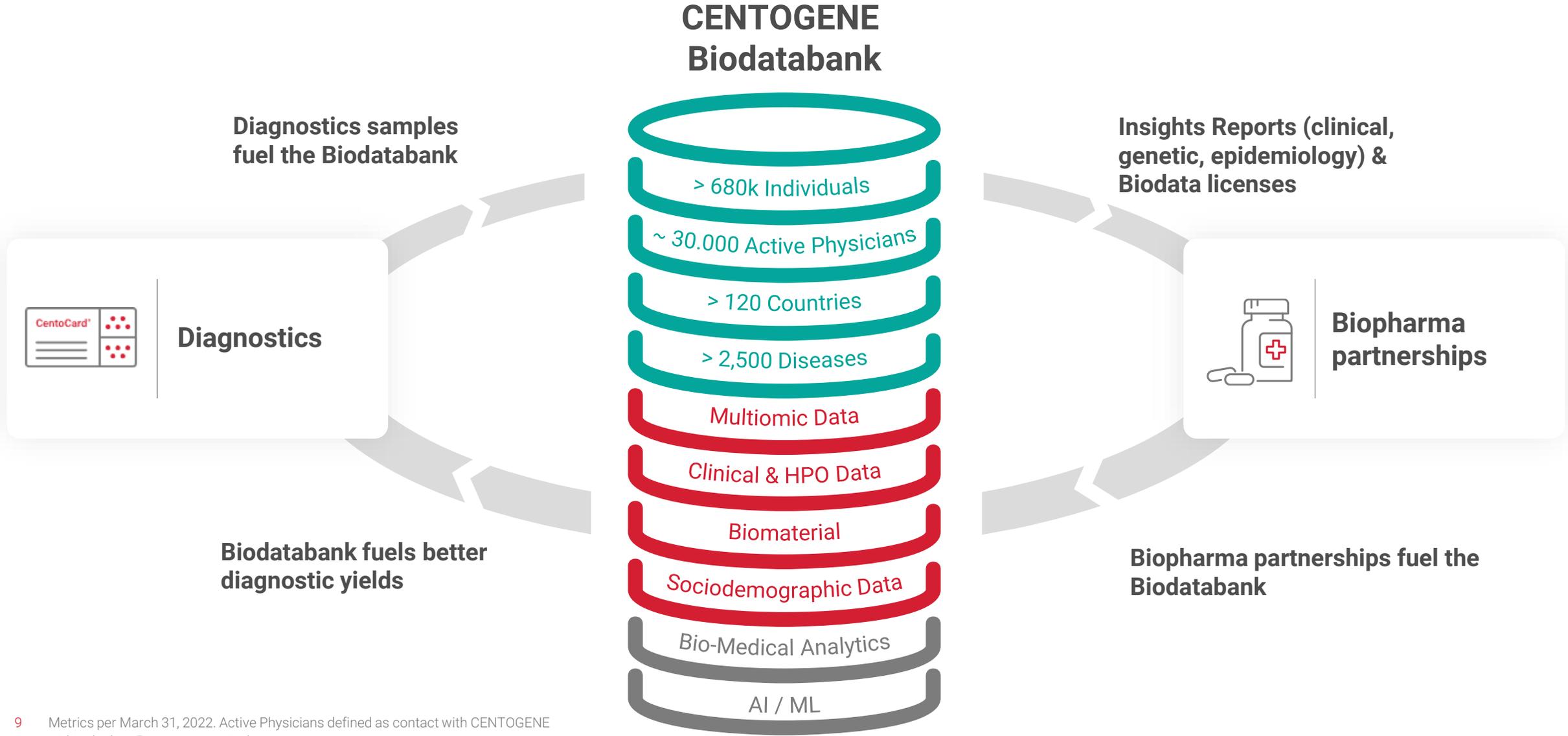
#### TARGET & DRUG SCREENING

Patient-derived Cell Models & Multiomics

Biomarker/ Assay Identification & Validation

**CENTOGENE BIODATA NETWORK** (Insight Reports & Biodata licenses)

# CENTOGENE Biodatabank: the world's largest real-world data repository for rare and neurodegenerative diseases



9 Metrics per March 31, 2022. Active Physicians defined as contact with CENTOGENE within the last 5 years, respectively.

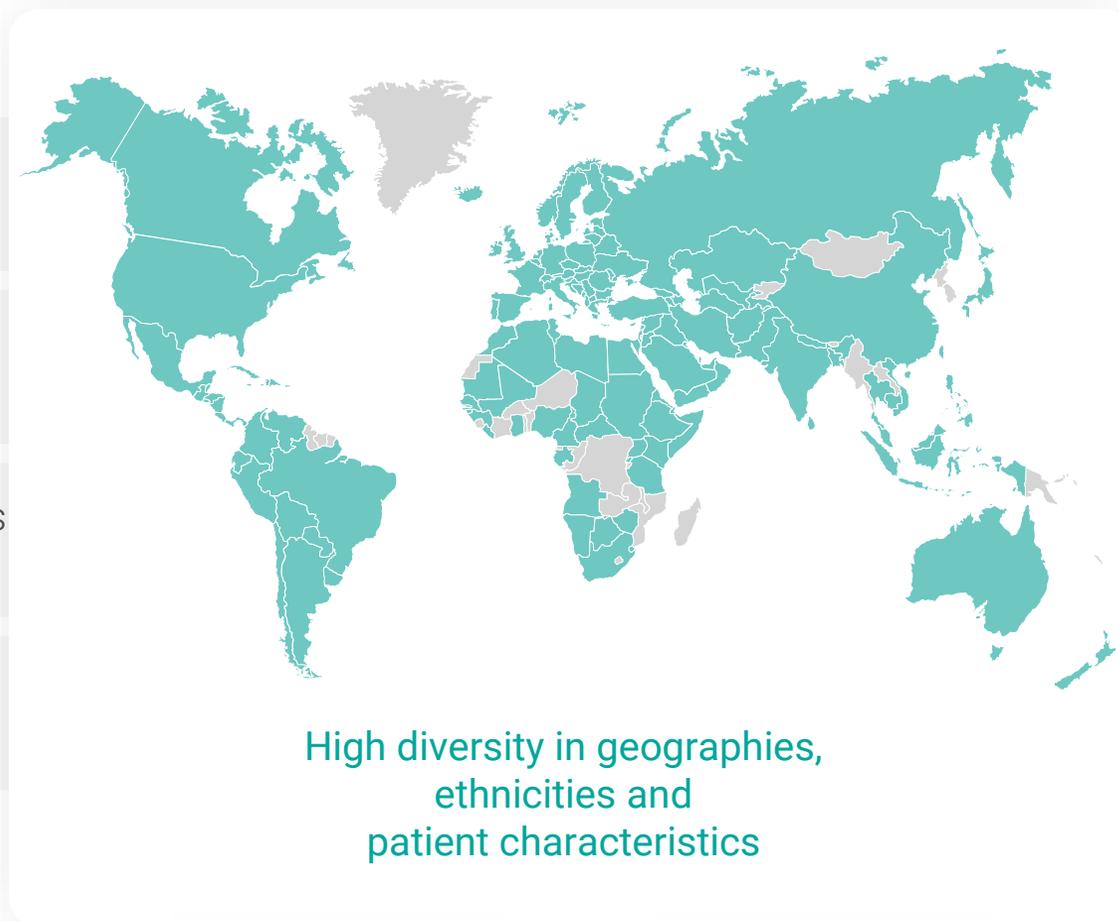
# The Breadth and Depth of CENTOGENE's Biodatabank make it a Unique Resource

**>680,000** individuals  
**>30,000** via clinical studies

**>400,000** biosamples from  
**>120** countries

Nearly **30,000** active physicians  
in our network

**>2,500** rare diseases  
diagnosed



**>13k** families with trio analysis

**>31 million** unique variants

High share of pediatric cases

**~50%** of individuals with broad  
research consent

**Clinical  
Diagnostics**

**Market Access  
& Expansion**

**Clin. Development  
Support**

**Target & Drug  
Screening**

# First-in-class Data Capture and Proprietary Curation and Analysis Technologies

## Data capture



**Gold standard for DNA and multiomic sampling**  
(from >120 countries)

All common forms of sampling accepted (incl. buccal swab)



**Clinical data capture**



**Clinical data extraction & curation**



**Whole genome sequencing**



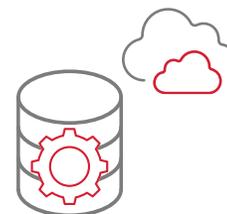
**State-of-the-art mass spectrometry**



**RNA sequencing**

## Data bioinformatics

**CENTOGENE BIODATABANK**



**Automated pipelines for**

- variant annotation
- prioritization
- medical reporting
- > 31 million variants
- multiomic analysis and combination expertise

