MiNA Therapeutics Presents Clinical and Pre-Clinical Data at ESMO Supporting MTL-CEBPA as Immunological Combination Treatment

--Final results from Phase 1 study of MTL-CEBPA in advanced liver cancer patients demonstrate clinical activity and attractive safety profile--

--Results from pre-clinical study highlight synergistic benefit of combining MTL-CEBPA with anti-PD1 checkpoint inhibitors--

London, United Kingdom, September 30, 2019 – MiNA Therapeutics, the pioneer in RNA activation (RNAa) therapeutics, today announced final Phase 1 clinical data of MTL-CEBPA as a single agent in patients with advanced liver cancer as well as pre-clinical data demonstrating synergistic immunological and anti-tumour activity of MTL-CEBPA in combination with anti-PD1 checkpoint inhibition. The data will be presented in two posters at the European Society for Medical Oncology (ESMO) 2019 Congress taking place in Barcelona, Spain on September 28th and September 30th.

"The Phase 1 study, in which immunological activity and tolerability of MTL-CEBPA as a single agent was observed, provides an excellent foundation on which to advance MTL-CEBPA in combination with other cancer therapies and serves as a strong, general validation of our novel approach to targeting cancer," said Robert Habib, CEO of MiNA Therapeutics. "In addition to the ongoing evaluation of MTL-CEBPA in combination with sorafenib in patients with advanced liver cancer, the new pre-clinical findings support investigating MTL-CEBPA and anti-PD1 checkpoint combination therapy in patients with other solid tumour cancers."

Final results of the first-in-human evaluation of MTL-CEBPA as a single agent demonstrated MTL-CEBPA to be well tolerated at all dose levels with clear pharmacological activity. In the study, MTL-CEBPA was evaluated as a single agent in 39 patients with advanced liver cancer and liver disease across escalating dose levels and dose frequencies in which no maximum tolerated dose was identified. Pharmacological activity was observed in patients with significant activation of CEBPA target gene and subsequent changes in white blood cell count. Analysis of paired biopsies indicated repopulation of the tumour microenvironment from immuno-suppressive to mature myeloid cells. In 35 patients evaluable for efficacy, partial tumour response was achieved in 1 patient, and stable disease was achieved in 15 patients. Following discontinuation of MTL-CEBPA, 8 patients received subsequent tyrosine kinase inhibitor therapy. Of 5 patients treated with sorafenib, 4 experienced durable, objective tumour responses including 3 complete tumour responses durable for over 1 year. The ongoing OUTREACH Phase 1b study continues to evaluate MTL-CEBPA in combination with sorafenib standard of care.

Separately, a new pre-clinical study described the synergistic benefits of combining MTL-CEBPA with anti-PD1 checkpoint inhibition in an immunocompetent mouse model of colon cancer. Compared to single agent treatments, the combination treatment resulted in synergistic improvements in tumour growth inhibition. Synergistic increases in infiltration of

cytotoxic T lymphocytes (TILs) evidenced the immunological role of MTL-CEBPA in the tumour microenvironment.

The posters will be made available on the Company's website in the Publications section under "RNA Activation".

Presentation information

Title:	First-in-human, first-in-class phase I study of MTL-CEBPA, a RNA oligonucleotide targeting the myeloid cell master regulator C/EBP-α, in patients with advanced hepatocellular cancer
Poster no:	455PD (Abstract 2878)
Session:	Poster Discussion – Developmental therapeutics
Date / time:	16:30 – 18:00 CET, Saturday 28 September 2019
Location:	Alicante Auditorium (Hall 3)

Title:	Targeting myeloid-derived suppressor cells and T cells: combination treatment with MTL-CEBPA and PD-1 antibody in a mouse syngeneic CT26 model
Poster no:	1230P (Abstract 3089)
Session:	Poster Display Session 3, Immunotherapy of cancer
Date / time:	12:00 – 13:00 CET, Monday 30 September 2019
Location:	Poster Area (Hall 4)

About MTL-CEBPA

MTL-CEBPA is the first therapy to specifically up-regulate CCAAT/enhancer binding protein alpha (C/EBP-α), a transcription factor that acts as a master regulator of myeloid cell lineage determination and differentiation. Dysregulated myeloid cells have been implicated in several diseases and identified as a critical barrier for many therapies to induce clinical responses in solid tumour cancers. In pre-clinical studies MTL-CEBPA has been shown to improve the anti-tumour activity of cancer therapies by targeting dysregulated myeloid cells and reducing their suppression in the tumour microenvironment.

About MiNA Therapeutics

Harnessing an 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 cancer and other severe diseases. www.minatx.com

Contact:
MiNA Therapeutics
Robert Habib, CEO
Phone: +44 208 811 6700
E-Mail: info@minatx.com

Media requests:
Stephanie May or Gretchen Schweitzer
Trophic Communications
Phone: +49 89 2388 7734 or +49 171 185 56 82
E-Mail: may@trophic.eu