A NAGI BIOSCIENCE PRODUCT

SYDLAB™ ONE

UNLOCKING MICRO-ORGANISMS POTENTIAL FOR ANY LAB

NAGI'S TECHNOLOGIES ARE BASED ON THE PIONEER

ORGANISM-ON-CHIP TECHNOLOGY

Thanks to the development of our patented Microfluidic Worm Matrices (MWM) technology, we offer the possibility of confining microscopic nematodes (*C. elegans*) within large arrays of microfluidic chambers in a simple, fast and reproducible way, by means of passive hydrodynamic worm-valves.

By using Nagi™ MWM method, our team was able to shape a myth into a reality: the first Organism-on-Chip technology. The Nagi™ Chips achieve an optimal controlled growth of *C. elegans* worms and their automated time-resolved treatment and analysis throughout their entire lifespan.

THE ALTERNATIVE TESTING TECHNOLOGY

PROVINDING FULL ORGANISM DATA

The scalability and ease of use of the Nagi™ Chips and its MWM technology made possible the development of the ultimate laboratory solution: SydLab™ One.

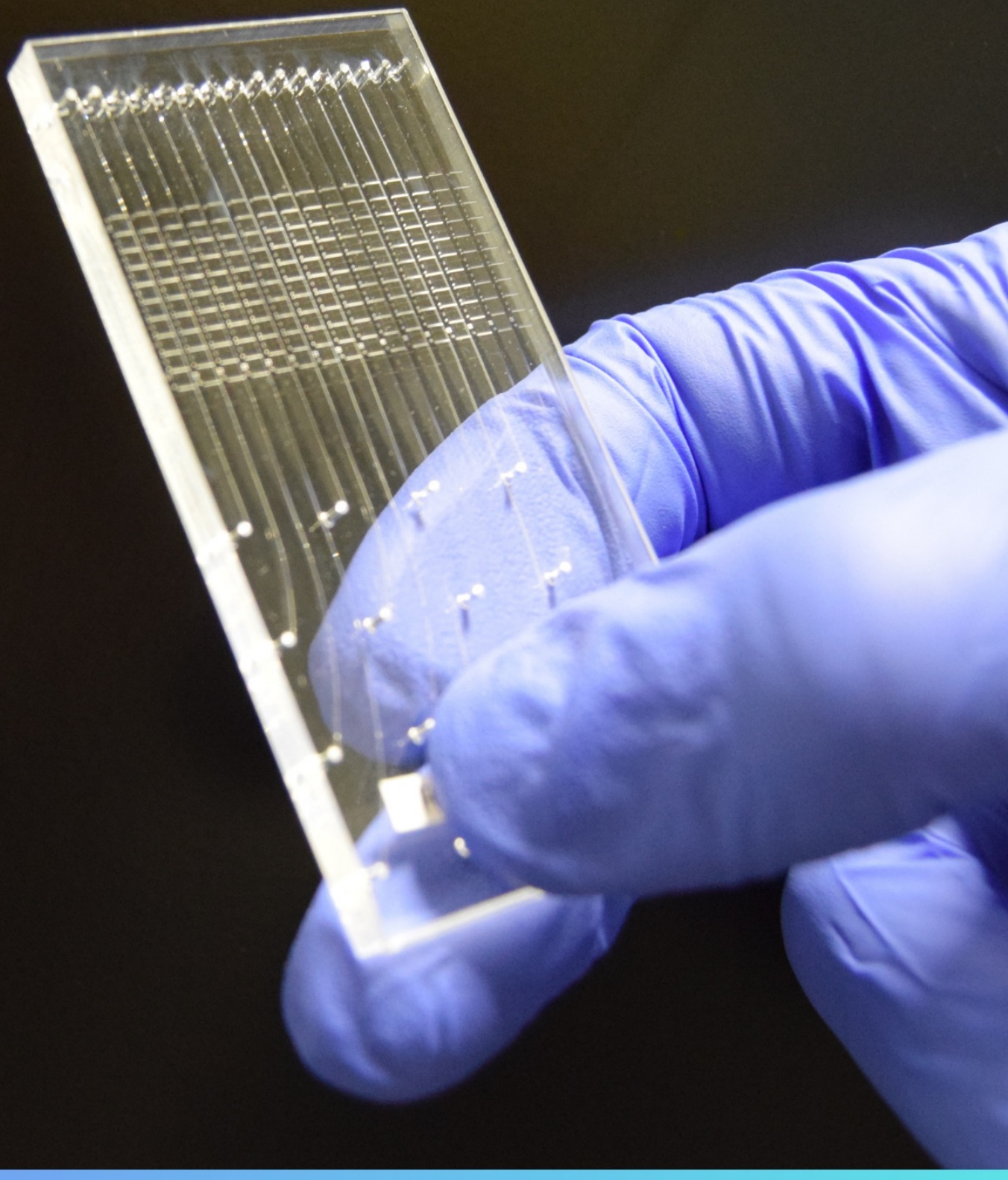
SydLab™ One is the first ent-to-end automated high-content screening system on full organisms with active flow control. By automating the whole micro-organisms experimentation process, SydLab™ One has proven to achieve unprecedented levels of standardization and reproducibility.

