

VERSATILE MICROFLUIDICS PLATFORM

Versatile platform for
microfluidics research



OFFICIAL INDIA CHANNEL PARTNER

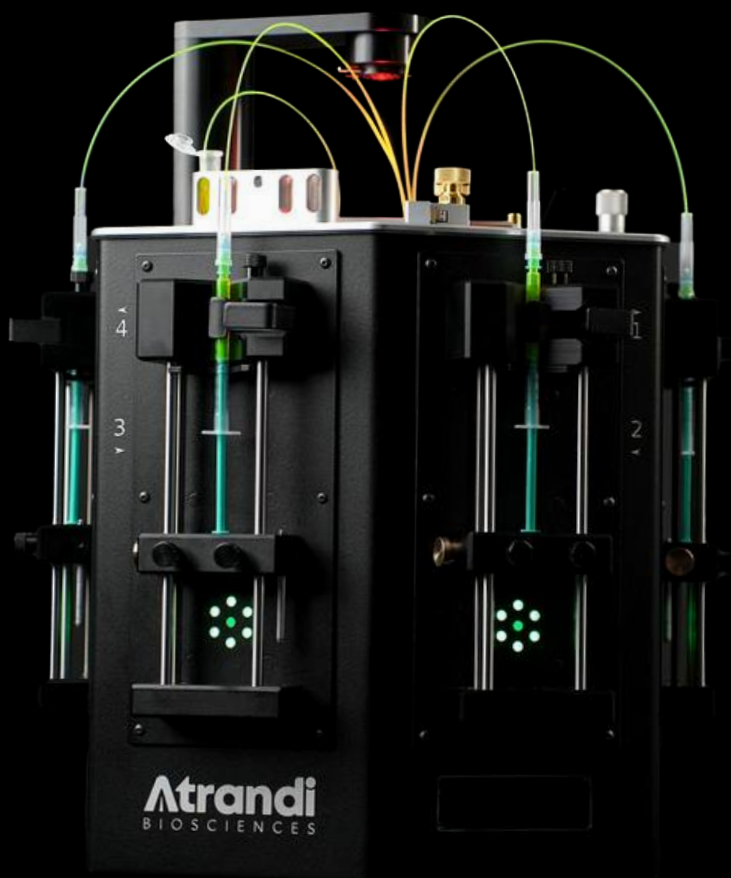


Atrandi
BIOSCIENCES

ENABLING THE CENTURY OF BIOLOGY
ATRANDI.COM

ONYX is a microfluidic platform that enables researchers to seamlessly scale their liquid handling to high-throughput levels using microfluidics. With intuitive syringe pump control, high-speed microscopy, and active droplet manipulation,

it supports both droplet and semi-permeable capsule technologies. This flexibility empowers researchers to customize and optimize workflows, offering complete control without being limited to specific assays.



KEY FEATURES

All-in-one platform

Integrated forcefield generator

Machine vision & in-line droplet analysis

Embedded UI software

Small footprint & mobility

High-speed microscopy

Wireless connectivity

No chip lock-in

WHY SYRINGE PUMPS?

