ethris

Transforming the Lives of Patients with Severe Pulmonary Disease

Bio-M × Tsukuba × Kawasaki Open Innovation Matching
June 8, 2021

Investment and partnering opportunity for high-value mRNA therapeutics

- **Ethris has developed unique and proprietary mRNA, formulation and delivery platforms**
- **Equity investment opportunity**
  - *Differentiated pipeline* of nasal/inhaled mRNA therapeutics with *near-term clinical entry* for treatment of pulmonary diseases with high unmet medical need and attractive indication expansion opportunities
  - Potential for up to three *clinical value-creating milestones within 24 months*
- **Pharma partnering opportunities**
  - Accelerate and exploit the *full potential of current pipeline* of mRNA therapeutics targeting pulmonary diseases, including indication expansion into large indications of high unmet need
  - Exploit the *full potential of Ethris` technology platforms* by unlocking additional therapeutic areas using alternative routes of administration

Ethris mRNA technology platform has broad applicability across therapeutic areas

Ethris Focus

Respiratory Diseases

Immunomodulation

- Covid-19 therapeutics with activity irrespective of virus variants
- Influenza therapeutic
- Therapeutic to prevention virus-driven COPD and asthma exacerbation
- Therapeutic for pulmonary alveolar proteinosis, a rare autoimmune disease

Protein replacement therapy

- Therapeutic for cystic fibrosis
- Therapeutic for primary ciliary dyskinesia

Targets for expansion of respiratory pipeline into COPD, asthma and IPF identified

