

June 29th,2022 Aculys Pharma, Inc.

Aculys Pharma initiates collaboration with Ubie with the aim of building a "sleep ecosystem"

- a fact-finding survey of patients with sleep disorders to be conducted as a first step -

Aculys Pharma, Inc. ("Aculys Pharma" Headquarters: Minato-ku, Tokyo, Representative Director and CEO: Kazunari Tsunaba), a company focused on the development and commercialization of new innovative drugs in the fields of neurology and psychiatry, initiated a fact-finding survey about patients with sleep disorders as part of efforts to build a "sleep ecosystem" for solving sleep-related social issues with Ubie, Inc. ("Ubie" Headquarters: Chuo-ku, Tokyo, co-representative directors: Yoshinori Abe and Kenta Kubo).

The impact of sleep-related problems on Japanese society is enormous. There is also a research result that reports presenteeism (decrease in productivity at work due to health problems) and absenteeism (absence due to health problems) due to lack of sleep cause an economic loss of about 3% of GDP, equivalent to about 15 trillion yen. Compared to other countries, sleeping time of Japanese people is shorter due to lack of correct knowledge about stress and sleep. Therefore, even the "National Health Promotion Movement in the twenty first century (Health Japan 21)" promoted by the government picked up sleep as one of the key themes in attempt to raise awareness.

Problems with sleep disorders are also factors that interfere with proper sleep and daytime awakening. It has been reported that delays in appropriate medical intervention for sleep disorders and complications associated with sleep disorders (cardiovascular diseases, depression, etc.) rather increase overall cost including medical care expenditure. In order to improve the patient's QoL (quality of life), life prognosis, productivity, and reduce social loss, it is necessary to detect people suspected to suffer sleep disorders and provide appropriate medical care at early stage.

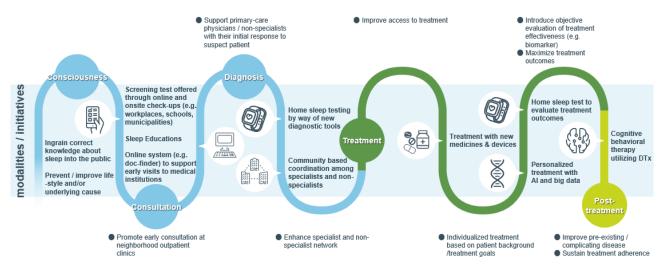
To solve these sleep-related social issues, Aculys Pharma strives to develop a "sleep ecosystem" that provides comprehensive solutions by actively utilizing new technologies and services through working with external partners.

As part of building a "sleep ecosystem", we have started collaboration with Ubie to conduct a fact-finding survey of patients with obstructive sleep apnea syndrome (OSAS) and narcolepsy. It is considered that the actual situation of these illnesses remains to be unknown as many people have not been examined or diagnosed. Patient survey using the platform provided by Ubie enables to identify issues surrounding patients. We aim to utilize the interviews about sleep using Ubie's Al technology and objective sleep assessment using digital device in order to formulate programs to solve problems.

Concept of "Sleep Ecosystem" focused on mitigating the societal burden due to sleep-related problems

Through collaboration and partnerships,

we aim to co-create a transformational holistic mechanism (ecosystem) to transform Japanese society



Aculys Pharma will continue to contribute to Japanese society by identifying medical issues from a social point of view and actively utilize new technologies and external partnerships for resolving social challenges.

- * A general term for sleep disorders such as Insomnia, Sleep Related Breathing Disorders (OSAS, etc.), and Central Disorders of Hypersomnolence (narcolepsy, etc.).
- 1 Hafner M et al. Why Sleep Matters-The Economic Costs of Insufficient Sleep. Cambridge, UK: RAND Europe; 2016
- 2 OECD (2009), Society at a Glance 2009: OECD Social Indicators, OECD Publishing, Paris.
- 3 2019 National Health and Nutrition Survey (Ministry of Health, Labour and Welfare)
- $4\ Lyons\ MM,\ et\ al.\ Global\ burden\ of\ sleep-disordered\ breathing\ and\ its\ implications.\ Respirology\ 2020\ Jul; 25(7):690-702.$
- 5 Skaer TL, Sclar DA. Economic implications of sleep disorders. Pharmacoeconomics 2010;28(11):1015–23.
- 6 Leger D, Bayon V, Laaban JP, et al. Impact of sleep apnea on economics. Sleep Med Rev 2012;16: 455-62.
- 7 Flores NM, Villa KF, Black J, Chervin RD, Witt EA. The humanistic and economic burden of narcolepsy. J Clin Sleep

■ About Ubie, Inc.

Ubie is a Japanese HealthTech Startup founded by a medical doctor and an engineer in 2017. Using AI as its core technology, the company develops and provides AI-powered patient questionnaire which guides patients from symptoms to appropriate medical care, and improves operational efficiency in the medical field. We are promoting the creation of a society in which anyone can access medical care that suits them best.

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Established: May 2017

Representative: Yoshinori Abe Co-Founder/CEO, MD Kenta Kubo Co-Founder/CEO, Software

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■ About Aculys Pharma, Inc.

Aculys Pharma is a biopharmaceutical company focused on the development and commercialization of innovations in the fields of neurology and psychiatry. Its corporate name was created from the philosophy of "Catalyst to Access." Aimed to act as a bridge for innovative medical care in the field of neuropsychiatry, Aculys Pharma develops and commercializes novel pharmaceuticals and provides innovations for better medical care to patients, their families, healthcare professionals, and society.

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