

March 11<sup>th</sup>, 2022  
HIROTSU BIO SCIENCE INC.  
Sojitz Corporation

**HIROTSU BIO SCIENCE and Sojitz Form Capital and Business Tie-up**  
**– Expanding Primary Cancer Screening Test N-NOSE® to Global Markets –**

HIROTSU BIO SCIENCE INC. (Representative Director: Takaaki Hirotsu; “HIROTSU BIO SCIENCE”) and Sojitz Corporation (Representative Director: Masayoshi Fujimoto; “Sojitz”) have concluded a capital and business tie-up with the aim of pursuing mutual collaboration for the global expansion of primary cancer screening test N-Nose, and Sojitz has acquired stake in HIROTSU BIO SCIENCE under this agreement.

In Japan, cancer has been the leading cause of death for over 30 years after 1981. According to the latest cancer statistics projections, the number of cancer-related deaths is estimated to increase over the next 10 years. \*1 Early cancer detection is therefore an essential measure leading to early treatment and higher survival rates.

HIROTSU BIO SCIENCE’s primary cancer screening test N-NOSE was introduced in 2020 for practical use in Japan. N-NOSE utilizes nematode microorganisms highly sensitive to the scent of cancer in human urine, and these tests can be conducted from a single drop of urine. This simple, painless screening test utilizes nematode capabilities and has been confirmed to be effective in detecting even early stage cancers. Over 150,000 people have been screened using N-NOSE to date, and HIROTSU BIO SCIENCE and Sojitz are working to promote the N-NOSE screening test in Japan and preparing to introduce the test overseas.

According to the International Agency for Research on Cancer (IARC), an external research agency of the World Health Organization (WHO), the number of cancer patients is projected to increase globally. \*2 HIROTSU BIO SCIENCE will introduce its N-NOSE screening test to global markets together with Sojitz which has a strong global network.



In April 2017, Sojitz consolidated its healthcare related business internally and established a new specialized team to strengthen its projects in the healthcare sector. Sojitz is currently expanding its hospital PPP\*<sup>3</sup> business and clinic chain business primarily in Turkey and the Asia and Oceania region.

HIROTSU BIO SCIENCE and Sojitz will leverage their assets, including their respective technologies and networks, to expand mutual opportunities and contribute to the realization of a healthy and prosperous society.

\*1: National Cancer Center website

“4. Cancer Prediction (2015-2039)”

([https://ganjoho.jp/reg\\_stat/statistics/data/dl/en.html](https://ganjoho.jp/reg_stat/statistics/data/dl/en.html))

\*2: International Agency for Research on Cancer website

“Cancer Tomorrow”

(<https://gco.iarc.fr/>)

\*3: PPP: Public Private Partnership

## [Related Information]

### N-NOSE nematode cancer screening

N-NOSE is a primary cancer screening test that utilizes nematodes microorganisms that are highly sensitive to the odor of cancer in human urine. This simple, pain-free test which utilizes the capabilities of microorganisms is characterized by the following six features.

- 1) Simple and convenient: Screening only requires a small urine sample similar to a medical checkup
- 2) Low-cost: Screening test fees can be provided at a low cost as nematode breeding is inexpensive.
- 3) High accuracy: Screening test sensitivity is 86.3% (\*4)
- 4) Early detection: Nematodes respond to early stage cancers (stages 0 and 1)
- 5) Noninvasive: This painless screening test only requires a urine sample
- 6) Comprehensive full-body screening: Cancer risk can be assessed in one test for the full body (\*5)

\*4: Data sources: Japanese Association for Cancer Prevention (June 2019), Japan Society of Ningen Dock (July 2019), Japan Association for Cancer Detection and Diagnosis (August 2019)

\*5: Nematodes respond to the following 15 types of cancers: Stomach, colorectal, lung, breast, pancreatic, liver, prostate, uterine, esophageal, gall bladder, bile duct, kidney, bladder, ovarian, oral/pharyngeal

## [Company Overview – Sojitz Corporation]

Established	April 2003
Location	1-1, Uchisaiwaicho 2-chome, Chiyoda-ku, Tokyo
Representative Director	Masayoshi Fujimoto, President & CEO
Main Business	General trading company
Website	<a href="https://www.sojitz.com/en/">https://www.sojitz.com/en/</a>

## [Company Overview – HIROTSU BIO SCIENCE INC.]

Established	August 2016
Location	4-1 Kioicho Chiyoda-ku, Tokyo New Otani Garden Court
Representative Director	Takaaki Hirotsu, President & CEO
Main Business	Research, development, and sale of cancer diagnostic test utilizing <i>C. elegans</i> and <i>C. elegans</i> olfactory sensors
Website	<a href="https://hbio.jp/en/">https://hbio.jp/en/</a>