Academic Partnerships

Regenerative Medicine

Bone and Tendon Healing

- Therapeutic for non-union fractures and osteoporosis-related fractures

Cardiovascular

- Therapeutic for cardiac regeneration following myocardial infarction

Neuroscience

- Neuronal cell therapy for M. Huntington and M. Parkinson

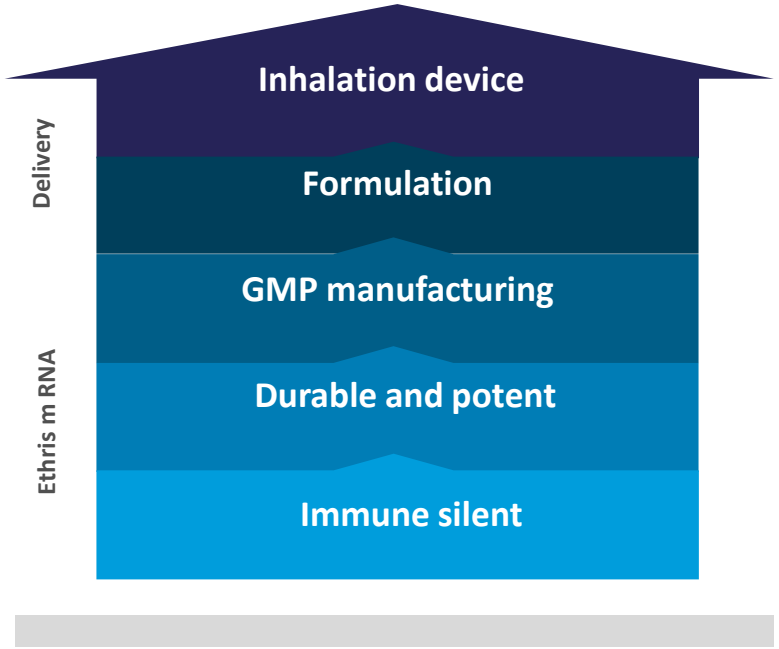
Platform Opportunities

Other TAs

Pipeline expansion potential of current platform into

- Vaccines
- Genetic liver diseases
- Oncology

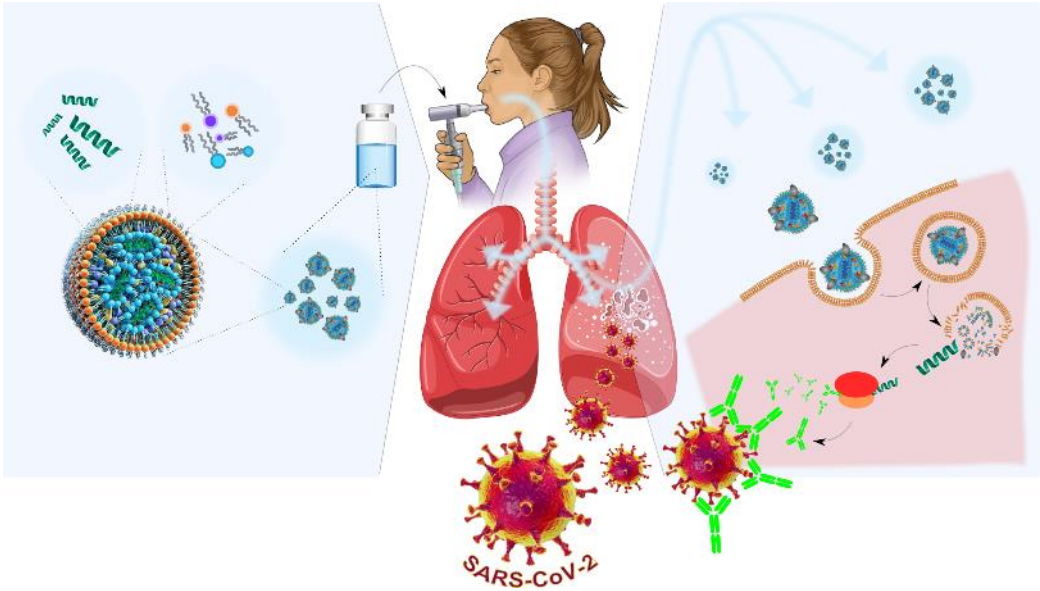
Ethris mRNA, formulation and delivery technology enables mRNA delivery in the clinic



- Rapid nebulization of high-quality nanoparticles with disposable device for treatment of respiratory diseases
- Alternative routes of administration:
  - Transcript activated matrix for bone healing
  - Ex-vivo cell therapy
  - Systemic administration
- Long-term storage at room temperature of commercial product
- Strong IP

ETH46: Near-term CTA for inhaled Ethris mRNA encoding anti-SARS-CoV-2 antibody

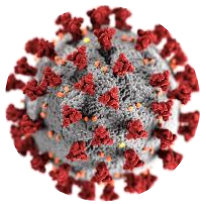
- Neutralizing antibody active against prevalent virus variants
  - Potential to rapidly cope with new virus variants similar to mRNA vaccines
- Simple inhaled delivery with disposable device for self-administration at home
- Low amounts of drug product due to production of neutralizing anti-SARS-CoV-2 antibodies directly at location of virus replication
- IND/CTA filing planned in 4Q2021



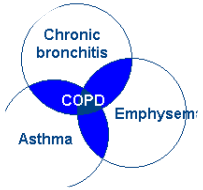
In partnership with neurimmune

ETH47: First-in-class early intervention in respiratory virus infection with Ethris mRNA encoding type III interferon (IFN)-encoding; IND/CTA filing planned in 2Q2022

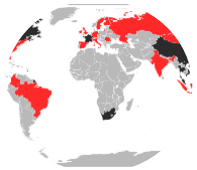
Type III IFNs induce an innate immune defense at mucosal barriers of virus entry sites and inhibit viral replication and spread in virus- and mutation-agnostic manner



Therapeutic activity against influenza, SARS-CoV-2 and other respiratory viruses (lead indication: Influenza)