## Data utilization

**Clinical Diagnostics**

**Biopharma Partnerships**

Target & Drug Screening

Clinical Development Support

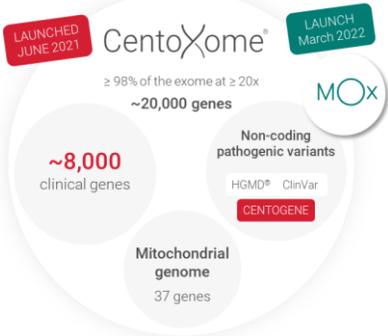
Market Access & Expansion

Value chain supported by advanced bioinformatics and AI tools

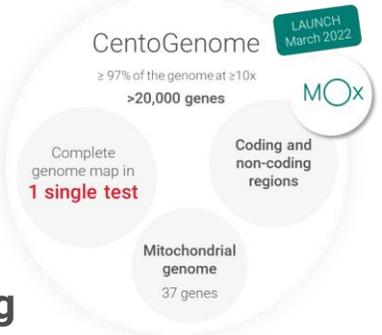
# Diagnostics: A distinctive offering and services that support efficient and timely diagnosis of rare and neurodegenerative diseases, leading to better treatment and health outcomes

**Highly differentiated testing portfolio** in state-of-the-art CLIA/CAP certified laboratory with **deep medical expertise**

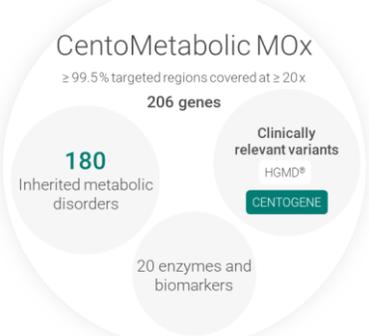
### Exome testing



### Genome testing



### Multiomic testing



**Easy logistics** for centralized testing enabling **broad access to multiomics**



**Dry-lab (SaaS) solution** enabling laboratories around the world to deliver leading diagnostic **insights to local patients**



Unique global footprint with **network of ~29,000 active physicians** and **focus on countries with a high prevalence of rare diseases**

# Quality, data integrity & privacy are core to CENTOGENES business processes, driven by first-class data capture, multi-level QMS, & proprietary curation

CENTOGENE follows the strictest quality criteria to meet our customer's requirements in clinical diagnostics, clinical trial services and research & development. CENTOGENE's QMS integrates into every aspect of our operations, from data integrity and privacy, patient safety, and responsibility to scientific research and innovations.

- CENTOGENE's **holistic quality management system (QMS)** has been recognized by **our CAP, CLIA, ISO 15189, and ISO 13485 certifications**. CENTOGENE's biobank is the first CAP accredited repository outside the U.S., compliant with ISO 20387
- As a full service company - we follow applicable and market-standard **good laboratory practice (GLP)** and **good manufacturing practice (GMP)** guidelines
- We continually participate in the **international external proficiency testing schemes** of the **European Molecular Genetics Quality Network (EMQN)** and the **College of American Pathologists (CAP)** to ensure technical and medical competency and proficiency
- CENTOGENE's **processes and IT systems are ISO/IEC 27001:2017 certified** by the independent accreditor datenschutz cert GmbH, ensuring a high level of confidentiality, availability, and integrity to all processed data
- **CentoPortal is certified for providing safety and privacy** according to the "internet privacy standards" by German accreditor datenschutz-cert



Rostock Lab #8574447 (biorepository)  
Boston Lab #8417628



#99D2049715  
#22D2154474



CENTOGENE



Urkunden-ID: DSC.1096.11.2021  
Certificate-ID: DSC.843.09.2020

# CENTOGENE Unique Pharma Offering - Our ambition is to be the essential biodata life science partner in rare and neurodegenerative diseases

## Target & Drug Screening

Patient-derived Cell Models & Multiomics

Biomarker/Assay Identification & Validation

## Clinical Development

Observational Studies

POC/ Ph II/III

Observational Studies  
(e.g., epidemiology, patient finding, genetic & biomarker profiling)