FROM BIOASSAY DESIGN UNTIL PHENOTYPE ANALYSIS.
ALL AUTOMATED IN JUST ONE BENCHTOP LABORATORY DEVICE.

WELCOME TO THE NEW ERA OF

EFFICIENT & ETHICAL

BIOLOGICAL TESTING



SYDLAB™

AUMATION OF MANUAL PROTOCOLS

Elimination of manual worm handling, culture, treatment and monitoring. No manual protocols, more time for your research. Faster and better datapoints to top-up your results.

UNIQUE READOUTS ON MICRO-ORGANISMS

Thanks to the elimination of manual protocols, SydLab™ achieves to extract unique readouts unlocking the full potential of *C. elegans* as the powerful model organism that it is.

UNPRECEDENTED SCALABILITY & REPRODUCIBILITY

1 experiment, up to 64 parallel conditions tested with fully automated treatment and analysis. High reproducibility of the analyzed phenotypes, including worms' growth, reproduction and survival rate.

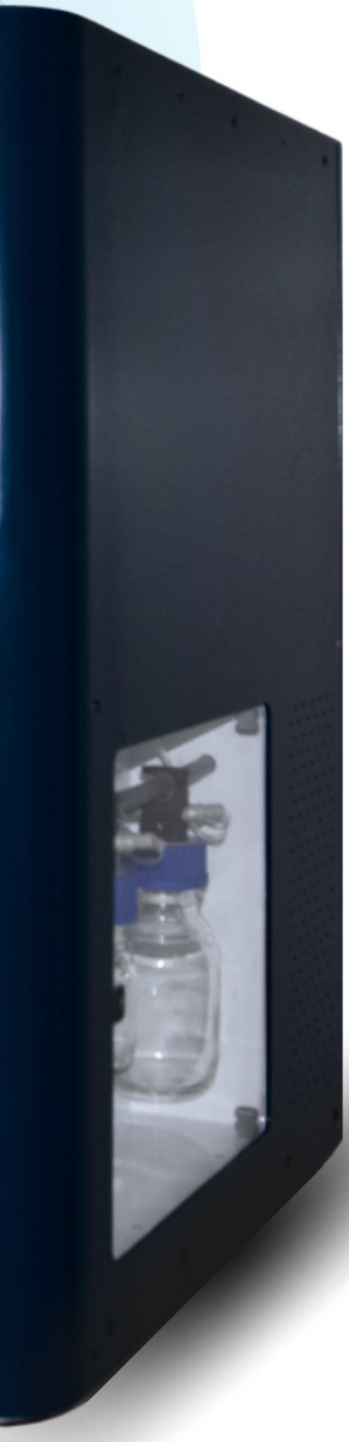
MINIMAL COMPOUND CONSUMPTION

Minimal compound consumption thanks to the unique Nagi's microfluidic approach.

ONE

UNLOCKING MICRO-ORGANISMS TESTING TO ANY LAB

The first ent-to-end automated high-content screening system of drugs, chemicals and other substances on micro-organisms with active flow control.



MICRO-ORGANISMS TESTING MADE EASY

SydLab™ One is an easy-to-design-&-run experiment platform so you can focus on what is truly important: your results.

