

Overseas third-party research institutes verify N-NOSE nematode cancer screening technology, confirming reproducibility

Several overseas research institutes have conducted “replication studies” to verify the technology and reproducibility of N-NOSE, the world’s first biological diagnosis technology, which is owned by HIROTSU BIO SCIENCE INC. (headquartered in Chiyoda-ku, Tokyo; President & CEO: Takaaki Hirotsu).

The research confirmed that the technology is reproducible as a method of identifying cancer with great accuracy, and results have been published in academic journals (see attached materials).

The publication of these results is further proof, from several third-party research teams, that our nematode cancer screening technology meets a high standard of scientific reliability.

***C. elegans*-based chemosensation strategy for the early detection of cancer metabolites in urine samples**

Lanza, et al., Scientific Reports, 2021

***A Caenorhabditis elegans* Behavioral Assay Distinguishes Early Stage Prostate Cancer Patient Urine from Controls**

Thompson, et al., Biology Open, 2021

As we continue to lead the world in the invention of biological screening technology, we will actively collaborate with partner research organizations to expand N-NOSE globally.

We also plan to announce our success in developing a “cancer type” identification test, a next-generation N-NOSE screening technology.

■ About N-NOSE nematode cancer screening

N-NOSE is the world's first primary cancer screening test that utilizes "nematodes," microorganisms that are highly sensitive to the odor of cancer in human urine. Clinical research has shown that nematodes even respond to early-stage cancer (stages 0 and I), which is difficult to detect with conventional screening methods.

The fact that cancer risk can be assessed in one test, regardless of the location in the body,* is another strength that sets N-NOSE apart from other tests.

* Types of cancer that nematodes are known to respond to: stomach, colorectal, lung, breast, pancreatic, liver, prostate, uterine, esophageal, gall bladder, bile duct, kidney, bladder, ovarian, oral/pharyngeal—15 types of cancer (as of September 2019)

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Incorporated August 2016

Business Overview Biological Diagnostics Research:

Research, development, and sale of cancer diagnostic test utilizing *C. elegans* and *C. elegans* olfactory sensors

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