

FOR IMMEDIATE RELEASE

Research to Pave Way for Development of Microbiome-Based Therapies for Atopic Dermatitis

Japan's Corundum Systems Biology to Sponsor Full Project

Tokyo, November 24, 2020 -- Corundum Systems Biology Inc. will sponsor a research project to hasten discovery of microbiome-based therapies for atopic dermatitis (AD), a chronic skin disease. AD is one of the most common inflammatory skin diseases affecting up to 20 percent of children and up to 10 percent of adults in the world*.

The 3-year research that will assess gut's modularity effects on human immunity is based on the idea and preliminary proof-of-concept study initiated in Israel by a team of scientists: Dr. Jacob Mashiah, of Professor Eli Sprecher's team, Dermatology Division, Tel-Aviv Sourasky Medical Center; Professor Nitsan Maharshak, Gastroenterology Division, Tel-Aviv Sourasky Medical Center; and Professor Eran Segal of the Weizmann Institute of Science. Professor Segal serves on Corundum Systems Biology's Scientific Advisory Board, which he joined upon the Japan-based company's establishment in April 2020.

The recent preliminary proof-of-concept study focusing on conducting fecal microbiome transplant (FMT) in 9 patients demonstrated for the first time that FMT from a healthy donor can be an effective and safe procedure in alleviating symptoms of moderate to severe AD patients. The transplantation gained reduction of AD symptoms by an average of up to 70 percent. The latest follow-up study will build on these results and expand randomized clinical trials to 30 patients. It will identify and isolate microbiome, metabolomic, and AD host gene and immune drivers.

Professor Eran Segal explains: "The skin and the intestine both have an important role as immunological barriers and regulators. Intestinal microbiota influences the skin through the gut's modulatory effect on immunity. Increasing evidence supports the existence of a gut-skin relationship; many such studies link inflammatory skin diseases to a gut microbiome imbalance. This particular study that Corundum Systems Biology will sponsor will focus on proving our hypothesis that change of the gut microbiota, could improve AD skin conditions."

A mix of factors are known to cause AD. Genetic predisposition and deviations in the immune system play part, as do skin barrier function and microbial colonization. Environmental conditions are factors as well.

"Until recently, treatment of mild AD consisted of dry skin care with moisturizers," says Hidehiko Otake, president of Corundum Systems Biology. "For more severe cases topical treatments, phototherapy, and immunosuppressant agents are applied. Those given, a truly effective remedy does not yet exist. We are truly eager to see Professor Segal and his collaborators' research help to clarify the dynamics between gut and skin, opening up microbiome-based avenues for treating patients of this prevalent disease."

Twenty percent of all AD cases are diagnosed as moderate to severe cases.*

Corundum Systems Biology, a Japan-based company dedicated to facilitate microbiome research and business creation, was established on April 30, 2020.

*Source: Kowalska-Olędzka E, Czarnecka M, Baran A. Epidemiology of atopic dermatitis in Europe. *J Drug Assess.* 2019 Jun 12;8(1):126-128. doi: 10.1080/21556660.2019.1619570. PMID: 31232396; PMCID: PMC6566979. <https://pubmed.ncbi.nlm.nih.gov/31232396/>

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About Corundum Systems Biology Inc.

Corundum Systems Biology aspires to become an Innovation Hub in the field of microbiome, a critical field with potential to unlock next-generation life science technologies and bettering human health and quality of life. The company, based in Japan, focuses on the field of microbiome in three business areas: development of new business, development of biometric database and data analysis platforms, and grant-giving to facilitate and hasten R&D. World renowned microbiome scientist Professor Eran Segal of the Weizmann Institute of Science serves on its Scientific Advisory Board. Corundum Systems Biology was established in Tokyo in April 2020. Hidehiko Otake serves as its CEO. (<https://www.csb.co.jp/>)