UNPARALLELED FLOW CONTROL

Straightforward and responsive operation without the need for flow sensors

NO CHIP CLOGGING

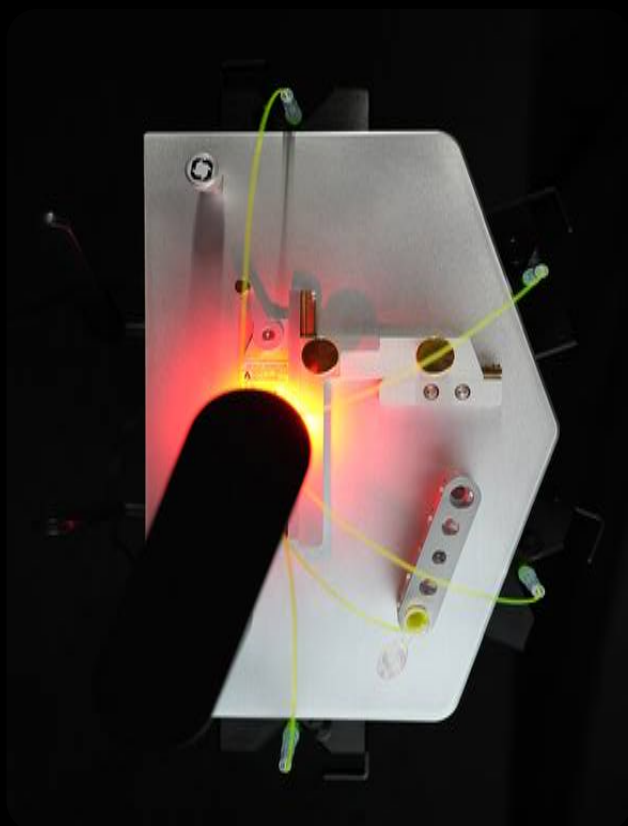
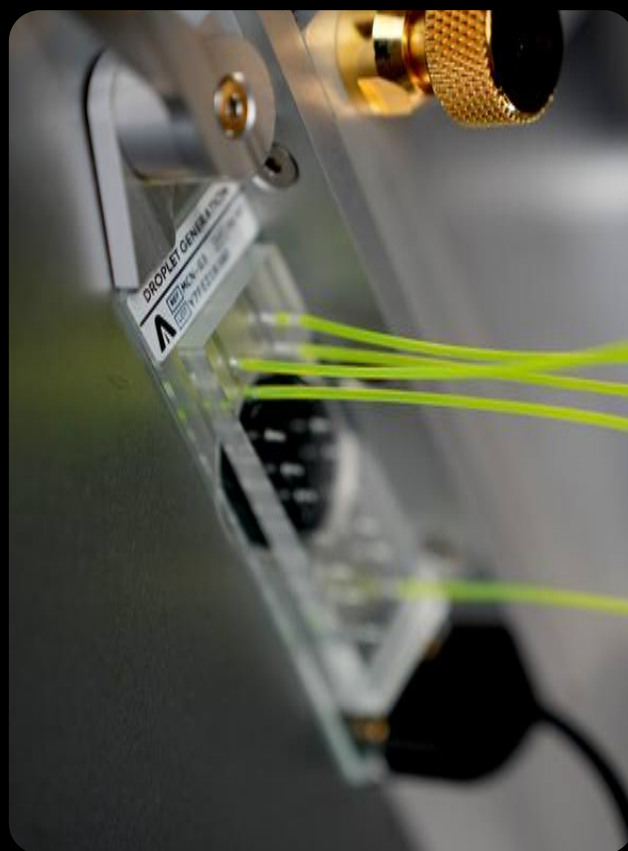
In contrast to pressure-based systems, heterogeneous biological samples and environmental particles do not clog the chips

VERSATILITY

Using a single instrument and interchangeable syringes makes it possible to work with sample volumes ranging from 10 μ L to 50mL

ROBUST OPERATION

More reproducible flow rates result in a more monodisperse droplet population



VERSATILITY

COMBINATION OF 4 INDIVIDUAL SYRINGE PUMPS

Allows performing both complex and routine experiments

WIDE FLOW RANGE

Covers 6 orders of magnitude:
0.5 μ L/h - 0.5L/h (depending on syringe)

HIGH-SPEED CAMERA

25 μ s at 1440x1080 allows monitoring encapsulation at high speeds

COMPATIBILITY

Compatible with a wide range of commercial and custom-made microfluidic chips

MOBILITY

Laminar flow hoods

Cold rooms

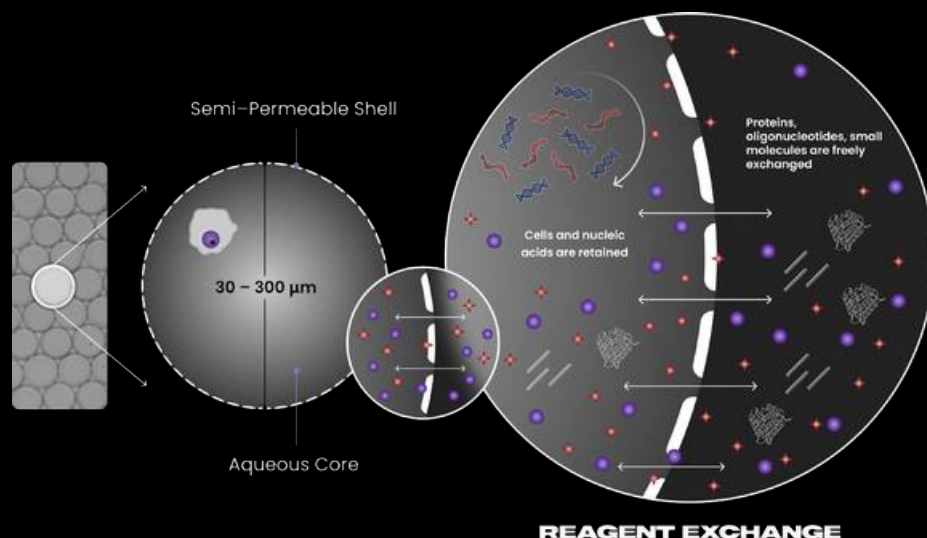
Clean rooms

Anoxic chambers

The instrument integrates all the needed components in a single compact and portable package, which can be interfaced remotely over standard wireless or wired connection

APPLICATIONS

SEMI-PERMEABLE CAPSULES



Semi-permeable capsules (SPCs) are aqueous compartments enclosed by a semi-permeable wall that isolates cells and nucleic acids while allowing the free exchange of smaller molecules like enzymes, buffers, and nutrients.

