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## **Chugai and Biofourmis Partner to Develop an Objective Assessment of Pain Using Digital Technology**

- Chugai and Biofourmis are partnering to develop a digital solution leveraging Biofourmis' Biovitals® platform for pain management in patients with endometriosis
- A non-interventional study will be conducted with endometriosis patients to validate the novel tool in real-life conditions

**TOKYO, JAPAN and BOSTON, USA, July 22 and 21, 2020** – [Chugai Pharmaceutical Co., Ltd.](#) (TOKYO: 4519) and [Biofourmis](#), a Boston-based digital therapeutics company, announced that they have partnered to develop a digital solution for the objective assessment of pain associated with endometriosis.

Pain is one of the main symptoms of endometriosis and therapeutically important. The severity of pain may vary from day to day, and it can be a major issue that affects patients' quality of life. However, because pain can be a subjective symptom, patients often have difficulty quantifying their level of pain when communicating with healthcare professionals and family members.

The partnership leverages Biofourmis' Biovitals® platform to co-develop a novel digital technology for the objective assessment of pain using biosensors and artificial intelligence (AI)-based algorithms. The solution will be validated in a global, multi-center observational study enrolling more than 120 endometriosis patients.

Biofourmis has demonstrated its ability to discover, develop and clinically validate multivariate digital biomarkers across multiple therapeutic areas. The digital solution for managing patients with endometriosis in an ambulatory setting will include a wearable, clinical-grade biosensor to capture physiology biomarkers and a patient-facing mobile app to monitor symptoms, with a gamification engine for patient engagement. The AI-based technology will provide a continuous quantification of pain by applying analytics to physiology biomarkers. The platform will also include a clinician-facing web dashboard for remote review and intervention.

“Through the partnership with Biofourmis, a leading company in research, development and commercialization of digital therapeutics, Chugai will set out to objectively assess pain associated with endometriosis and better understand its pathology,” said Satoko Shisai, Chugai's Vice President, Head of Digital & IT Supervisory Division. “Through this partnership, Chugai is demonstrating its commitment to applying the most advanced digital technologies to better understand the real-life needs of patients and to develop innovative solutions for society, as outlined in the [CHUGAI DIGITAL VISION 2030](#).”

Kuldeep Singh Rajput, CEO and founder of Biofourmis, said: “Chugai aims to become a top innovator by utilizing digital technologies, and we are thrilled to partner with them.” He added: “This unique collaboration with Chugai is another indicator of the growing consensus in the healthcare industry that combining digital solutions with therapeutic developments—from discovery to patient care—is a powerful way to augment efficiency. Digital solutions can deliver faster, more reliable insights to clinicians to aid interventions, while increasing engagement and improving outcomes for patients and lowering healthcare costs for all stakeholders.”

### **About Endometriosis**<sup>1</sup>

Affecting one out of 10 women in their 20s to 40s, endometriosis is the repeated proliferation and shedding of endometrial tissue outside the uterus, accompanied by dysmenorrhea (pain with menstruation) and chronic lower abdominal pain. It is also a cause of infertility. The disease can interfere with daily life, including absences from work or school, as sufferers find it difficult to do more than lie still when symptoms are severe. The only existing medications are hormonal agents. Moreover, if the pain cannot be controlled by drugs, the only treatment is surgical removal of the endometriotic tissue. Unfortunately, many patients experience a recurrence several years after surgery, making this a disease that has a high level of unmet medical need.

[Reference]

1. ESHRE guideline: management of women with endometriosis. Dunselman GA, et al. *Hum Reprod.* 2014.

### **About Chugai**

Chugai Pharmaceutical is one of Japan’s leading research-based pharmaceutical companies with strengths in biotechnology products. Chugai, based in Tokyo, specializes in prescription pharmaceuticals and is listed on the 1st section of the Tokyo Stock Exchange. As an important member of the Roche Group, Chugai is actively involved in R&D activities in Japan and abroad. Specifically, Chugai is working to develop innovative products which may satisfy the unmet medical needs. Additional information is available at <https://www.chugai-pharm.co.jp/english/>.

### **About Biofourmis**

Biofourmis—a fast-growing global leader in digital therapeutics that powers personalized predictive care—discovers, develops and delivers clinically validated software-based therapeutics to provide better outcomes for patients, advanced tools for clinicians to deliver personalized care, technology to demonstrate the value of and complement pharmacotherapy, and cost-effective solutions for payers. Biofourmis has built Biovitals<sup>®</sup>, a highly sophisticated personalized AI-powered health analytics platform that predicts clinical exacerbation in advance of a critical event, which is the backbone of their digital therapeutics product pipeline across multiple therapeutic areas—including heart failure, oncology, infectious disease (i.e., COVID-19), chronic pain, acute coronary syndrome and COPD. For more information, visit: [www.biofourmis.com](http://www.biofourmis.com).

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