

September 29, 2021

Impact Investment in PaMeLa Co., Ltd.

- Contributing to Improving Patients' Quality of Life through Development of Medical Device That "Visualizes" Pain Using Brain Waves -

The Dai-ichi Life Insurance Company, Limited (the "Company"; President and Representative Director: Seiji Inagaki) has invested approximately JPY 100 million in PaMeLa Co., Ltd. ("PaMeLa"; President and Representative Director: Arata Hasegawa), a Japanese startup that develops and provides a medical device that scientifically measures pain using brain waves. This impact investment¹ is a part of the Company's ESG investments.

- A startup that has spun off from Osaka University and is developing a medical device that can objectively measure and evaluate pain, a subjective sensation
- The technology developed by PaMeLa analyzes brain waves using artificial intelligence to quantify pain, thereby making it possible to conduct pain evaluations with universal indicators, even for different patients
- Objectively evaluating pain makes it possible to properly administer analgesics, which is anticipated to contribute to an improvement in patients' quality of life. Examples of such improvement include lessening the number of patients with chronic pain whose pain endures due to the underdosage of analgesics, the inhibition of symptoms of addiction resulting from the overdosage of analgesics, and the like.



[Social Impact]

Improvement of patients' quality of life

The development and supply of a medical device which can objectively measure and evaluate pain makes it possible to appropriately administer analgesics and the like, thereby realizing an improvement in patients' quality of life



Through this investment, the Company not only expects a high level of returns, but will provide capital support for the initiatives of PaMeLa, which are expected to improve patients' quality of life (social impact). Further, the Company will continuously monitor the progress of these initiatives.

As a responsible institutional investor, the Company will continue to actively engage in ESG investment to realize a sustainable society as well as to improve its investment returns through sophisticated and diverse investment methods.

¹Impact investment is an investment method where an investor makes investment decisions with the intent to gain investment returns and generate social impact (e.g., structural change in society).

Mr. Arata Hasegawa, President and Representative Director of PaMeLa Co., Ltd., made the following remarks:



We are a university spinoff startup engaged in medical device development, formed in order to socially implement the research results of Specially Appointed Professor Aya Nakae of Osaka University's Graduate School of Frontier Biosciences. Just as there are clinical thermometers for body temperature and sphygmomanometers for blood pressure, by providing a method for measuring pain in the form of a medical device, we are striving toward a society in which measuring pain is an everyday occurrence. The current pain evaluation method used in medical care is a subjective method called VAS (visual analogue scale), which is conducted via self-reporting. In contrast, we use an objective method which quantifies pain by using a small electroencephalograph to measure brain waves and using AI to analyze the quantity of pain characteristics. The first application involved usage as a medical device in pain management following surgery; and we have set our sights on home usage in the future. We will contribute to improving the quality of life of people suffering from pain by developing a medical device which contributes to appropriate pain treatment.

[Company Outline]

Trade Name	PaMeLa Co., Ltd.
Head Office	E601 Osaka University Biosystems Building 6F, 1-3 Yamadaoka, Suita, Osaka 565-0871, JAPAN
Representative	Arata Hasegawa, President and Representative Director
Established	February 2016
Business Description	Accumulation of clinical research data regarding analgesic effects and product development of electroencephalograph which automatically displays patients' pain

Dai-ichi Life's Impact Investment History

Headline	Release Date	URL
Dai-ichi Life to Engage in Impact Investment - First Impact Investment in Gojo & Company, Inc. which provides support for micro-finance business -	Oct. 23, 2017	https://www.dai-ichi-life.co.jp/english/news_release/2017/pdf/index_012.pdf
Dai-ichi Life to Invest in Spiber Inc. - Second Impact Investment through Support for Development of New-Generation BioMaterials -	Oct. 23, 2017	https://www.dai-ichi-life.co.jp/company/news/pdf/2017_044.pdf
Dai-ichi Life to Investment in CureApp, Inc. - Third Impact Investment through Support for Treatment Applications -	Feb. 26, 2018	https://www.dai-ichi-life.co.jp/english/news_release/2017/pdf/index_018.pdf
Dai-ichi Life to Impact Invest in CROWD CREDIT, Inc. - Energize Business Activities in Developing Countries to Alleviate the Global SupplyDemand Gap for Funds -	Apr. 5, 2018	https://www.dai-ichi-life.co.jp/company/news/pdf/2018_002.pdf
Dai-ichi Life to Impact Invest in SUSMED, Inc. - Promote the Widespread Adoption of Non-Drug Therapies through Insomnia Therapy Apps -	June 4, 2018	https://www.dai-ichi-life.co.jp/company/news/pdf/2018_008.pdf
Dai-ichi Life to Impact Investment in MELTIN MMI - Mitigating Accidents Caused by Work in Hazardous Environments by MELTIN's Avatar Robots -	Oct. 17, 2018	https://www.dai-ichi-life.co.jp/english/news_release/2018/pdf/index_004.pdf

