

The Essential
Life Science Partner
for Data-Driven Answers
in Rare & Neurodegenerative
Diseases

CENTOGENE (CNTG) Company Presentation November 2022

## **Disclaimer**

This presentation has been prepared by CENTOGENE N.V. (the "Company"), is made for informational purposes only and does not constitute an offer to sell or a solicitation of an offer to buy securities, nor shall there be any sale of any of securities in any state or jurisdiction in which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of any such state or jurisdiction. The information set forth herein does not purport to be complete or to contain all of the information you may desire. Statements contained herein are made as of the date of this presentation unless stated otherwise, and neither the delivery of this presentation at any time, nor any sale of securities, shall under any circumstances create an implication that the information contained herein is correct as of any time after such date or that information will be updated or revised to reflect information that subsequently becomes available or changes occurring after the date hereof.

This presentation contains statements that constitute "forward-looking statements" as that term is defined in the United States Private Securities Litigation Reform Act of 1995, including statements that express the Company's opinions, expectations, beliefs, plans, objectives, assumptions or projections regarding future events or future results, in contrast with statements that reflect historical facts. Examples include discussion of our strategies, financing plans, growth opportunities and market growth. In some cases, you can identify such forward-looking statements by terminology, such as "anticipate," "intend," "believe," "estimate," "plan," "seek," "project" or "expect," "may," "will," "would," "could" or "should," the negative of these terms or similar expressions. Forward-looking statements are based on management's current beliefs and assumptions and on information currently available to the Company. However, these forward-looking statements are not a guarantee of our performance, and you should not place undue reliance on such statements. Forward-looking statements are subject to many risks, uncertainties and other variable circumstances, such as negative economic and geopolitical conditions and instability and volatility in the worldwide financial markets, possible changes in current and proposed legislation, regulations and governmental policies, pressures from increasing competition and consolidation in our industry, the expense and uncertainty of regulatory approval, including from the U.S. Food and Drug Administration, our reliance on third parties and collaboration partners, including our ability to manage growth and enter into new client relationships, our dependency on the rare disease industry, our ability to manage international expansion, our reliance on key personnel, our reliance on key personnel, our reliance on hier factors. Such risks and uncertainties may cause the statements to be inaccurate and readers are cautioned not to place undue reliance on such statements. Many of these risks

Certain information contained in this presentation relates to or is based on studies, publications, surveys and other data obtained from third-party sources and the Company's own internal estimates and research. While the Company believes these third-party sources to be reliable as of the date of this presentation, it has not independently verified, and makes no representation as to the adequacy, fairness, accuracy or completeness of, any information obtained from third-party sources. In addition, all of the market data included in this presentation involves a number of assumptions and limitations, and there can be no guarantee as to the accuracy or reliability of such assumptions. Finally, while the Company believes its own internal research is reliable, such research has not been verified by any independent source.

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.

# **CENTOGENE** @ a glance



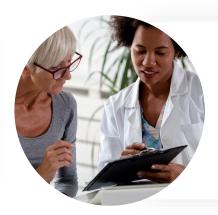
- Headquarters Rostock, Germany, with locations in Boston, MA, Berlin, Germany, Belgrade, Serbia, and Rotkreuz, Switzerland
- ~420 employees¹
- Listed on Nasdaq in November 2019 (Ticker: CNTG)



- 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)

