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Groundbreaking cancer treatment research published in "Nature Communications"

The prestigious journal "Nature Communications", one of the world's most respected scientific journals, has published research on Coegin Pharma's drug candidate AVX420. The research involves internationally renowned research groups from the Norwegian University of Science and Technology (NTNU), University of California in San Diego, USA, University of Athens in Greece, and Kobe University in Japan. The results of this research show how AVX420, with its unique and selective mechanism of action, targets specific cancer cells in multiple ways and confirms AVX420's potential as a new, more effective treatment for leukemia and other cancers, with no comparable alternative on the market.

"Nature Communications" is one of the world's most respected scientific journals, known for its high quality, rigorous peer review, and global reach, reaching researchers, doctors, and decision-makers worldwide. The publication is clear evidence of AVX420 being considered novel and promising for leukemia treatment and relevant for continued clinical research.

The article presents research showing that AVX420 is a unique molecule with a selective mode of action targeting cPLA₂ α , particularly effective against specific aggressive blood cancers with mutations in the MLL and ASXL2 genes. In these specific cells AVX420 creates an oxidative stress, a mechanism in which a form of rust forms inside the cancer cells, damaging their internal structures and preventing them from surviving. At the same time, AVX420 affects key genes in the cancer cells, which can slow their growth and survival.

"Having our research published in 'Nature Communications' is a significant recognition of the work we have put into understanding and developing AVX420. It is incredibly exciting to see how this drug candidate, with its unique ability to selectively target cancer cells and attack them in several biological ways, can contribute to new, selective, and safe solutions for treating leukemia and other cancers," says Professor Berit Johansen, NTNU, and scientific advisor to Coegin Pharma.

In collaboration with SINTEF in Norway, Coegin Pharma has developed a new patented nanoformulation that stabilises the drug in a concentrated form for injection. This formulation has been shown to improve AVX420's effectiveness in preclinical models for the leukemia forms ALL and AML, where it has proven to be safe, improve survival, and be well tolerated without side effects in mice.

"We are incredibly pleased with the publication in 'Nature Communications', which confirms both the high quality of the research conducted and AVX420's promising clinical potential. This is particularly hopeful for the approximately 30% of all leukemia cases with mutations in the MLL or ASXL2 genes, where the drug candidate is expected to be highly effective and therefore commercially viable. With our global patent on AVX420, we are now ready to take the next step. We are seeking a co-development partner who can contribute to financing and further development toward clinical

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research in phase 1, with the aim of making the treatment available to patients," says Dr. John Zibert, Chief Medical Officer at Coegin Pharma.

Coegin Pharma is now planning to conduct the final preclinical tests in collaboration with a co-development partner to assess safety, establish the correct dosage, and determine the best method for administering AVX420, followed by testing in humans. Since AVX420 is a second-generation of Coegin Pharma's cPLA₂α inhibitors, it is expected that the safety profile will be similar to the topical first-generation AVX001, which has undergone safety studies in animals and humans up to clinical phase 2 with a good safety profile.

Link to the article: <https://doi.org/10.1038/s41467-024-55536-9>

Reference to the article:

Ashcroft, F. J., Bourboula, A., Mahammad, N., Barbayianni, E., Feuerherm, A. J., Nguyen, T. T., Hayashi, D., Kokotou, M. G., Alevizopoulos, K., Dennis, E. A., Kokotos, G., & Johansen, B. (2025). "Next generation thiazolyl ketone inhibitors of cytosolic phospholipase A2α for targeted cancer therapy". *Nature Communications*, 16 (164).

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This document is a translation of the original Swedish press release. In case of any discrepancies, the Swedish version shall prevail.

About Coegin Pharma

Coegin Pharma is a Swedish biotech company with derma cosmetic innovations for hair growth and skin pigmentation, alongside groundbreaking drug candidates for the treatment of myocardial infarction, leukemia and skin cancer. The company is planning for the launch of its first product series for hair growth in 2025, followed by a skin pigmentation product in 2026.

Coegin Pharma's share is listed on NGM Nordic SME and is dual-listed on Börse Stuttgart. The company has a registered office in Lund, Sweden.

For more information, please visit: coeginpharma.com/en

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