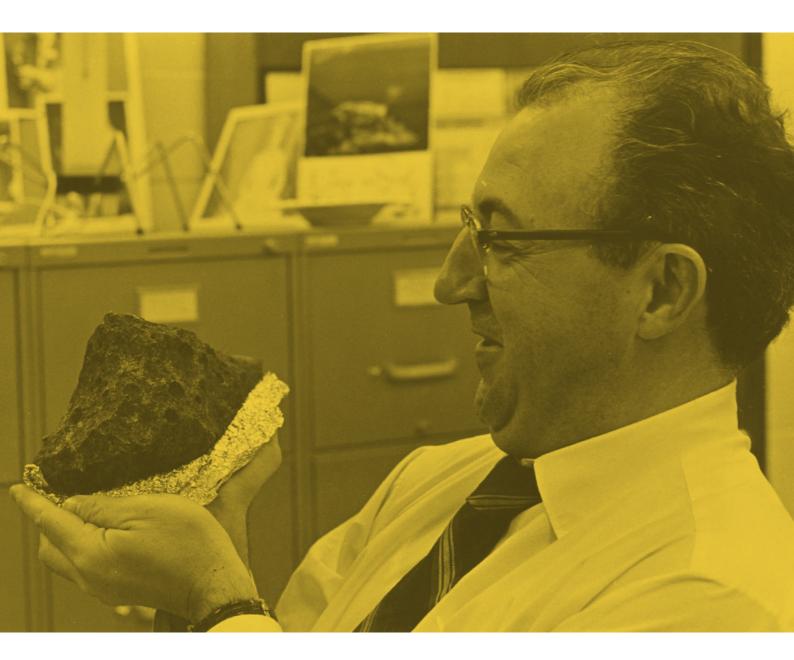
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COMMEMORATION 2023 JOAN ORÓ YEAR



2023 CENTENARY OF THE BIRTH OF THE UNIVERSAL BIOCHEMIST





INTRODUCTION

he year 2023 marks the centenary of the birth of Joan Oró, one of the most important scientists of the 20th century, who devoted his career to the study of the origin of life, an exciting question (and one that is very attractive to the general public). In this field, he made major contributions that have inspired later generations of scientists.

His discovery, which culminated in 1959, of how a primitive Earth could have manufactured adenine (one of the main components of DNA and also crucial in the cellular processes of energy generation) made him a figure of worldwide recognition, and his advice to NASA on the Apollo projects on the Moon and, especially, on the design of the Viking missions to Mars and the correct interpretation of the results obtained, further increased this recognition.

We want to disseminate the figure of Joan Oró from the scientific side and that of personal values

But beyond the scientific sphere, Oró exemplifies a whole series of fundamental values that marked his life and that we consider key for current and future generations, such as the entrepreneurial spirit, the struggle to achieve a dream, humility and courage.

For all these reasons, the centenary deserves to be celebrated in a public, powerful, extensive and emotional way.

To this end, the Joan Oró Foundation and Catalan Foundation for Research and Innovation have proposed an ambitious commemoration project. A project that includes, as explained below, a whole series of activities with a very high capacity for impact on a wide and diverse public, with



The Joan Oró Year means an extensive set of activities with a very high impact on a large and diverse public

the aim of disseminating the figure of Joan Oró from both the scientific side and that of his personal values.

At the institutional level, we would like to highlight that a whole set of institutions, among which we can mention the Lleida City Council, the Lleida Provincial authority, the Government of Catalonia, the Lleida University, the Institute for Lleida Studies, the Montsec Astronomical Park, the Montsec Observatory, the Institute of Space Studies of Catalonia, the Catalan Association of Scientific Communication, the CSIC, the IRBLleida, the PCITAL, the Geoparc Orígens, the Astronomical Society of Lleida, and, of course, the two foundations that present this report.

In September, the Government of Catalonia officially declared 2023 as Joan Oró Year.



The discovery of the abiotic synthesis of adenine in Houston in 1959 made Oró a world scientific figure.

JOAN ORÓ FLORENSA (1923-2004)

oan Oró is undoubtedly one of the most important scientific figures of the 20th century. Inspired by his innate curiosity, and fuelled by scientific readings, such as the work of Charles Darwin, he began to ask himself important questions about the origin of life at a very young age. This strong interest soon made him decide to dedicate his life to the study of what is one of the most exciting and profound areas of human knowledge, and which, in short, attempts to unravel the mystery of our own origin and the possibility that life could also have arisen elsewhere in the Universe.

The discovery of the abiotic synthesis of adenine, in 1959 when he was working at the University of Houston, made Joan Oró a world-renowned scientific figure. Adenine is one of the building blocks of DNA, and with that discovery Oró unveiled the mechanism by which nature would have manufactured it billions of years ago, under the conditions that existed on a young Earth and from simple components that were abundant at the time. The discovery marked a turning point, a leap forward in research into the origin of life.

The repercussions of his work meant that NASA did not hesitate to ask Oró for his advice on several projects, such as the analysis of lunar samples and, especially, in the search for life on the planet Mars. In fact, Joan Oró knew how to correctly interpret the results of the first biochemical tests that mankind had carried out on the surface of the red planet with the Viking missions, which seemed to point to the existence of microorganisms when, in fact, they were due to reactions unrelated to life.

In the course of his studies, Oró developed a model, pioneering at the time, to explain how the basic components from which life was made had arrived on Earth. The model was based on the contribution of material from comet impacts, objects that we now know to be very rich in organic compounds.

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But beyond his scientific side, Joan Oró represents dedication to a dream, to a goal, and overcoming difficulties and barriers. Because turning his youthful passion into a reality was not easy. Coming from a family of confectioners, he decided to become an entrepreneur once he had finished his degree in chemistry (at that time, chemistry and biology had not yet converged into what we know today as biochemistry). But the adventure of setting up a company did not work out well for him.

Without ever abandoning his dream, and in order to support a family, Oró did not hesitate to work as a confectioner in the family business. And finally, despite the difficulty of going abroad at that time with a very limited knowledge of English, he decided to try his luck and contacted several American universities and research centres. Among the offers he received, Joan Oró chose the Rice Institute in Houston. And, at the age of 28, a young and excited Oró crossed the Atlantic to begin a successful scientific career, which would lead him to become a professor and researcher at the University of Houston, and finally to set up the Department of Biophysical Sciences at this university.

Throughout his professional career, Dr. Oró generated an extensive production of publications and scientific articles. He received numerous awards and recognitions, and his work on the synthesis of adenine has been considered by many to be worthy of the Nobel Prize. In addition, Joan Oró built up a powerful network of relationships with very important scientific figures of the time.

On his return to Catalonia, once he retired from the University of Houston, he promoted several initiatives for the promotion of science and its dissemination. Among other projects, Oró was the driving force behind the creation of the Catalan Foundation for Research and Innovation and the Montsec Astronomy Park. In 1993 he created the Joan Oró Foundation, with the aim of promoting basic and applied research, as well as links between companies and universities and research centres.

Last but not least we would like to highlight that Joan Oró took advantage of his worldwide renown to advocate peace and the peaceful and supportive use of science.

Joan Oró represents the dedication to a dream, to a goal, and the overcoming of difficulties and barriers



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