

Chugai Pharmaceutical Co., Ltd.
Biofourmis

Chugai and Biofourmis Enter into New Partnership Focused on Data-Driven Virtual Care for Endometriosis-Related Pain

- The companies have entered a partnership agreement to develop new digital solutions for the objective assessment and management of pain associated with endometriosis, which they have been jointly developing since July 2020
- The digital solutions will be rolled out for real-world use with support from Biofourmis' virtual specialty care services in the U.S., utilizing Chugai's R&D data. Chugai aims to utilize accumulated data from the Biofourmis's virtual care for R&D and post-marketing in endometriosis disease area

TOKYO AND BOSTON, March 2, 2023—[Chugai Pharmaceutical Co., Ltd.](#) (TOKYO: 4519) and [Biofourmis](#), a global leader in technology-enabled care delivery, announced that they have entered into a new partnership agreement for the continued development and real-world use of digital solutions to objectively measure pain in patients with endometriosis. Endometriosis affects approximately 10%¹ of all women of reproductive age and 70% of women with chronic pelvic pain, resulting in a reduced quality of life.²

The two companies have been collaborating on developing a new objective assessment of pain in patients with endometriosis using a biosensor and an AI-based algorithm utilizing Biofourmis' Biovitals[®] platform since July 2020. Since pain is a subjective symptom, it can be difficult to accurately convey to family members and healthcare professionals the degree of pain patients experience. In addition, access to early diagnosis and treatment of endometriosis is inadequate.

Further advances in pain quantification technologies in endometriosis patients could lead to a better understanding of the pathology, to guide appropriate medical care and advance of clinical trials. By providing new digital solutions, Chugai aims to further enhance its value propositions for endometriosis patients.

The collaboration will focus on:

- Continued development of objective measurement technology for pain associated with endometriosis
- Advancing progress on a technology platform for a real-world data driven pain measurement and supporting patient care
- Virtual specialty care delivery by Biofourmis for endometriosis patients in the U.S.
- Utilization of data collected during research and development and post-marketing of Chugai's investigational product for the treatment of endometriosis pain, AMY109

“Since 2020, we have partnered with Biofourmis, a global leader in technology-enabled remote care and personalized therapies for patients, to understand the pathophysiology of endometriosis through the joint development of an objective evaluation of pain associated with the disease,” said Chugai’s President and CEO, Dr. Osamu Okuda. “Through this new partnership, with the aim of further advancement, we will work toward realizing patient-centric healthcare. In addition, we will strive to deliver new value to patients as part of the Insight Business outlined in our growth strategy, TOP I 2030.”

“Chugai and Biofourmis have already seen highly promising results in our work together to objectively quantify pain by identifying digital biomarkers in patients with endometriosis,” said Kuldeep Singh Rajput, CEO and founder of Biofourmis. “Expanding this collaboration from research and development to real-world use demonstrates the scalability and flexibility of Biofourmis’ end-to-end platform and solutions for both drug development and healthcare delivery. Our focus is on solving the biggest pain points in care delivery and pharma R&D, and this patient-centered collaboration with Chugai is a leading example.”

[Reference Information]

Chugai and Biofourmis Partner to Develop an Objective Assessment of Pain Using Digital Technology
(Press Release on July 22, 2020)

https://www.chugai-pharm.co.jp/english/news/detail/20200722113000_744.html

About Endometriosis^{1,3}

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 standard treatment is care with hormone-related drugs, and if the pain cannot be controlled with the drugs, the only treatment is the surgical removal of the endometriotic tissue.

Unfortunately, many patients experience recurrences within several years after surgery, making this a disease with a high level of unmet medical needs. Endometriosis is caused by inflammation and fibrosis. One of the cytokines, IL-8, is thought to be associated with the progression of endometriosis.

About Chugai

Chugai Pharmaceutical Co., Ltd., headquartered in Tokyo, is a research-based pharmaceutical company with world-class drug discovery capabilities, including proprietary antibody engineering technologies. Chugai is committed to creating innovative pharmaceutical products that may satisfy unmet medical needs. Chugai is listed on the Prime Market of the Tokyo Stock Exchange. While maintaining autonomy and management independence, Chugai is an important member of the Roche Group. Additional information is available at <https://www.chugai-pharm.co.jp/english/>.

About Biofourmis

Biofourmis brings the right care to every person, no matter where they are. The company's AI-driven solution collects and analyzes patient data in real time and identifies shifts that require proactive interventions. This vital innovation provides people everywhere with connected access to hospital-level

services, virtual provider networks for remote care, and life-changing clinical trials—all without leaving their homes. Trusted by leading health systems, payers, biopharma companies and patients alike, Biofourmis' connected platform improves patient outcomes, prevents hospital readmissions, accelerates drug development, and closes critical gaps in care—ultimately making science smarter, healthcare simpler, and patients healthier. Biofourmis is a global technology-enabling care delivery company, with headquarters in Boston and key offices in Singapore and India. For more information, visit biofourmis.com and follow Biofourmis on [LinkedIn](#), [Twitter](#) and [YouTube](#).

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[Reference]

1. ESHRE guideline: management of women with endometriosis. Dunselman GA, et al. Hum Reprod. 2014. Available from: <https://pubmed.ncbi.nlm.nih.gov/24435778/> (Internet. Accessed in February 2023)
2. American College of Obstetricians and Gynecology. Management of endometriosis. ACOG Practice bulletin no. 114. Obstet Gynecol 2010;116:225–36. Available from: https://journals.lww.com/greenjournal/Citation/2010/07000/Practice_Bulletin_No_114_Management_of.41.aspx (Internet. Accessed in February 2023)
3. A long-acting anti-IL-8 antibody improves inflammation and fibrosis in endometriosis. Nishimoto-Kakiuchi A et al. Science Translational Medicine. 2023. Available from: <http://www.science.org/doi/10.1126/scitranslmed.abq5858> (Internet. Accessed February 2023)

Media Contacts

Chugai Contacts:

Chugai Pharmaceutical Co., Ltd.
Corporate Communications Dept.
Media Relations Group
+81-3-3273-0881
pr@chugai-pharm.co.jp

Investor Relations Group
+81-3-3273-0554
ir@chugai-pharm.co.jp

Biofourmis Contacts:

Tara Stultz
Amendola Communications for Biofourmis (U.S.)
+1 440.225.9595
tstultz@acmarketingpr.com

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