POWERFUL ORGANISM MODELS FOR POWERFUL RESULTS

Empower your research using the most powerful nature's organism model seamlessly. Introduce the nematode *C. elegans* in your workflow and benefit from whole-organism readouts without animal testing. Bridge the gap between cells and vertebrates.

UNLOCKING UNIQUE DATAPOINTS

Achieve unprecedented levels of standardization and reproducibility by automating end-to-end micro-organisms experimentation with SydLab™ One.

POWERED BY NAGI™ PATENTED ORGANISM-ON-CHIP TECHNOLOGY

ADVANCED ROBOTIC AND IMAGING TECHNOLOGY

Tailor the image and video acquisition frequency at your needs. Combine brightfield and fluorescence imaging, as well as video.

INCUBATOR

Active temperature control and programmable cycles in the 10-40°C range.

MICROFLUIDIC TECHNOLOGY

Minimal compound consumption thanks to the unique Nagi's microfluidic approach.

OPTIMIZED LOADING TRAY

Capacity to plug 4 Nagi™ Chips (64 independent conditions in parallel). Plug&Play system with reservoir tray included for easy worm, bacteria and compounds loading.

SCAN ME

AI-BASED DATA ANALYSIS SOFTWARE

Cutting-edge statistical analysis and data interpretation algorithms, customizable analyses and phenotypic fingerprinting.

DESIGN YOUR EXPERIMENT SEAMLESSLY

Introduce culture conditions, treatment cycles and acquisition rates of images (brightfield and fluorescence) and videos.

DATA PROCESSING PIPELINE

Automated time-resolved high-content data extraction (20+ features / time-point / organism) based on state-of-the-art AI.

OBTAIN YOUR FULL ORGANISM DATA

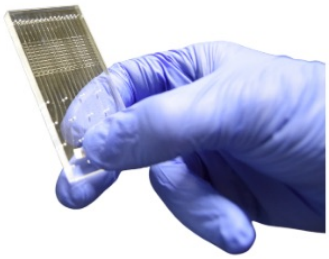
IN JUST 4 SIMPLE STEPS

Get quick and accurate data about the safety and efficacy of your compounds on living systems without the use of vertebrates. Make predictions about their potential impact on animal and human health fast and seamlessly.

1 **DESIGN YOUR EXPERIMENT EASILY ON SYDLAB™ EXPERIMENT LAUNCHER.**

2 **PLUG THE 4 NAGI™ CHIPS* IN YOUR SYDLAB™ ONE LABORATORY PLATFORM.**

*THE NAGI™ CHIPS ARE INCLUDED IN YOUR NAGI™ ASSAY KIT.



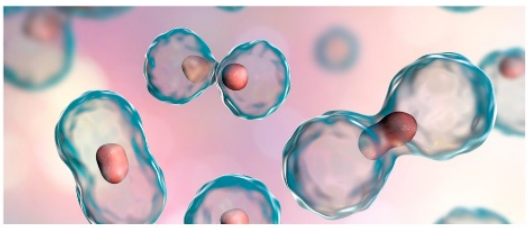
3 **LOAD YOUR WORM STRAINS, THEIR FOOD (BACTERIA) & YOUR COMPOUNDS OF INTEREST.**