Patient Multiomic Profiling, Stratification, Modelling, Efficacy Marker

Patient Identification & Diagnostics

## Market Access & Expansion

RW Registry & Early Access Programs

Patient Stratification, Genetic & Biomarker Profiling, Modelling

Patient ID & Diagnostics

## CENTOGENE Biodata Network

Insight Reports  
(e.g., new and existing reports, clinical, genetic, epidemiology)

Biodata Licenses



# Market access and expansion: maximize access and personalise patient, provider and biopharma value

## Market Access and Expansion



- Real world registry
- Early access programs
- Patient Stratification
- Genetic and Biomarker Profiling
- Modelling
- Patient Identification
- Patient Diagnostics
- CENTOGENE Biodata Network
  - Insight Reports & Biodata Licenses



- 2015 - Ongoing
- **Rare Metabolic and Rare Neurodegenerative Diseases**
- **Provide diagnostic testing services** to identify patients with **rare metabolic and rare neurodegenerative diseases**
- **42 Countries**



- 2015 - Ongoing
- **Hereditary transthyretin amyloidosis (hATTR) disease**
- Sponsored testing program with > 600 samples from 10 countries (Europe) & 125 samples (U.S.)



- 2019 - Ongoing
- **Duchenne muscular dystrophy (DMD)**
- **DMD Sponsored testing program (250 samples)**
- **5 countries:** UAE, KSA, Lebanon, Kuwait, Egypt



- 2019 - Ongoing
- Identify patients in **DMD & Aromatic L-amino Acid Decarboxylase (AADC)**
- **Genetic testing and biomarker analytics** for AADC deficiency in **65 countries** (LATAM, Europe, MENA)
- >2500 DMD & >2900 AADC samples screened

# Clinical development: accelerate and expand biopharma partnerships

## Clinical Development



### Observational studies

- Epidemiology & Patient finding
- Genetic & biomarker profiling

### POC/Ph II/III

- Patient multiomic profiling
- Stratification, Modelling, and Efficacy markers
- Patient identification & diagnostics

### CENTOGENE Biodata Network

- Insight Reports & Biodata Licenses



- **2021**
- **Hypophosphatasia (HPP)**
- Strensiq (innovative enzyme replacement therapy )
- **De novo variant identification** for HPP and **identification of potential new genes** causing HPP
- **Germany**



- **2021 - Ongoing**
- **Pyruvate kinase ("PK") deficiency**
- **Genetic testing and identification of causative mutations**, incl. HBA1, HBA2, and HBB genes, in Ph. II/III trials
- **20 Countries** (North America, Europe, MENA, APAC, & LATAM)



- **2018 - Ongoing** (ROPAD 1 & 2 Study with extensions)
- **Parkinson's disease (PD)**
- **Enroll and genotype 12,500 patients**
- **10 countries**
- Success milestone: **10,000 patients enrolled and genotyped**



- **2020 - Ongoing**
- **Hereditary transthyretin-related amyloidosis (hATTR)**
- **Longitudinal study providing a molecular genetic diagnosis of hATTR** via NGS and MLPA
- **Germany**
- **5,000 patients enrolled**



- **2018 - 2021**
- **Gaucher disease**
- **Longitudinal natural history study** (LysoProof) with **>1,600 samples analyzed**
- **13 countries** (EU, LATAM, APAC, MENA)
- **Identified and genetically tested >250 Gaucher patients**



- **2021 - Ongoing**
- **Frontotemporal dementia (FTD)**
- **Enroll and genetically test over 3,000 FTD patients in EFRONT Study**
- **7 countries** (Belgium, Germany, Greece, Italy, Portugal, Spain, and Turkey)

# Target & drug screening: build partnerships around precision and confidence

## Target and Drug Screening



### Target & Drug Screening

- Patient-derived cell models & multiomics
- Biomarker/Assay identification & validation

### CENTOGENE Biodata Network

- Insight Reports & Biodata Licenses



- **2021 - Ongoing**
- **Niemann-Pick type C**
- **Collaboration to generate data set to enable start of drug discovery**



- **2020 - Ongoing**
- **Gaucher Disease – joint drug discovery project**
- **Joint drug discovery project to identify small molecules reducing biomarker Lyso-GB1 in disease cell models**
- **Transcriptomic and metabolomic data set enabling patient selection with highest unmet need**



