



# BROKERAGE FOR HEALTH

## September 3-4 2018, Oslo

session (edit)



**Non-viral Cell Therapy**  
Lonza Cologne GmbH, Germany  
Large Industry [private]  
Headquarter Lonza AG: Basel, Switzerland

HEALTH-NCP-NET 2.0 project is funded by the European Commission



# Project idea/ Company expertise

## Project idea:

New approach for cell therapy to address unmet clinical needs of large patient groups

- Establishing an innovative procedure for non-viral cell therapy based on CAR-T/NK technology
- Stable CAR-expression in T- or NK-cells
  - CRISPR/Cas9 targeted integration at defined positions in the genome OR
  - Episomal vectors: extra chromosomal vector replication in the cell
- Process optimization for relevant high cell numbers

## Company expertise:

4D-Nucleofector™ LV Unit for Large-Scale Transfection

- Efficient, Closed and Scalable Transfection of up to  $10^9$  cells
- Ex-vivo modification of human primary cells for the development and establishment of cell therapy applications (e.g. genome editing, generation of CAR-T cells)



4D-Nucleofector™ LV Unit was marketed for research use only – next step: **bringing the device to the clinic** with the help of an international consortium with outstanding and diversified expertise

# Topic

## Possible topic/topics you wish to participate in

TOPIC : Regenerative medicine: from new insights to new applications

**Topic identifier:** SC1-BHC-07-2019

**Publication date:** 27 October 2017

**Types of action:** RIA Research and Innovation action

**DeadlineModel:** single-stage

**Planned opening date:** 26 July 2018

**Deadline:** 16 April 2019 17:00:00

Time Zone : (Brussels time)

- Lonza brings in expertise in non-viral transfection of therapeutic cells
- Partner needed:
  - Researcher working on new **therapies based on modified immune cells** (e.g. T or NK cells)
  - Clinicians responsible for preclinical and **clinical phases** in cell therapy
  - Experts providing the necessary **regulatory** know-how/experience

# Sample text

The **goal** of the project is to establish a new **non-viral cell therapy**.

*Example:* Modified T (or NK) cells express specific receptors (CAR, chimeric antigen-receptor) that bind to defined molecules on tumour cells. Effector molecules are released and destroy the tumour cells.

Other approaches with modified therapeutic cells are possible.

- Lonza can take the role as coordinator or partner (experienced in both roles)
- Two potential partner are already defined (academic, SME)
- No clinical partner included up to now



# Contact details

# Thank you!

**Dr. Birgit Nelsen-Salz**

Future Technologies Lonza PharmaBioscience

Head of the Board HansaBioMed Life Sciences

Lonza Cologne GmbH, Nattermannallee 1, 50829 Koeln, Germany

Tel. : +49 221 99 199148

[birgit.nelsen-salz@lonza.com](mailto:birgit.nelsen-salz@lonza.com)

[www.lonza.com](http://www.lonza.com)

[www.bioscience.lonza.com](http://www.bioscience.lonza.com)