



## Establishment of a Joint Venture Company with Apnimed for Solving Challenges in Sleep Disorders

**OSAKA, Japan, November 1, 2023** - Shionogi & Co., Ltd. (Head Office: Osaka, Japan; Chief Executive Officer: Isao Teshirogi, Ph.D.; hereafter "Shionogi") announced that Shionogi and Apnimed, Inc. (Head Office: Massachusetts, USA; Chief Executive Officer: Lawrence G. Miller, MD; hereafter "Apnimed") have agreed to establish a joint venture company, Shionogi-Apnimed Sleep Science, LLC, with the aim of solving challenges in sleep disorders.

### 1. Background and purpose of establishing the joint venture

Shionogi set forth our commitment to "Contribute to a healthy and prosperous life" in the revision of our mid-term business plan STS2030. As part of that effort, we are advancing R&D for diseases with a significant impact on Quality of Life (QoL) which remain unresolved and are predicted to have even greater impact in the future due to the aging population, with commensurately high social impact. Obstructive Sleep Apnea (OSA), a serious sleep disorder, is one of these diseases. It is estimated to affect more than 45 million Americans and hundreds of millions more around the world. It has been suggested that OSA may lead to or worsen other chronic diseases such as hypertension, diabetes, cardiovascular disease, and stroke, and also to impair work productivity. Longevity may be significantly reduced if OSA is left untreated. The vast majority of diagnosed patients are prescribed positive air pressure therapy devices such as continuous positive airway pressure, or CPAP, but substantial unmet need remains, and effective, safe, and convenient therapeutic agents are desired. As we share a strong commitment to meet unmet needs in sleep disorders such as OSA, and highly complementary capabilities, we have agreed to establish a joint venture with Apnimed, a clinical-stage pharmaceutical company with an exceptional depth of expertise in sleep disorders. The joint venture, Shionogi-Apnimed Sleep Science, LLC, combines Shionogi's capabilities in small molecule drug discovery and proven ability to create best-in-class compounds) with Apnimed's intensive knowledge of OSA and exceptional translational medicine capabilities, including highly experienced clinical-stage drug development team and robust network of sleep medicine clinical sites. The joint venture will seek to create promising solutions for OSA faster than either company could alone. The joint venture is owned equally by Shionogi and Apnimed. Apnimed's most advanced development programs, AD109 (now in Phase 3 trials) and AD504 (in Phase 2 trials) are not included in the joint venture.

### 2. Overview of the joint venture

1.	Name	Shionogi-Apnimed Sleep Science, LLC
2.	Location	Commonwealth of Massachusetts, US
3.	Business	Research and development of pharmaceuticals
4.	Date of establishment	November 1, 2023 (scheduled)
5.	Shareholding ratio	SHIONOGI: 50%, Apnimed: 50%

### 3. Overview of Joint Venture Partner

1.	Company	Apnimed, Inc.
2.	Location	Commonwealth of Massachusetts, US
3.	Representative	CEO: Lawrence G. Miller, MD
4.	Date of establishment	2017

### 4. Schedule

Date of resolution by the Board of Directors                      October 31, 2023  
Date of establishment of the joint venture company              November 1, 2023 (scheduled)

### **About Obstructive Sleep Apnea (OSA)**

Obstructive Sleep Apnea is one of the most common and serious sleep disorders. It is estimated to affect more than hundreds of millions of people worldwide, though underdiagnosis continues to be a serious problem and the number of affected patients may be far greater. OSA is characterized by partial or complete upper airway closure during sleep, which can cause dramatic reductions in overnight oxygen saturation and often leads to reduced sleep quality, and, in the long term, has been shown to cause or exacerbate hypertension, diabetes, cardiovascular disease, and stroke. Additionally, OSA can impair work productivity, reduce daytime functional abilities, and lower quality of life. The vast majority of diagnosed patients are prescribed positive air pressure therapy devices such as continuous positive airway pressure, or CPAP, but many patients are dissatisfied with these mechanical devices and fewer than half are compliant long term, leaving a significant population untreated, undertreated and at risk.

### **About Apnimed**

Apnimed is a clinical-stage pharmaceutical company working to transform the treatment of sleep apnea based on a simple idea – patients with obstructive sleep apnea could benefit from treatment with a safe and effective oral medication dosed once daily at bedtime. Apnimed’s lead development program targets the neurologic control of upper airway muscles to maintain an open airway during sleep. Based in Cambridge, Mass., the company is developing a portfolio of novel pharmacologic therapies for sleep apnea and related disorders. Learn more at [apnimed.com](http://apnimed.com) or follow us on X and LinkedIn.

### **Forward-Looking Statements**

*This announcement contains forward-looking statements. These statements are based on expectations in light of the information currently available, assumptions that are subject to risks and uncertainties which could cause actual results to differ materially from these statements. Risks and uncertainties include general domestic and international economic conditions such as general industry and market conditions, and changes of interest rate and currency exchange rate. These risks and uncertainties particularly apply with respect to product-related forward-looking statements. Product risks and uncertainties include, but are not limited to, completion and discontinuation of clinical trials; obtaining regulatory approvals; claims and concerns about product safety and efficacy; technological advances; adverse outcome of important litigation; domestic and foreign healthcare reforms and changes of laws and regulations. Also for existing products, there are manufacturing and marketing risks, which include, but are not limited to, inability to build production capacity to meet demand, lack of availability of raw materials and entry of competitive products. The company disclaims any intention or obligation to update or revise any forward-looking statements whether as a result of new information, future events or otherwise.*

### **For Further Information, Contact:**

SHIONOGI Website Inquiry Form: <https://www.shionogi.com/global/en/contact.html>