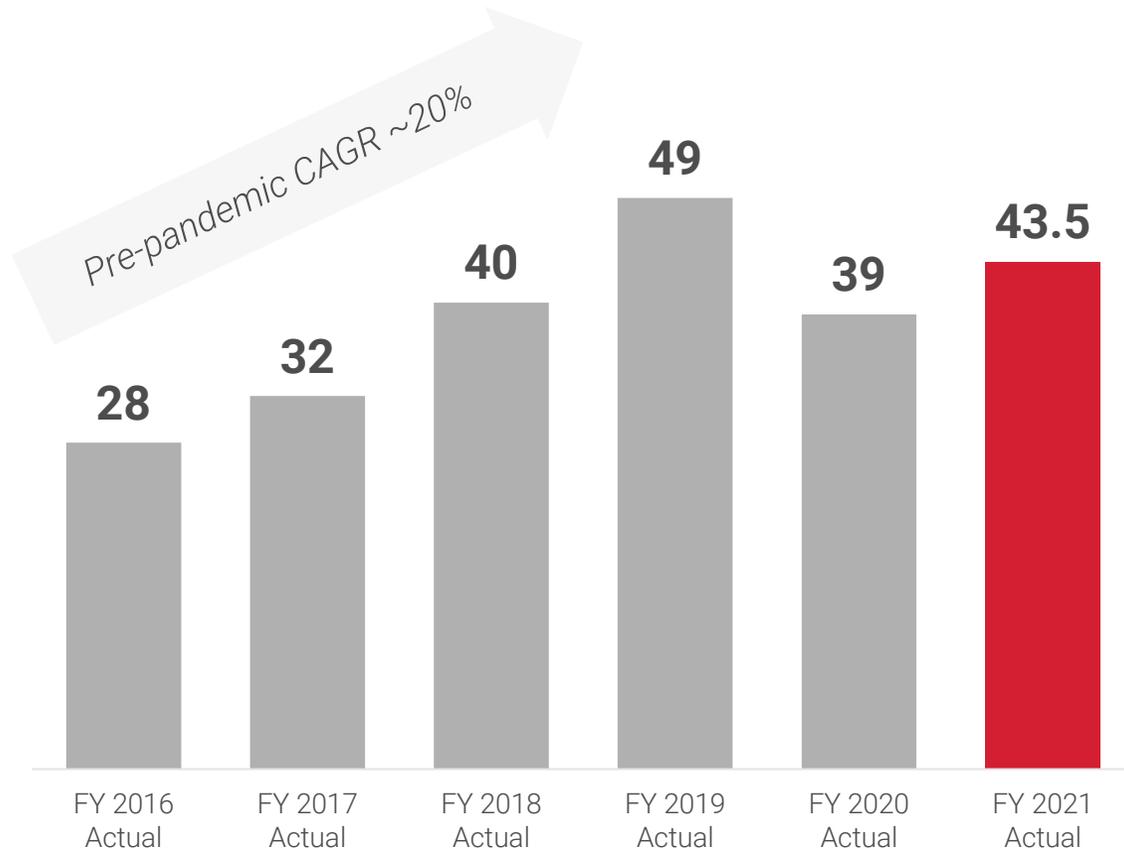
- **2021 - Ongoing**
- **Friedreich's Ataxia, Duchenne Muscular Dystrophy, Hereditary transthyretin-related amyloidosis**
- **Novel biomarker discovery to stratify and monitor patients for disease severity/progression and to enable the discovery of disease modifiers explaining heterogeneity**



- **2018 - Ongoing**
- **Rare neurodegenerative diseases**
- **Data Access and Collaboration Agreement granting access to CENTOGENE's Biodatabank for discovery & validation of novel genetic and biochemical targets for the potential development of new therapies for rare diseases**

# CENTOGENE 2021 Financials

Core Business - Dx and Biopharma revenues<sup>1</sup>



Record year for Diagnostics

## Diagnostics

- Full year 27.9 € million +26% vs FY 2020
- 57,000 test requests +36% vs FY 2020
- WES and WGS ~ 20 € million +25% vs FY 2020

Impacted by COVID

## Biopharma

- Full year 15.6 € million -8% vs FY 2020
- Q4 revenues 6.5 € million +40% YoY
- 45 active collaborations by end 2021
- Driven by partnerships in patient identification and clinical development