This distinctive property solves the problems faced by droplet-based systems, supporting multi-step workflows where reactions—such as cell lysis followed by nucleic acid amplification—can be carried out sequentially, each under optimal conditions. Once generated, SPCs can be easily manipulated, with reactions initiated by simply submerging the capsules in different buffers with a pipette.

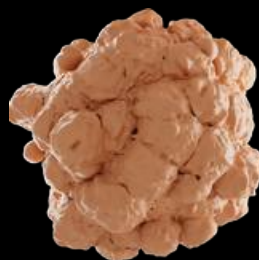
ONYX FEATURES

No capsule size limitation
(30–300 μm)

High-throughput generation
1M – 10M SPCs/hour

Effective cell isolation
100,000–1M cells isolated per hour

Visibility
Monitor cell encapsulation with microscope and high-speed camera



SINGLE-CELL ASSAY INNOVATION

Mix and match preferred molecular biology reactions to develop your own custom single-cell multi-step workflows



SINGLE-CELL CULTIVATION

Scale up the cultivation of spheroids or isolated microbial strains for high-throughput experiments

DROPLET MICROFLUIDICS

Water-in-oil droplets are closed compartments that isolate individual cells or molecules, providing a controlled environment for different reactions.

The closed nature of water-in-oil droplets ensures that encapsulated cells and molecules (e.g., plasmids) or secreted products (e.g., antibodies, proteins) remain isolated.



ONYX FEATURES

Full integration

No additional components required to start microfluidic experiments

Droplet manipulation

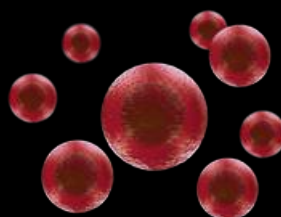
Integrated forcefield generator for reagent addition (e.g. injection, merging) assays

Compatibility

Compatible with commercial and homebrew microfluidic modules

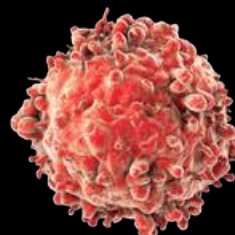
Flexibility

No reagent or assay lock-in



HIGH-THROUGHPUT SCREENING

Isolate libraries of cells or molecules and perform functional assays for target selection with the Styx platform



SINGLE-CELL SEQUENCING

Isolate single cells and replicate a wide range of published single-cell analysis protocols



CUSTOM WORKFLOWS

Different microfluidic modules can be combined and customized to create workflows tailored to specific research needs, offering flexibility and scalability as projects evolve



ATRANDI BIOSCIENCES

ATRANDI

"You discover" – in Lithuanian

ABOUT COMPANY

Atrandi Biosciences, founded in 2016, is a pioneering life sciences tool company transforming single-cell analysis. Headquartered in Vilnius, Lithuania, we simplify single-cell research by creating versatile and scalable tools that empower labs around the globe. Our mission is to

remove barriers, expand possibilities, and enable researchers to address the world's most intricate biological questions. We believe the greatest scientific breakthroughs should be accessible to everyone, fostering a future where discovery knows no limits.

200+

Satisfied
customers

>150

Install base

20+

Collaborations
worldwide

70+

People in the
team

**ISO 9001
ISO 14001**

Certified

FIND US

US office: Boston, MA, USA
Address: Coming soon
E-mail: info@atrandi.com
Phone: +1 (720) 805-3101

Headquarters: Vilnius, Lithuania
Address: Vytenio str. 18, LT-03229
E-mail: info@atrandi.com
Phone: +370 (619) 78-075

OFFICIAL INDIA CHANNEL PARTNER



**Genique
Lifesciences™**

Unit-805, 8th Floor, Unitech Arcadia, South City-2,
Sector 49, Gurugram, Haryana 122018, India
contact@genique.co +91 124-426-3051 genique.co

Atrandi
BIOSCIENCES

ENABLING THE CENTURY OF BIOLOGY
ATRANDI.COM