Dai-ichi Life to Impact Investment in MOLCURE Inc. - Shortening of pharmaceutical development through the world's first antibody discovery platform utilizing AI -	Nov. 27, 2018	https://www.dai-ichi-life.co.jp/english/news_release/2018/pdf/index_007.pdf
Dai-ichi Life to Impact Invest in QD Laser - World's First Eyewear that Employs State-of-the-Art Laser Technology Improves Quality of Life for Low-Vision Patients -	Dec. 12, 2018	https://www.dai-ichi-life.co.jp/english/news_release/2018/pdf/index_010.pdf
Dai-ichi Life to Impact Invest in Challenergy Inc. - Helping to reduce CO ₂ emissions using the world's first wind turbine capable of generating electricity even in typhoons -	Feb. 28, 2019	https://www.dai-ichi-life.co.jp/english/news_release/2018/pdf/index_012.pdf
Dai-ichi Life to Impact Invest in Venture Fund managed by Energy & Environment Investment, Inc. - Japan's Only Independent Venture Capital Focused on the Energy and Resource Related Sectors -	Mar. 20, 2019	https://www.dai-ichi-life.co.jp/english/news_release/2018/pdf/index_015.pdf
Impact Investment in CureApp and NeuroTrack - Extending healthy life expectancy and improve quality of life through synergies between investments and life insurance -	July 5, 2019	https://www.dai-ichi-life.co.jp/english/news_release/2019/pdf/index_008.pdf
Dai-ichi Life to Impact Invest in Integral Geometry Science - Contributing to a reduction in breast cancer deaths through the world's first high precision breast cancer visualizing system -	Sep. 13, 2019	https://www.dai-ichi-life.co.jp/english/news_release/2019/pdf/index_015.pdf
Dai-ichi Life to Impact Invest in UniFa - Contributing to Resolving the Lengthy Daycare Waiting List Problem Caused by a Shortage of Nursery Care Workers by Introducing IoT and AI to Daycare Operations -	Sep. 27, 2019	https://www.dai-ichi-life.co.jp/english/news_release/2019/pdf/index_014.pdf
Dai-ichi Life to Impact Invest in Life is Tech, Inc. - Contributing to Solving the IT Talent Shortage with IT and Programming Education Services -	Nov. 15, 2019	https://www.dai-ichi-life.co.jp/english/news_release/2019/pdf/index_018.pdf
Dai-ichi Life to Impact Invest in World's First Anti-Smoking Social Impact Bond - Support Social Impact Creator and Investment Recipient CureApp, through Investment in Anti-Smoking Project -	Nov. 29, 2019	https://www.dai-ichi-life.co.jp/english/news_release/2019/pdf/index_021.pdf
Dai-ichi Life to Impact Invest in Modulus Discovery, Inc. - Contributing to Realizing Accessible Healthcare for All by Cutting Development Timelines and Costs of Pharmaceuticals -	May 13, 2020	https://www.dai-ichi-life.co.jp/english/news_release/2020/pdf/index_003.pdf
Impact Investment in Metcela Inc. - Contributing to Extending Healthy Life Expectancy of Patients with Heart Failure through the Development and Provision of a New Treatment -	Jan. 4, 2021	https://www.dai-ichi-life.co.jp/english/news_release/2020/pdf/index_017.pdf
Impact Investment in Sharing Energy Co., Ltd. - Contributing to CO ₂ emission reduction through distributed renewable energy power generation for residential solar power -	Feb. 15, 2021	https://www.dai-ichi-life.co.jp/english/news_release/2020/pdf/index_021.pdf
Impact Investment in GITAI Japan - Contributing to Economic Growth through Promotion of Space Development by Means of R&D for Space Worker Robots -	Mar. 1, 2021	https://www.dai-ichi-life.co.jp/english/news_release/2020/pdf/index_024.pdf
Impact Investment in Noile-Immune Biotech, Inc. - Extending Healthy Life Expectancy through Development and Provision of Next-Generation Cancer Immunotherapy -	Mar. 22, 2021	https://www.dai-ichi-life.co.jp/english/news_release/2020/pdf/index_028.pdf
Investment in Climate Infrastructure Fund for Emerging Countries - Contributing to Resolving Climate Change Challenges Through Joint Public/Private Support for Development of a Low Carbon Economy -	Jul. 8, 2021	https://www.dai-ichi-life.co.jp/english/news_release/2021/pdf/index_003.pdf
Impact Investment in RIVERFIELD Inc. - Contributing to Improving Patients' Quality of Life by Lessening Burden on Mind and Body Through Usage of Surgery Support Robots -	Jul. 30, 2021	https://www.dai-ichi-life.co.jp/english/news_release/2021/pdf/index_005.pdf