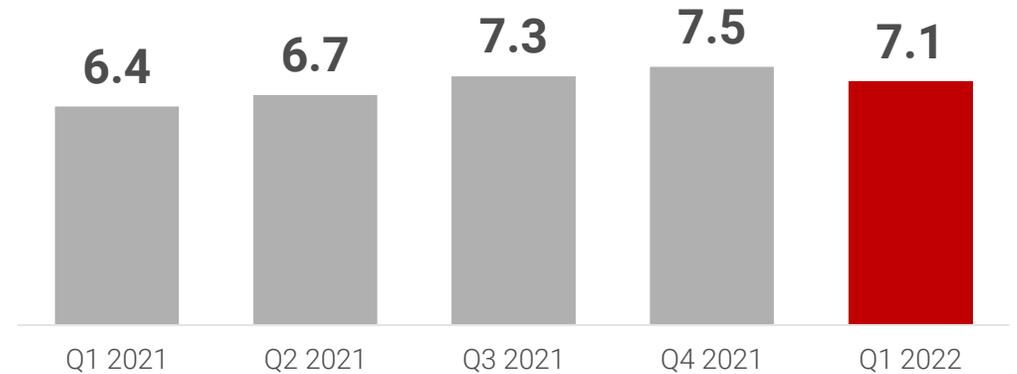
# CENTOGENE Q1 2022 Financials

Dx and Biopharma revenues in € million<sup>1</sup>

Double-digit growth rate

## Diagnostics

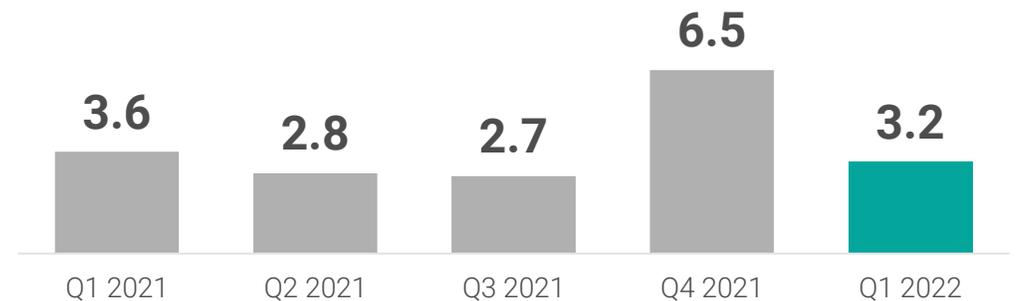
- Q1 2022 €7.1 million +11% vs Q1 2021
- Q1 2022 16,300 test requests +24% vs Q1 2021
- WES and WGS ~ 3.7 € million +18% vs Q1 2021
- Product portfolio updates on CentoCloud & MOx



Longer recovery post COVID impact

## Biopharma

- Q1 2022 € 3.2 million, -10% vs Q1 2021
- Primarily attributable to impact of COVID-19 on slowing pharma programs and longer sales cycle
- 42 active collaborations per March 31, 2022
- Post Q1 2022 extended Agios & Takeda contracts



# CENTOGENE Q1 2022 Financials

P&L and balance sheet highlights in € million<sup>1</sup>

	Q1 2021	Q1 2022	delta
Revenue	10.0	10.3	+0.3
Cost of sales	6.2	6.5	+0.3
<b>Gross Profit</b>	<b>3.8</b>	<b>3.9</b>	<b>+0.1</b>
Gross Profit %	38%	38%	-
Research & development expenses	4.3	4.6	+0.3
General Administrative expenses	11.6	7.9	(3.7)
Selling expenses	1.9	2.4	+0.5
Impairment of financial assets	0.1	0.2	+0.1
Other operating income	0.4	0.7	+0.3
Other operating expenses	0.0	0.0	-
<b>Operating loss</b>	<b>(13.9)</b>	<b>(10.5)</b>	<b>+3.4</b>

