

# DECODING THE BRAIN WITH IN SITU SEQUENCING

In situ sequencing (ISS) offers an unprecedented new capability to sequence inside tissue samples, fulfilling the unmet need to simultaneously analyze the expression of hundreds of genes within every cell of a tissue, while preserving tissue morphology.



## SALSS CONTACT

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SALSS RISING STAR | 2018



CARTANA

Cartana AB | Private Company

CARTANA is revolutionizing biomedical research, biomarker discovery and treatment validation with its proprietary, patent-pending, in situ sequencing technology, based on 20+ years of development in the laboratory of Prof. Mats Nilsson at Science for Life laboratories in Stockholm.

## OUR PRODUCTS & SERVICES

CARTANA offers both reagent kits for sale, customizable for specific project needs, as well as a contract service that processes customer tissue samples and returns gene expression maps within as fast as one working week.

Our first NEUROKIT product, targeting CNS function, enables researchers to see a quantitative expression map of >100 genes analyzed simultaneously with sub-cellular resolution on top of the natural morphology of the brain tissue section.

The approach uses gene specific barcoded probes and rolling-circle amplification (RCA) to detect and amplify the genes of interest in situ, within the brain section. Next-gen sequencing (NGS) chemistry is then applied directly on the tissue sections to sequence the amplified barcode sequences. Our analysis software package decodes the barcode sequences, to identify and quantify the genes, and classifies cell types inside their natural morphology based on their gene expression levels.

## WHAT MAKES US UNIQUE

The morphological brain cell maps produced by CARTANA provide ~100x more data per sample than the previous state of the art, saving cost, time and most importantly, generating vast amounts of new information. Customers can scroll through the map, view and compare gene expression of individual cells within different brain compartments, linking cellular activity with disease pathology, which can ultimately be translated into diagnostic and treatment strategies.

CARTANA's goal is to build up a highly differentiated global product and service business around our core technology.

## WHY YOU SHOULD MEET US

CARTANA is looking to build revenue and attract high-profile use cases with partners in pharmaceutical research.

The Company is aiming to close a financing round of SEK 9M by the end of Sept 2018, of which a final SEK 3M is available.

## KEY TEAM

**Malte Kühnemund, PhD**

- CEO & Co-founder
- Neuro-science expertise, assay development, inventor of 3 patents

**Francesca Bignami, MSc**

- CMO & Co-founder
- Experience in IP & market analysis with Health Innovation & UBE, KI

**Johan Banér, PhD**

- CTO
- 10+ years industrial experience with Natera, USA and Vanadis Dx, Sweden

**Xiaoyan Qian**

- CSO & Co-founder
- Probe design, assay development, image & data analysis

**Mats Nilsson, PhD**

- Director, Senior Adviser & Co-founder
- Professor of Biochemistry/Molecular Diagnostics at the Department of Biochemistry and Biophysics, Stockholm University

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