4 **YOUR EXPERIMENT WILL RUN AUTOMATICALLY. TIME TO CHECK ON REAL-TIME YOUR DATAPOINTS ON SYDLAB™ ANALYZER SUITE.**

REQUEST A PERSONALIZED DEMO

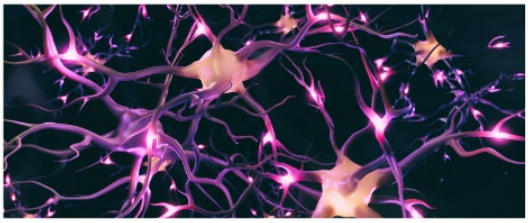
YOU ARE 4 SIMPLE STEPS AWAY FROM

UNLIMITED APPLICATIONS

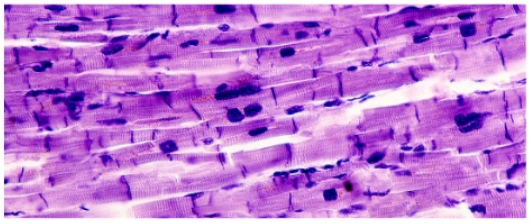


REPRODUCTIVE TOXICOLOGY

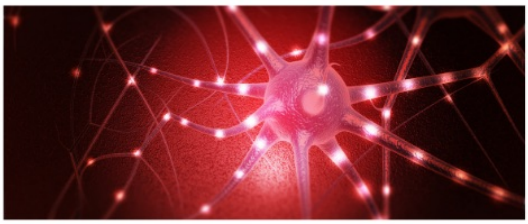
DEVELOPMENTAL TOXICOLOGY



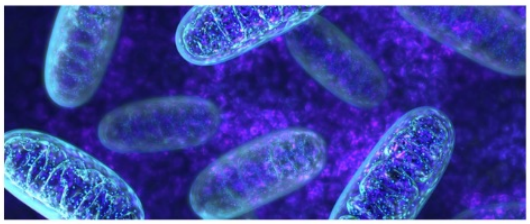
NEUROTOXICITY ASSESSMENT



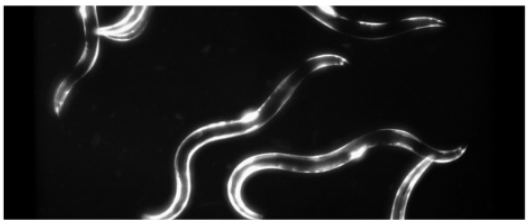
MUSCULAR TOXICITY



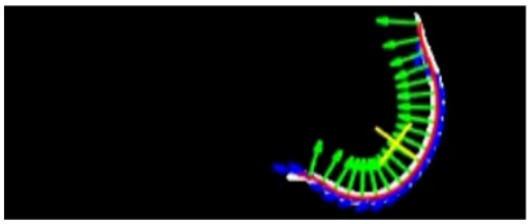
MOLECULAR NEURODEGENERATION



LIFESPAN & HEALTHSPAN ASSAYS



WORM DISEASE MODELS



MOTILITY BEHAVIOR ASSAYS

SCAN ME

DOWNLOAD ALL THE APPLICATION NOTES SCANNING THE QR CODE AND DISCOVER THE POWERFUL DATA OBTAINED BY SYDLAB™ ONE.

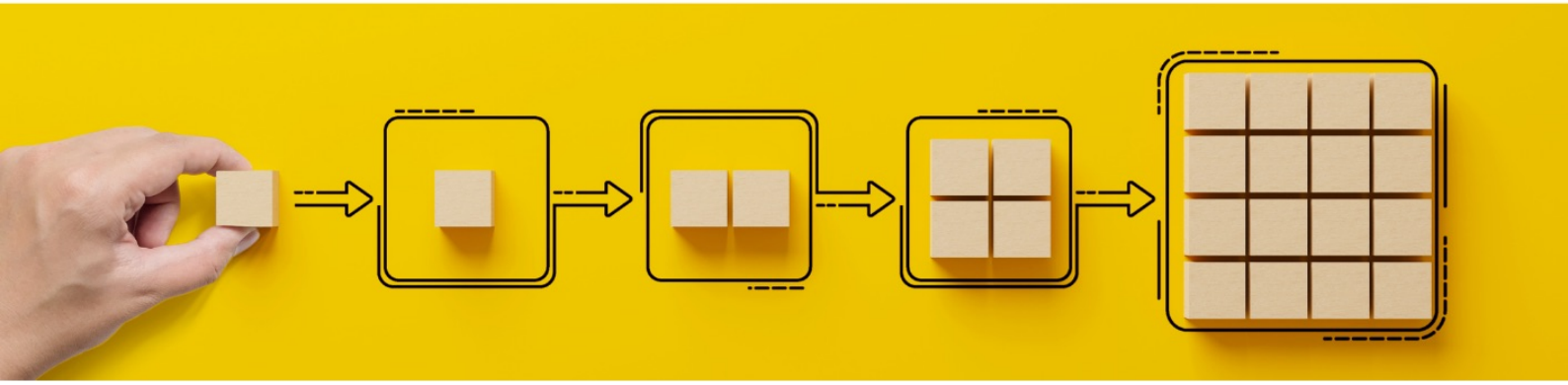
GET TO KNOW

SYDLAB™

ANALYZER SUITE

The powerful software solution to make your SydLab™ One experience easy and unique.