## Balance sheet highlights (in € million)

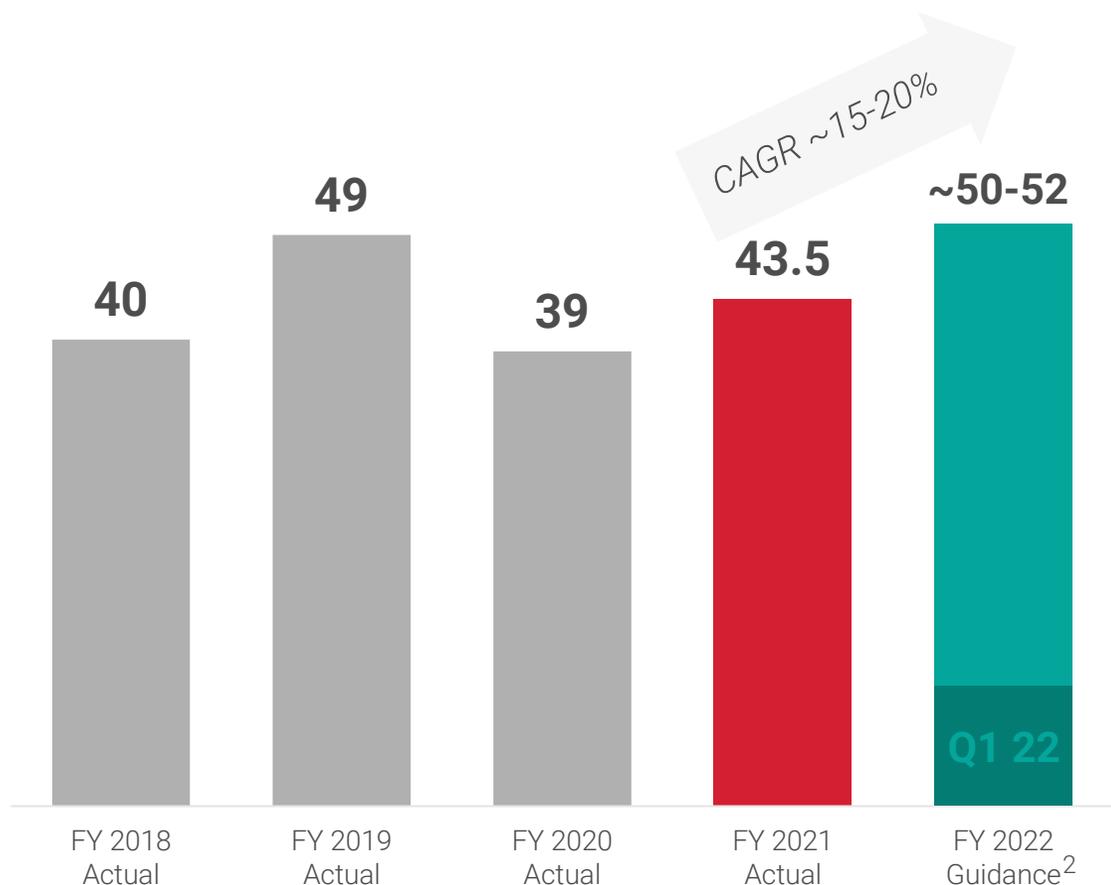
	Q1 2022	Q4 2021	delta
Cash & cash equivalents	42.7	17.8	24.8
Debt outstanding <sup>2</sup>	(43.0)	(22.5)	(20.5)
Net debt	(0.3)	(4.7)	4.4

20 <sup>1</sup> Selected information, may include rounding differences

<sup>2</sup> Debt outstanding includes non-current loans, non-current lease liabilities, current loans and current lease liabilities.

# CENTOGENE Guidance: 2022 poised for post-COVID recovery and refocus on core business and growth strategy

Core Business - Dx and Biopharma revenues<sup>1</sup>



FY 2022 Guidance<sup>2</sup>



- **\$62 million financing (~€55 million)** announced Q1 2022:
  - €15 million PIPE & \$45 million debt<sup>3</sup>
- Q1 of € 10.3 million up 3% year-over-year - acceleration in second half driven by biopharma
- Q1 COVID-19 revenues of ~€19 million; exited in **Q1 2022<sup>4</sup>**

# Near and Mid Term Priorities

## Topline

### Growth

- Focus on unique and transformative business model
- Expand pharma partnerships
  - Fully execute on our existing >20 ongoing partnerships and target ~20+ new pipeline deals
- Keep growing Dx at above-market level
  - Focus on profitable growth
  - Commercial excellence, CentoCloud & multiomics

**2022 Guidance:\***

**Revenues**  
**~50-52 € million**

**+15-20%  
YoY**

## Bottomline

### Cost management

- Drive fit-for-purpose organization
- Focus on efficient operations and margin improvement

**Q1**  
**2022**

**€ 10.3M up +3% yoy**  
acceleration in 2H22 driven  
by biopharma

## Runway

### Cashflow

- Sector is not about growth at all costs
- Diligently manage cash and extend runway

**\$**

**\$62M financing (~€55M)** in  
Q1 2022: €15M PIPE & \$45M  
secured debt facility \*\*

Thank  
you