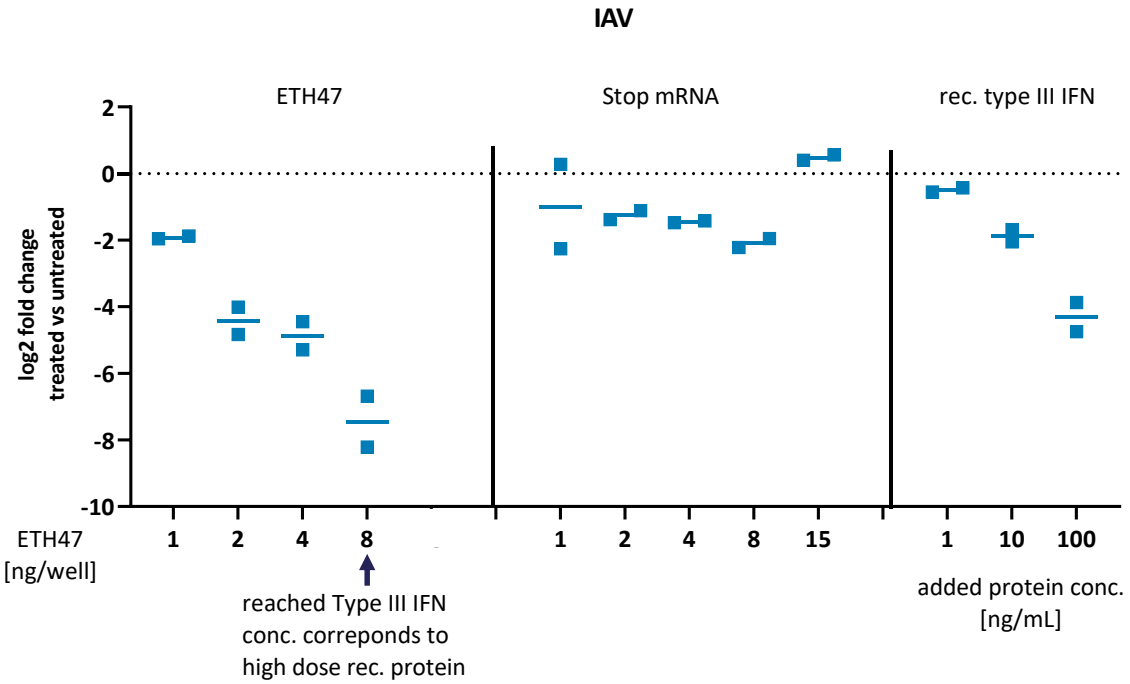


LCM: Prevention of seasonal, viral driven exacerbations in patients with underlying respiratory disease (asthma, COPD) and RSV



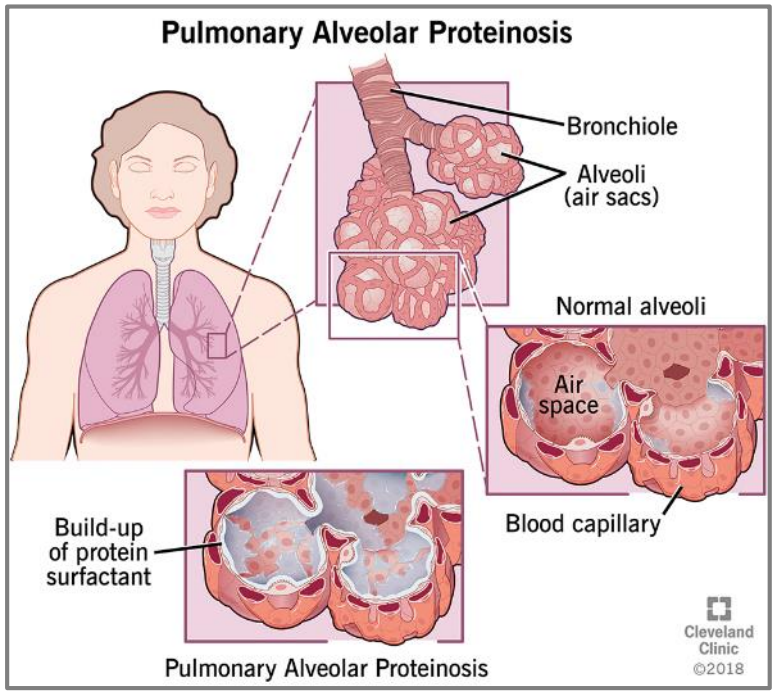
LCM: Pandemic preparedness

ETH47 potently inhibits Influenza A virus replication up to ~10-fold more than recombinant type III IFN



ETH45: First-in-class inhaled Ethris mRNA for treatment of pulmonary alveolar proteinosis (PAP) is effective in presence of anti-GM-CSF autoantibodies

- PAP is a rare pulmonary autoimmune disease due to anti-GM-CSF auto-antibodies without curative therapy
  - Repetitive invasive whole lung lavage is currently the only treatment option
- In contrast to recombinant GM-CSF, ETH45 activates disease pathway in presence of anti-GM-CSF antibodies
  - ETH45 demonstrates in vitro efficacy where recombinant protein fails
- Attractive indication expansion opportunities
- IND/CTA filing planned in 4Q2022



Impaired gas exchange results in high morbidity and mortality of PAP

Leadership team of mRNA pioneers with strong track record of success in research and development of mRNA therapeutics

CEO and co-founder:
PD Dr. Carsten Rudolph

- Inventor of the SNIM® RNA-Technology and co-inventor of numerous drug delivery patent applications
- Pharmacist degree from FU Berlin; Affiliated with Dr. von Haunerschen Kinderhospital of the Ludwig Maximilians University in Munich
- Recipient of the BMBF BioFuture Award

CTO and co-founder:
Prof. Dr. Christian Plank

- Professor at the Technical University in Munich
- Author of more than 170 publications and co-inventor of numerous patents in the field of nucleic acid delivery
- PhD in biochemistry from the University of Vienna, Austria

CMO:
Dr. med. Thomas Langenickel

- More than 10 years experience in translational research and clinical development in respiratory, cardiovascular and metabolic diseases at Bristol-Myers Squibb and Novartis Pharmaceuticals
- MD and PhD from Humboldt University in Berlin
- Clinical Pharmacology and Internal Medicine/ Cardiology training at the Max-Delbrück Center for Molecular Medicine and the Charité in Berlin

THANK YOU

Dr. Carsten Rudolph
Co-founder & acting CEO

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