- User-optimized interface to design, run and monitor experiments on SydLab™ One.
- Image processing by our trained machine learning (ML) software for object recognition.
- Real-time data visualization tool.
- Rapid toxicity identification, ranking of toxic or effective compounds and their concentrations, and aggregates generator.

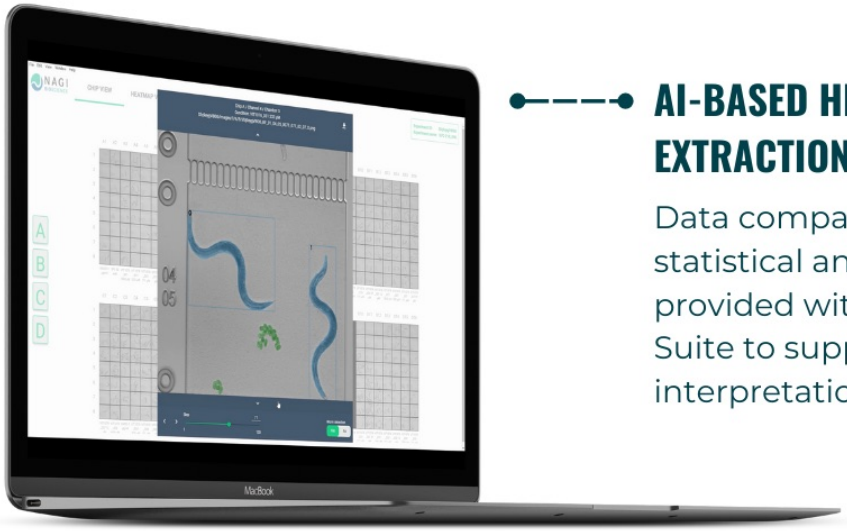


SYDLAB™ EXPERIMENT LAUNCHER

The user-friendly graphical interface will guide you throughout all the phases of design, execution and monitoring of your experiment.

MONITOR YOUR EXPERIMENT ON A REAL-TIME BASIS

Real-time raw data extraction on the cloud and computer vision algorithms are employed to extract multi-phenotypic information from the images and videos generated by SydLab™ One during your experiment.



AI-BASED HIGH-CONTENT DATA EXTRACTION & ANALYSIS ALGORITHM

Data comparison, clustering and statistical analysis modules are provided with the SydLab™ Analyzer Suite to support you in the data interpretation process.

