



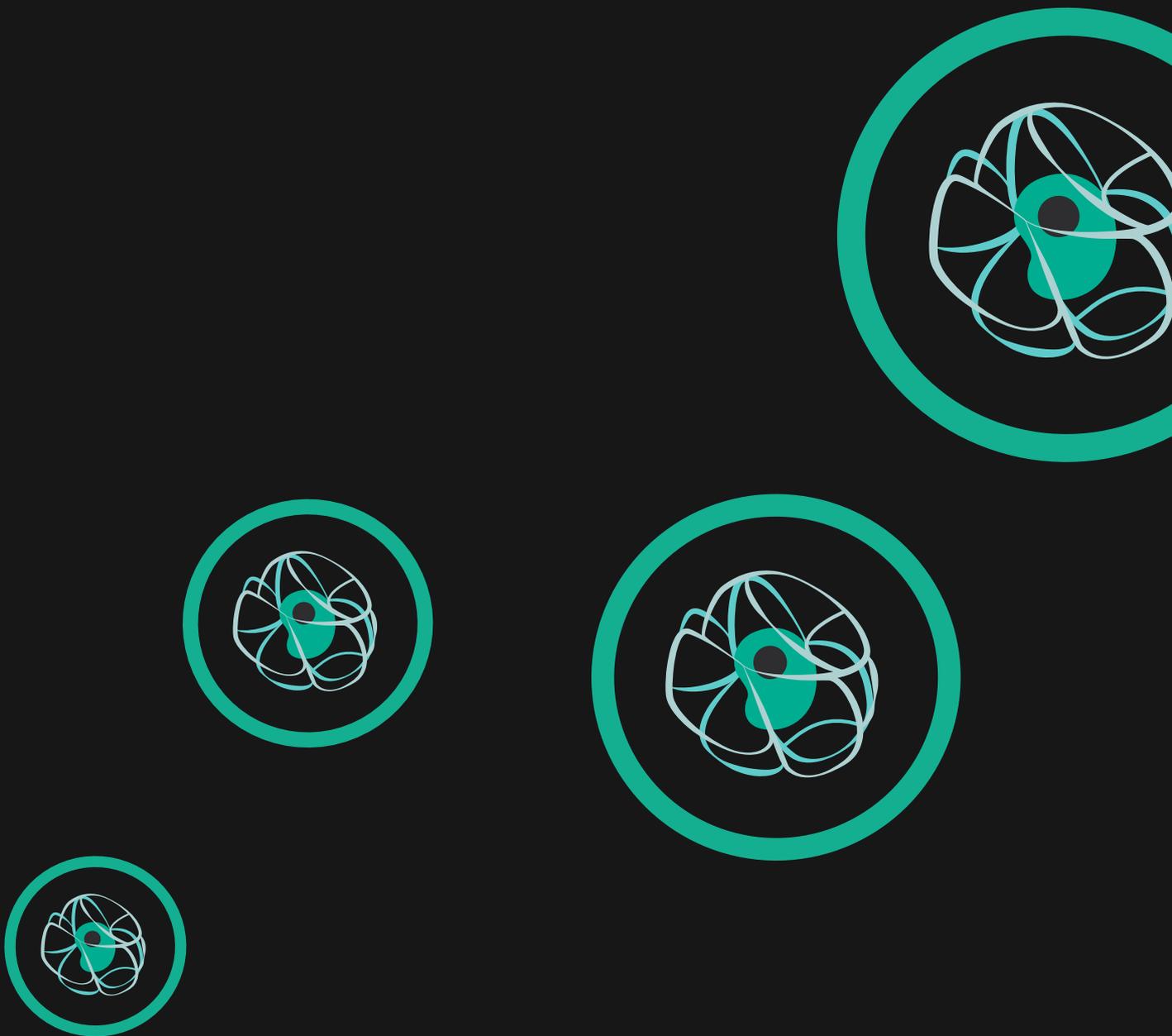
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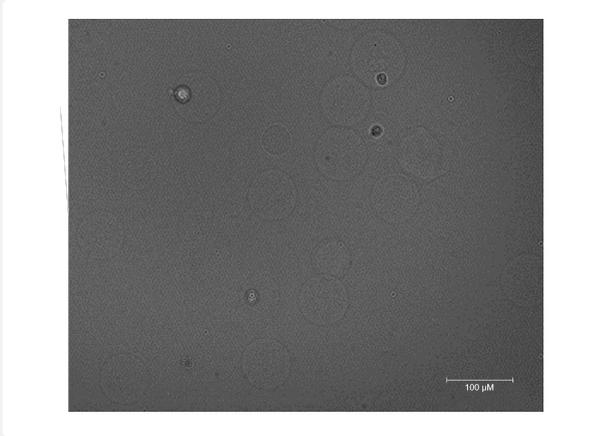
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nadAROSE

