RNS Number : 4658C
Roquefort Therapeutics PLC
13 June 2023

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Roquefort Therapeutics plc

("Roquefort Therapeutics" or the "Company")

Anti-Cancer MDK mRNA - Positive *in vitro* Results

Positive Experimental Results in Breast and Liver Cancer and Enhanced mRNA Patent Position

Roquefort Therapeutics (LSE:ROQ), the Main Market listed biotech company focused on developing first in class medicines in the high value and high growth oncology market is pleased to announce the successful completion of *in vitro* studies for the Company's anti-cancer mRNA therapeutic in breast and liver cancer. The studies demonstrated a statistically significant reduction in both proliferation (cancer growth) and migration.

Today's announcement follows the development of a new platform of anti-cancer mRNA therapeutics targeting the Company's novel Midkine target ("MDK mRNA Program") announced on 8 March 2023. The Roquefort Therapeutics team and collaborators at the University of New South Wales have accelerated development of the MDK mRNA Program and successfully demonstrated its cancer killing ability in validated *in vitro* models of breast and liver cancer.

The Company's MDK mRNA Program was tested in validated *in vitro* models of breast and liver cancer to evaluate whether this could slow the cancer growth and migration (as an early proxy for metastasis). The study demonstrated a statistically significant reduction in both proliferation (cancer growth) and migration. While these are early *in vitro* results, this effect, if replicated in clinical trials, is consistent with the potential for a first in class cancer medicine. The Company intends to present these highly encouraging results at one of the forthcoming leading cancer conferences.

The Company has recently updated its filed patents to protect the MDK mRNA Program including compositions and methods, which further consolidates the Company's leadership position in the Midkine field.

The mRNA cancer market is a highly attractive new field of medicine (~$31 billion, 7.8% CAGR[1]) and is led by Pfizer, Moderna and BioNTech. Roquefort Therapeutics is well positioned in this field, with four mRNA sequences that uniquely target Midkine.

The Company's strategic focus is on solid cancers including breast and liver cancer in which poor survival is correlated to Midkine expression[2]. Breast cancer is the most frequently diagnosed life-threatening cancer in women with 2.3 million new diagnoses per year and the second leading cause of cancer death among women worldwide with approximately 685,000 deaths per year[3]. While the overall survival rate is 91%, metastatic breast cancer survival rates are circa 30% and metastasis constitute the primary cause of death for >90% of breast cancer deaths. Elevated Midkine has been associated with breast cancer progression, metastasis[4] and chemotherapy resistance[5]. The annual treatment market is circa $25 billion (estimated 8% CAGR)[6].

Hepatocellular carcinoma (HCC) accounts for around 90% of liver cancers[7], which is the fourth-leading cause of cancer mortality worldwide with an estimated market size of $8 billion (6.7% CAGR)[8]. Elevated Midkine has been associated with progression, metastasis and chemotherapy resistance in liver cancer,[9] and because of the limited efficacy of conventional therapy[10], the 5-year survival rate is just 21% (American Cancer Society)[11].

The MDK mRNA program will now progress into *in vivo* studies with a targeted delivery technology to be developed in the Company's laboratory in Stratford-upon-Avon.

Ajan Reginald, Chief Executive Officer of Roquefort Therapeutics, said:

"We invested in mRNA to create a breakthrough medicine, targeting hard-to-treat cancers with the highest patient mortality rates. Less than 30% of patients with liver and metastatic breast cancer survive 5 years and both cancers are associated with

high rates of Midkine expression. And so, with our deep expertise in Midkine, this was a natural first target for our mRNA program.

mRNA is the most attractive field in Biotech and, within this highly innovative filed, we are developing a unique Midkine niche. These results, while early, validate our strategy that demonstrating a significant reduction in both proliferation and migration are an early proxy for metastasis. In parallel, our intellectual property portfolio has been enhanced through updated patent filing.

These experiments were completed on time and within budget and form a critical part of our Midkine portfolio and our broader anti-cancer portfolio of five programs. Our five pre-clinical programs, which are in in vivo and in vitro studies, continue to progress on track and we look forward to announcing further progress in due course."

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LEI: 254900P4SISIWOR9RH34

About Roquefort Therapeutics

Roquefort Therapeutics (LSE:ROQ) is a Main Market listed biotech company developing first in class drugs in the high value and high growth oncology segment prior to partnering or selling to big pharma.

Since listing in March 2021, Roquefort Therapeutics has successfully acquired Lyramid Pty Limited, a leader in the development of medicines for a new therapeutic target, Midkine (a human growth factor associated with cancer progression), and most recently acquired Oncogeni Ltd, founded by Nobel Laureate Professor Sir Martin Evans, which has developed two families of innovative cell and RNA oncology medicines.

Roquefort Therapeutics' portfolio consists of five fully funded, novel patent-protected pre-clinical anti-cancer medicines. The highly complementary profile of four best-in-class medicines consists of:

- Midkine antibodies with significant *in vivo* efficacy and toxicology studies;
- Midkine RNA therapeutics with novel anti-cancer gene editing action;
- Midkine mRNA therapeutics with novel anti-cancer approach
- STAT-6 siRNA therapeutics targeting solid tumours with significant *in vivo* efficacy; and
- MK cell therapy with direct and NK-mediated anti-cancer action.

For further information on Roquefort Therapeutics, please visit www.roquefortplc.com and @RoquefortTherap on Twitter.

[1] https://www.marketwatch.com/press-release/mrna-cancer-vaccines-and-therapeutics-market-research-size-2023-2030-2023-06-05

[2] Zhang L, Song X, Shao Y, Wu C, Jiang J. Prognostic value of Midkine expression in patients with solid tumors: a systematic review and meta-analysis. Oncotarget. 2018 Jan 4;9(37):24821-24829. doi: 10.18632/oncotarget.23892. PMID: 29872508; PMCID: PMC5973861.

[3] https://www.who.int/news-room/fact-sheets/detail/breast-cancer

[4] Filippou, P.S., Karagiannis, G.S. & Constantinidou, A. Midkine (MDK) growth factor: a key player in cancer progression and a promising therapeutic target. Oncogene 39, 2040-2054 (2020). https://doi.org/10.1038/s41388-019-1124-8

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[6] https://www.gminsights.com/industry-analysis/breast-cancer-therapeutics-market

[7] https://www.nature.com/articles/s12276-020-00527-1

[8] https://www.grandviewresearch.com/industry-analysis/liver-cancer-diagnostic-market

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[11] https://www.cancer.org/cancer/types/liver-cancer/detection-diagnosis-staging/survival-rates.html

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