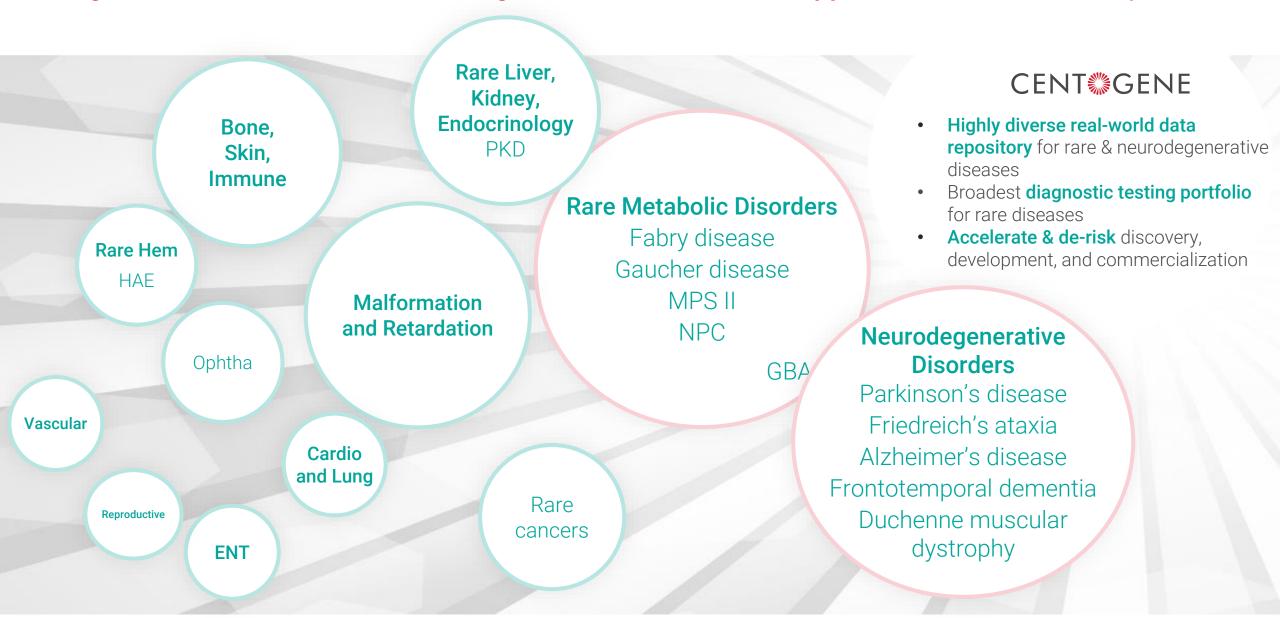


- >50 collaborations with biotech/biopharma partners, covering over 46 rare diseases
- Market access and expansion, clinical development, target and drug screening

# Essential Life Science Partner for Data-Driven Answers in Rare and Neurodegenerative Diseases



## Insights into 2,500 rare and neurodegenerative diseases to support breakthrough therapies



# 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: ~5,6001
- Public datasets are ~80% of European descent<sup>7</sup>
- <5% of rare diseases have meaningful therapies</li>

### **Growing Market for Rare Rx**

- Rare diseases market expected to grow 11+% to 2024<sup>3</sup>
- By 2024, rare disease products expected ~18% 
   <sup>R</sup> 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

**Patients, Patient Groups, Disease Foundations** 



# Our ambition is to be the essential life science partner for data-driven in rare and neurodegenerative diseases

Fueling revenues, growing CENTOGENE Biodatabank, and building pharma 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

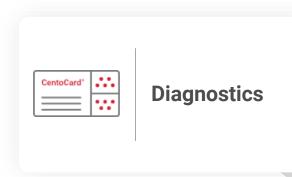
Patient- derived Cell Models & Multiomics