A unique, high-throughput solution for the
encapsulation of cells in individual micro-scaffolds

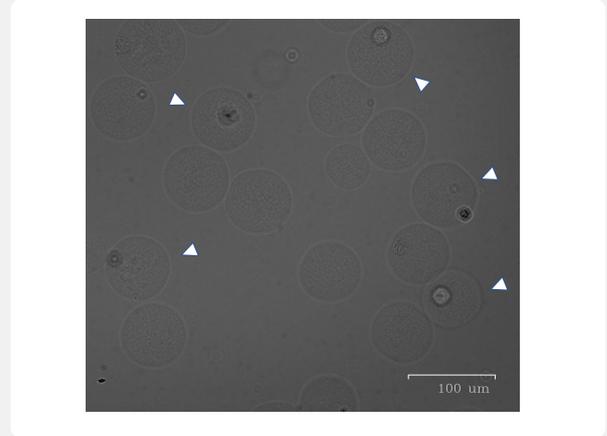


A Unique Solution



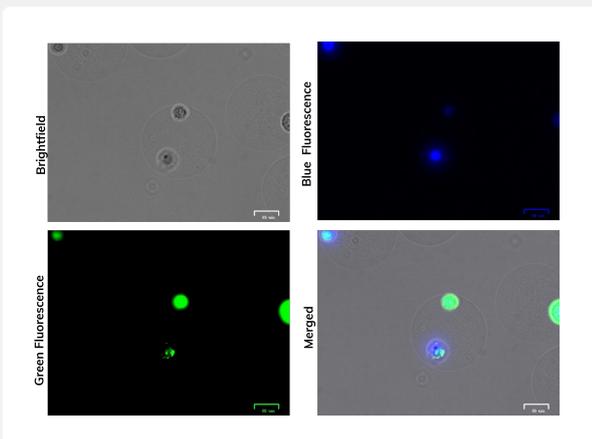
High Throughput

Agarose scaffolds can be reliably produced with the nadAROSE kit on up to 8 chips in parallel for high-throughput operation. The average scaffold size is 77.5 μm



Single Cell Encapsulation

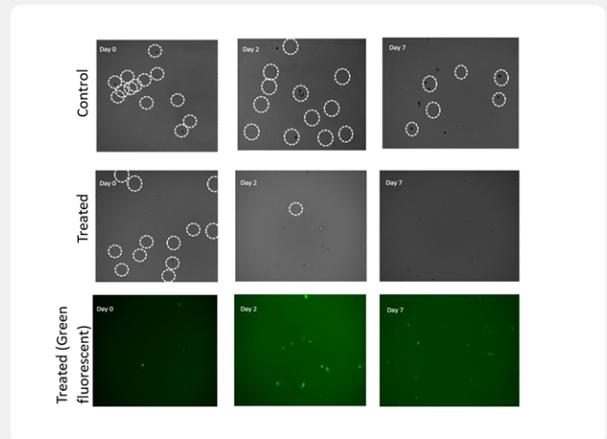
Viable single cells can be encapsulated in a single scaffold to assess variable downstream applications



Co-Encapsulation of Cells

More than one cell/ cell type can be co-encapsulated within a single scaffold

This is ideal for studying cell-cell or cell pathogen interactions



Cell Release

Cell-containing scaffolds were treated with an enzyme to digest them. In the Treated condition, scaffolds were eliminated within 2 days compared to control

The released cells were further cultivated and remained viable for at least 7 days

Kit Benefits



Experimental flexibility: cell-containing agarose scaffolds are suitable for a range of experimental procedures



Compatible with cell release: the nadAROSE kit produces agarose scaffolds that can be later digested to release cells



Temperature controlled process for robust encapsulation and scaffold construction



No microfluidic knowledge required: all scaffold production done with single use, prefabricated consumables



Scalable: choose to run 1, 2, 4 or 8 lanes at once



High throughput encapsulation of up to one million cells in one run

Controlled Cell Immobilisation



Sample preparation

1



Agarose scaffolds production on Nadia

2



Many options for example:

3

Cell-cell interactions

Single-genome PCR

Cell treatments

Following sample preparation, agarose scaffolds containing cells are produced on the Nadia using the nadAROSE kit. The Nadia is an automated, microfluidic droplet-based platform for single cell research that encapsulates up to 8 samples, in parallel, in under 20 mins and captures up to 1M cells in a single run.

The nadAROSE kit creates a spherical scaffold structure to allow diffusion of nutrients and gases that make it an ideal system for naturalistic mammalian and non-mammalian live cell studies, given its many similarities to the native physiological environment of living cells. Single or multiple cells encapsulated in agarose can, therefore, be maintained for extended periods of time within these individual three-dimensional microenvironments and used in various downstream workflows.

Get in touch

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