

# RAMBAM ESTABLISHES CENTER FOR CANNABIS RESEARCH

Rambam Health Care Campus has established the Medical Cannabis Research and Innovation Center in its Research Division, led by Dr. Igal Louria-Hayon, who also heads the hospital's Leukemia Research and Cancer Signaling Lab. The aim is to study the role of cannabinoids (naturally occurring chemical compounds found in the Cannabis plant) during communication between cells under various morbidity conditions.

The center is supported by The Clinical Research Institute at Rambam (CRIR)—which is responsible for its infrastructure—and through joint research with pharmaceutical and cannabis companies from Israel and abroad. This knowledge will form the basis of the center's clinical trials and subsequent cannabis-based treatments approved by the health authorities in Israel and around the world.

## Understanding the Effects of Cannabinoids

Louria-Hayon and his team will be investigating whether cell interplay can be affected by the use of cannabis-derived substances. "If we understand how cannabinoid components are used in intercellular interaction, we can use them to influence this communication in the event of a disease, disrupt it, or empower the communication to deliver desirable messages," says Louria-Hayon, whose professional interests focus

on cell communication and cell signaling, with an emphasis on cancer biology and immunology, and immunotherapy against solid tumors.

Since many cancer patients also use cannabis to increase their appetite, improve their mood, and relieve pain while receiving conventional treatment, Louria-Hayon and his team will study the effects of cannabis on the efficacy of other medications with regard to these aspects. "We want to reach the point where cannabis research will not look any different from classical pharma research. If we do, I believe doctors will be more comfortable prescribing plant-based therapy," he notes.

Until recently, most knowledge regarding therapeutic aspects of these chemical compounds has come from anecdotal evidence. However, the cannabis landscape is changing, and there is an understanding that research is necessary to decipher cannabis's medicinal activities. As such, Rambam's Medical Cannabis Research and Innovation Center is devoting its efforts toward discovering the biochemical interaction that triggers the pharmacological effect of cannabinoids derived from the cannabis plant. Louria-Hayon and his staff are developing technologies that enable the detection of cannabinoid mechanisms in human patients to follow the cannabinoid's pharmacokinetics (the behavior of a substance once it enters the body) and identify its receptors in human biopsies.



"As the research center is part of a hospital, our uniqueness is the direct connection to human samples and patients. In addition, we have established a state-of-the-art biochemical laboratory, where we study the cannabinoid's nexus at the molecular level of the cell and in a variety of animal disease models. These, together with the clinical laboratories that develop cannabinoid-related expertise, allow us to be a pioneering center that studies cannabinoids and their physiology under one roof – from science to clinical experiments," states Louria-Hayon.

## Becoming More Mainstream

Cannabis research is also carried out in other departments. Rambam has established a Cannabis Steering Committee with the participation of high-level department managers, the CRIR, the Division of Economics and Marketing, and more. More than 3,000 patients at Rambam have used medical cannabis, making Rambam one of the leading centers in Israel for cannabis-based treatments.

Louria-Hayon has seen an increase in the number of organizations willing to financially support advanced studies in the field of cannabis. "Our center collaborated

with Raphael Pharmaceuticals INC. to establish a comprehensive scientific study to research the effects of specific cannabis strains on arthritis. This study will allow us to understand the cannabinoids' apparatus at the biochemical and molecular levels of the human cell using a mouse model of the disease, which will lead towards knowledge-based clinical experiments in human patients."

In addition to the work in the laboratory, Louria-Hayon and his team are responsible for informing other clinician-scientists in the CRIR regarding the progress of the cannabinoid and cannabis research.

**"We are establishing a multidisciplinary network of physicians and researchers, who will work on research both independently and in collaboration with pharmaceutical companies. This ensures that the center will be able to provide answers to research questions in the field of cannabis from the cellular level to the level of human experiments, and will hopefully result in personalized, cannabis-based treatment," he explains.**

## Medicinal Cannabis Research & Innovation Center

