# CENTOGENE's Ground-Breaking Family Genetic Research Published in the New England Journal of Medicine Reveals Path to Potential Cure for Structural Birth Defects

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- Collaborative research utilized insights gained from CENTOGENE's rare disease-centric Bio/Databank to help analyze data of more than 20,000 families
- Enabled testing of successful targeted therapeutic approach that restored embryonic development in preclinical models of birth defects
- Results reflect a major step towards treatment options for the approximately 4 million infants every year that are born with structural birth defects

CAMBRIDGE, Mass. and ROSTOCK, Germany and BERLIN, Sept. 29, 2021 (GLOBE NEWSWIRE) -- Centogene N.V. (Nasdaq: CNTG), a commercial-stage company focused on generating data-driven insights to diagnose, understand, and treat rare diseases, announced today the publication of results from a ground-breaking global genetic study in the *New England Journal of Medicine* (http://www.nejm.org/doi/full/10.1056/NEJMoa2033911), including findings of a potential treatment of structural birth defects caused by specific gene alterations.

Structural birth defects, such as cleft palate, occur in approximately 3% of live births worldwide. The collaborative research study utilized data derived from CENTOGENE's rare disease-centric Bio/Databank. The analysis revealed that genetic variations affecting a central Wnt regulator – *WLS* – causes syndromic structural birth defects. The Wnt signalling pathway regulates cellular development, particularly at the embryonic stage. The researchers were able to administer a pharmacologic Wnt agonist that partially restored erroneous embryonic development in preclinical studies. Accordingly, this research is an important step in potentially preventing and curing syndromes and structural birth defects linked to *WLS* dysfunction.

If this method demonstrates translational robustness, it offers an opportunity for drug developers to capitalize on these insights with a clinical program that could be completed within the next 3-5 years – opening up the potential of bringing a treatment to market and helping a number of the estimated 4 million infants that are born with serious birth defects every year.

Prof. Peter Bauer, Chief Genomic Officer at CENTOGENE, said, "Up until now, the genetic causes of structural birth defects have remained largely unknown. This groundbreaking study has now not only helped us to understand a driving factor of these defects, but has shed light on the way to a potential cure – and that is game changing. That is what we are striving for every day."

"The study results are a perfect reflection of the significance of data and cross-institutional collaboration," adds Dr. Aida Bertoli-Avella, Head of Research Data Analysis. "The findings have helped us gain a deeper understanding of synodomic structural birth defects and put us on the right path with preclinical models – offering a next step towards advancing widespread pharmacological treatments."

This study represents another significant step forward for CENTOGENE's mission to enable the cure of 100 rare diseases within the next 10 years. To learn more, visit: https://www.centogene.com/virtual-investor-event

**About the Study**

The collaboration was led by scientists of the Rady Children's Institute for Genomic Medicine, San Diego, and A*STAR, Singapore, and the research queried CENTOGENE's Bio/Databank and others globally to identify the cohort. A total of 20,248 families with children suffering from neurodevelopmental disorders, as well as parental consanguinity, were identified. Approximately one-third of the affected children presented with structural birth defects or microcephaly. Patients then underwent Exome and Genome Sequencing to identify genes with biallelic pathogenic or likely-pathogenic mutations. After identifying disease-causing variants, researchers generated two models to understand the disease pathophysiology and to test candidate treatments. The administration of a pharmacologic Wnt agonist proved to be successful and partially restored embryonic development in mouse models. To read the complete study in the *New England Journal of Medicine*, visit: http://www.nejm.org/doi/full/10.1056/NEJMoa2033911

**About CENTOGENE**

CENTOGENE engages in diagnosis and research around rare diseases transforming real-world clinical, genetic, and multiomic data to diagnose, understand, and treat rare diseases. Our goal is to bring rationality to treatment decisions and to accelerate the development of new orphan drugs by using our extensive rare disease knowledge and data. CENTOGENE has developed a global proprietary rare disease platform based on our real-world data repository with over 3.9 billion weighted data points from approximately 600,000 patients representing over 120 different countries.

The Company's platform includes epidemiologic, phenotypic, and genetic data that reflects a global population, as well as a biobank of patients' blood samples and cell cultures. CENTOGENE believes this represents the only platform focused on comprehensive analysis of multi-level data to improve the understanding of rare hereditary diseases. It allows for better identification and stratification of patients and their underlying diseases to enable and accelerate discovery, development, and access to orphan drugs. As of December 31, 2020, the Company collaborated with over 30 pharmaceutical partners.

**Forward-Looking Statements**

This press release contains “forward-looking statements” within the meaning of the U.S. federal securities laws. Statements contained herein that are not clearly historical in nature are forward-looking, and the words “anticipate,” “believe,” “continues,” “expect,” “estimate,” “intend,” “project,” and similar expressions and future or conditional verbs such as “will,” “would,” “should,” “could,” “might,” “can,” and “may,” are generally intended to identify forward-looking statements. Such forward-looking statements involve known and unknown risks, uncertainties, and other important factors that may cause CENTOGENE’s actual results, performance, or achievements to be materially different from any future results, performance, or achievements expressed or implied by the forward-looking statements. Such risks and uncertainties include, among others, negative worldwide economic conditions and ongoing instability and volatility in the worldwide financial markets, the effects of the COVID-19 pandemic on our business and results of operations, 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 intellectual property protection, fluctuations of our operating results due to the effect of exchange rates, or other factors. For further information on the risks and uncertainties that could cause actual results to differ from those expressed in these forward-looking statements, as well as risks relating to CENTOGENE’s business in general, see CENTOGENE’s risk factors set forth in CENTOGENE’s Form 20-F filed on April 15, 2021, with the Securities and Exchange Commission (the “SEC”) and subsequent filings with the SEC. Any forward-looking statements contained in this press release speak only as of the date hereof, and CENTOGENE’s specifically disclaims any obligation to update any forward-looking statement, whether as a result of new information, future events, or otherwise.

Media Contact: CENTOGENE Ben Legg Corporate Communications Ben.Legg@centogene.com Lennart Streibel Investor Relations Investor.Relations@centogene.com FTI Consulting Robert Stanislaro robert.stanislaro@fticonsulting.com  Rachel Kleiman rachel.kleiman@fticonsulting.com