

Origins of the Molecules of Life



What is the science question?

Can organic molecules found inside meteorites be used to understand the origins of chemicals such as amino acids that are so important to life?

What were your findings?

We recently developed a novel analytical method for the chemical evaluation of meteoritic aldehydes and ketones that may be synthetic **precursors of amino acids**. Using this method, we have investigated the molecular distribution of the amounts of different types of aldehydes and ketones in 11 carbonaceous chondrite meteorites.

What was the impact?

With this new method, we found striking similarities between the molecular distribution of these extraterrestrial aldehydes and ketones and amino acids that suggest that at least a portion of the aldehydes and ketones may have been converted into amino acids in these meteorites.

Why does it matter to non-scientists?

Investigating aldehydes and ketones in meteorites will help us understand how amino acids, the building blocks of proteins in life on Earth, were created in the early Solar System.

