

Boehringer Ingelheim and MiNA Therapeutics to Develop Novel Treatment Approaches for Fibrotic Liver Diseases

- Collaboration and licensing agreement focused on investigating up to three targets and has a potential transactional value of up to EUR 307 million, excluding royalties
- Expands Boehringer Ingelheim's comprehensive R&D programme in non-alcoholic steatohepatitis (NASH) and fibrotic liver disease with innovative novel treatment modalities
- Leverages MiNA's leading expertise in RNA activation therapeutics, evaluating the platform technology's potential to prevent disease progression by restoring normal cell and target organ function

Ingelheim, Germany and London, United Kingdom, November 8, 2017 – Boehringer Ingelheim and MiNA Therapeutics ("MiNA"), a pioneer in RNA activation therapeutics, today announced that they have signed a collaboration and licensing agreement focused on the development of novel compounds to treat fibrotic liver diseases such as NASH, based on MiNA's small activating RNA ("saRNA") therapeutics platform. The new partnership underscores Boehringer Ingelheim's commitment to advancing innovative new treatment approaches and furthering its comprehensive clinical offerings in cardiometabolic diseases. It combines MiNA's leading expertise in the development of saRNAs with Boehringer Ingelheim's experience in bringing first-in-class breakthrough treatments to patients with cardiometabolic disease.

NASH is a major cause of liver fibrosis and cirrhosis and an area of high unmet medical need. It has an especially high prevalence among obese and diabetic patients and currently there are no treatments available. NASH is expected to become the most common cause of advanced liver disorders eventually necessitating liver transplantation in the coming decades.

saRNAs have been demonstrated to activate transcription of specific genes resulting in upregulation of proteins with therapeutic potential. In the new collaboration, Boehringer Ingelheim and MiNA aim to identify targets to restore metabolic functionality of hepatocytes and prevent fibrotic tissue formation in patients with NASH. It will enable Boehringer Ingelheim to rapidly design, profile and develop novel compounds, potentially also creating opportunities for combination with Boehringer Ingelheim's other NASH-pipeline assets.

"This collaboration is a recognition of our platform and expertise in liver-based diseases as well as validation from an established pharmaceutical leader in what has been an exciting year for the company," said Robert Habib, CEO of MiNA.

"This new collaboration is another sign of our ongoing commitment to patients with cardio-metabolic diseases, including NASH," said Clive R. Wood, Ph.D., Corporate Senior Vice

President Discovery Research at Boehringer Ingelheim. “It will combine MiNA’s pioneering work with saRNAs with our expertise in biopharmaceutical research and development,” added Wood.

Boehringer Ingelheim has a long history of excellence in the discovery and development of medicines for cardiometabolic disease patients. It has established a broad portfolio of marketed products for thromboembolic diseases, type 2 diabetes, acute myocardial infarction, hypertension and cardio-renal risk reduction. The cardiometabolic diseases pipeline extends beyond type 2 diabetes and anticoagulation with a focus on innovative drugs for the treatment of the devastating consequences of diabetes as well as contributing factors like obesity.

Under the terms of the agreement, MiNA will receive an upfront payment and committed research funding as well as potential research, development and regulatory milestone payments totalling up to EUR 307 million. In addition, MiNA is entitled to up to double-digit royalties on sales of selected products resulting from the partnership. No further financial details have been disclosed.

In this agreement, MiNA was advised by Ferghana Partners and Taylor Wessing LLP.

About MiNA Therapeutics

Harnessing the innate mechanism of gene activation, MiNA Therapeutics’ platform enables the development of new medicines that restore normal function to patients’ cells. We are applying our technology and clinical know-how to transform the therapy landscape of severe liver and other diseases. In May 2017, Sosei Group Corporation became a strategic minority shareholder in MiNA Therapeutics. www.minatx.com

About Boehringer Ingelheim

Innovative medicines for people and animals have for more than 130 years been what the research-driven pharmaceutical company Boehringer Ingelheim stands for. Boehringer Ingelheim is one of the pharmaceutical industry’s top 20 companies and to this day remains family-owned. Day by day, some 50,000 employees create value through innovation for the three business areas human pharmaceuticals, animal health and biopharmaceutical contract manufacturing. In 2016, Boehringer Ingelheim achieved net sales of around 15.9 billion euros. With more than three billion euros, R&D expenditure corresponds to 19.6 per cent of net sales.

Social responsibility comes naturally to Boehringer Ingelheim. That is why the company is involved in social projects such as the “Making More Health” initiative. Boehringer Ingelheim also actively promotes workforce diversity and benefits from its employees’ different experiences and skills. Furthermore, the focus is on environmental protection and sustainability in everything the company does. More information about Boehringer Ingelheim can be found on www.boehringer-ingelheim.com or in our annual report: <http://annualreport.boehringer-ingelheim.com>.



Contact for MiNA Therapeutics:

Dr. Stephanie May

MacDougall Biomedical Communications

P: +49 89 2424 3494 :: M: +49 175 571 1562

E-Mail: smay@macbiocom.com

Contacts for Boehringer Ingelheim:

Boehringer Ingelheim

Dr. Reinhard Malin

Head of Communications Innovation Unit

Boehringer Ingelheim GmbH

P: +49 6132 77-90815 :: M: + 49 151 150 20 690

reinhard.malin@boehringer-ingelheim.com

Linda Ruckel

Associate Director, Media and Corporate Reputation

Boehringer Ingelheim Pharmaceuticals, Inc.

Ridgefield, Connecticut

P: +1 203 791-6672 :: M: +1 203-957 5114

linda.ruckel@boehringer-ingelheim.com