INSIDE THE

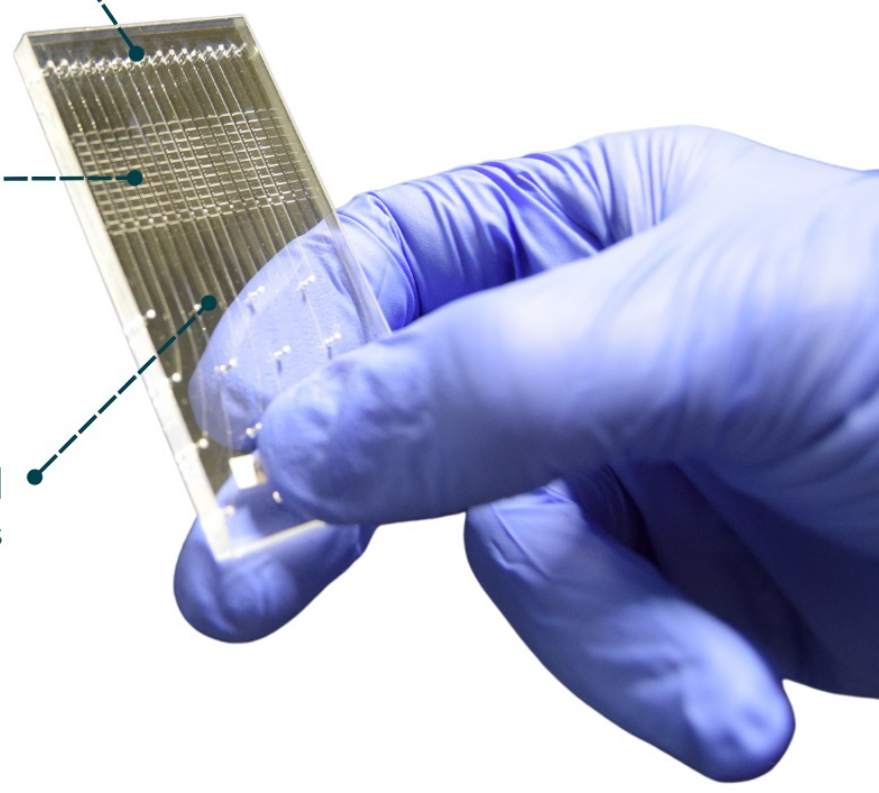
NAGI™ CHIPS

Relying on the patented WMW technology, the Nagi™ Chips are the perfect plug&play system to start an experiment on SydLab™ One.
No more messy plates. No more manual handling. Unlock the full potential of micro-organisms with the first microfluidic Organism-on-Chip technology. 64 parallel conditions, hundreds of readouts, infinite possibilities.

PLUG&PLAY
chip-to-device connectivity for fully automated fluidic operations

16 FLUIDIC LINES
enabling tests of 16 independent biological conditions on separate *C.elegans* populations in parallel

PATENTED MICROFLUIDIC DESIGN
relying on passive hydrodynamics



NAGI™ KIT L1-SYNC

Start your experiment with a synchronized population of *C. elegans* worms at L1 stage (new-born nematodes) and extract readouts until they reach adulthood.

IDEAL FOR: DEVELOPMENT & REPRODUCTIVE TOXICITY (DART) STUDIES

Bio-kit with all the components needed to successfully launch a full one-week experiment.

NAGI™ KIT L4-SYNC

Start your experiment with a synchronized population of *C. elegans* worms at L4 stage (adult nematodes) and extract readouts during their full lifespan.

IDEAL FOR: ADULT HEALTHSPAN AND LIFESPAN (AGING STUDIES AND COMPOUND EFFICACY)

Bio-kit with all the components needed to successfully launch one full lifespan experiment (approximately 1 month duration).

SYDLAB™ ONE COMMUNITY

GET IN TOUCH WITH A NAGI EXPERT

SHAPING THE

FUTURE OF BIOLOGICAL TESTING

Nagi Bioscience develops and provides cutting-edge laboratory equipment for fully automated high-content screening of substances on micro-organisms as a 3R alternative to animal testing.

With our mission of enabling *in vivo* testing at the *in vitro* scale in mind, we strive to accelerate the transition to a new era of biological testing: scalable, efficient and ethical.

NAGI BIOSCIENCE IS THE STORY OF PEOPLE SEEKING TO ACHIEVE SOMETHING THAT HAD NEVER BEEN SEEN BEFORE: A MICROFLUIDIC TECHNOLOGY THAT COULD UNLOCK THE POTENTIAL OF MICRO-ORGANISMS TO SPEED UP RESEARCH WHILE DECREASING THE NUMBER OF ANIMALS USED IN SCIENCE.

TODAY, THE ONCE DREAMT "ORGANISM-ON-CHIP" FIELD IS A REALITY THAT OUR TEAM HAS BEEN PIONEERING OVER THE LAST DECADE TO BRIDGE THE GAP BETWEEN CELLS AND VERTEBRATES EFFICIENTLY.

JOIN THE NEW ERA OF BIOLOGICAL TESTING.
EMPOWER YOUR RESEARCH WITH NAGI™ NEXTGEN ALTERNATIVE IN VIVO TESTING TECHNOLOGIES

APPLICATION NOTE: AUTOMATION OF AGING STUDIES USING C. ELEGANS ON SYDLAB™ ONE

SCAN ME

APPLICATION NOTE: AUTOMATION OF EARLY TOXICITY PROFILING USING C. ELEGANS NEMATODES ON SYDLAB™ ONE

SCAN ME

REQUEST A TECHNICAL NOTE AND/OR A QUOTE SCANNING THE QR CODE

SCAN ME

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