Biomarker/ Assay Identification & Validation

**CENTOGENE BIODATA NETWORK** (Insight Reports & CNTG Biodatabank licenses)

# **CENTOGENE Biodatabank:** Highly diverse real-world data repository for rare and neurodegenerative diseases

Diagnostics samples fuel the CNTG Biodatabank



CNTG Biodatabank fuels better diagnostic yields



~700k Individuals

 $^{\sim}30,000$  Active Physicians

> 120 Countries

> 2,500 Diseases

Multiomic Data

Clinical & HPO Data

Biomaterial

Sociodemographic Data

Bio-Medical Analytics

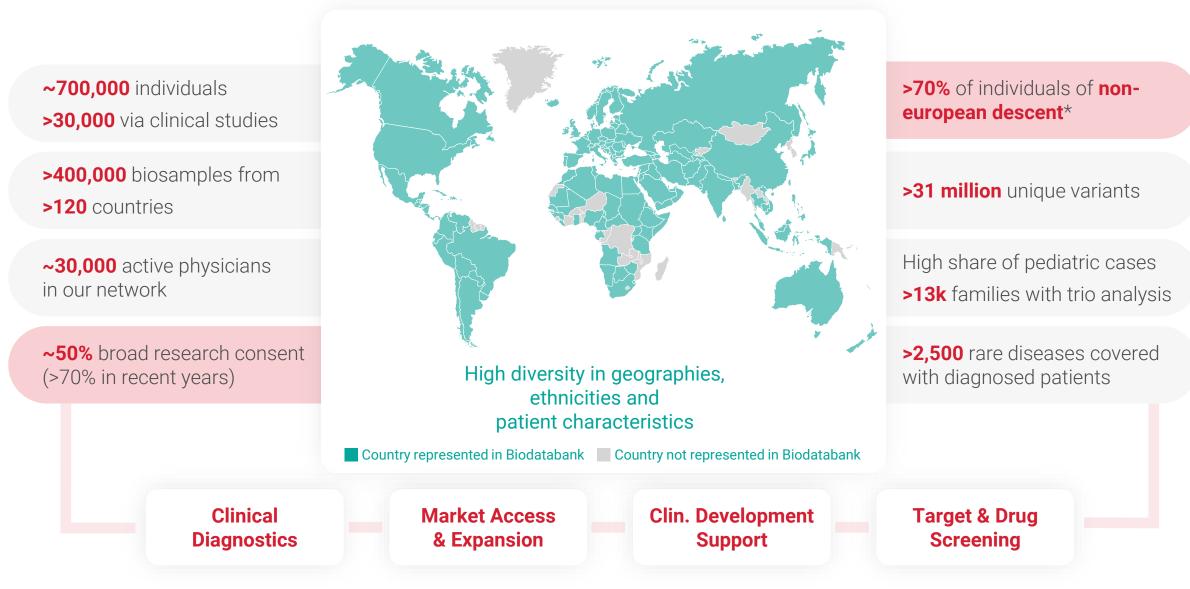
AI / ML

Insights Reports (clinical, genetic, epidemiology) & CNTG Biodatabank licenses



Biopharma partnerships fuel the CNTG Biodatabank

# The breadth and depth of the CENTOGENE Biodatabank makes it a unique resource



# First-in-class data capture and proprietary curation and analysis technologies

Data capture

Data bioinformatics

Data utilization



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

#### **CENTOGENE BIODATABANK**



#### Automated pipelines for

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

Clinical Diagnostics

**Biopharma Partnerships** 

Target & Drug Screening

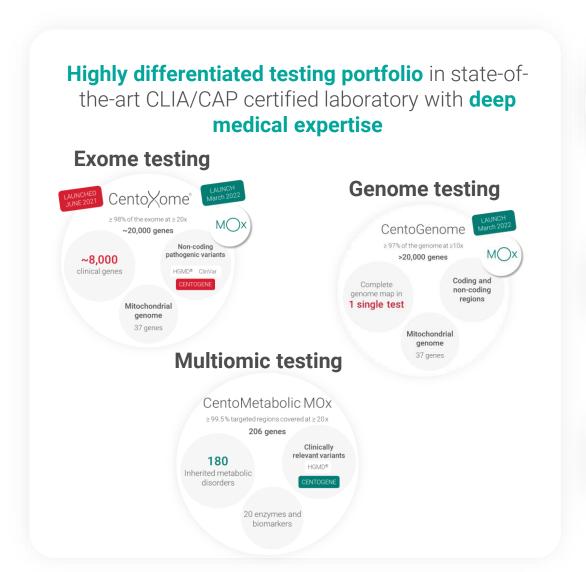
Clinical Development Support

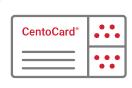
Market Access & Expansion

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





**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** ~30,000 active physicians and focus on countries with a high prevalence of rare diseases

# **CENTOGENE Unique Pharma Offering:** Our ambition is to be the essential life science partner for data-driven answers in rare and neurodegenerative diseases

# **Target & Drug** Screening

Patient-derived Cell Models & Multiomics

Biomarker/Assav 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, Modellina

Patient ID & Diagnostics

#### **CENTOGENE Biodata Network**

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

**CNTG Biodatabank Licenses** 

















# Market Access and Expansion: Maximize access and personalize patient, provider, and pharma 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 & CNTG Biodatabank 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



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





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



REVEAL-CP™

- 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)
- >2,500 DMD & >2,900 AADC samples screened

# Clinical Development: Accelerate and expand pharma 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 & CNTG Biodatabank Licenses

#### AstraZeneca Rare Disease

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

#### JENALI THERAPEUTICS

- 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

#### Takeda

- 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

### → agios

- 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)

#### \*2AInylam\*

- 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



- 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 & CNTG Biodatabank Licenses

#### CENT GENE



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

#### CENT GENE



- 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

#### **CENT**GENE

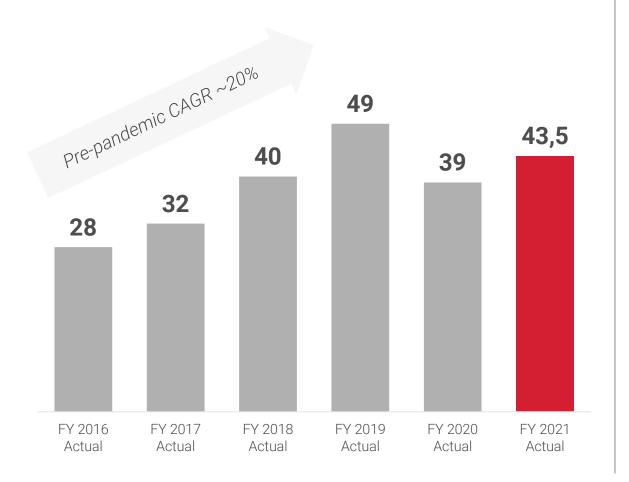
- 2021 Ongoing
- Friedreich's Ataxia, Duchenne Muscular Dystrophy, Hereditary transthyretin-related amyloidosis
- Novel biomarker discovery to stratify and monitor patients for disease severity/progression and to enable the discovery of disease modifiers explaining heterogeneity



- 2018 Ongoing
- Rare neurodegenerative diseases
- Data Access and Collaboration Agreement granting access to the CENTOGENE 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

# **Near- and mid-term priorities**

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

**Cost management** 

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

**Cashflow** 

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

Topline

2022 Guidance:\*

Revenues

~50-52 € million



**Bottomline** 

Runway

2022

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



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

\* Revenues reflect the Diagnostics and Pharma reporting segments, and do not include the COVID-19 Testing revenues recorded in the period 2020 − Q1 2022. COVID-19 Testing has been reported as discontinued operations since Q1 2022. Guidance as communicated per Q1 2022 earnings announcement. \*\* CENTOGENE announced the closing of a € 15 million (~\$ 17 million) private placement financing incl. warrants as well as the entry into a USD 45 million senior secured loan facility on February 1, 2022. / Image source: flaticon.com

CENT#GENE

Thank you

