

## Complex organic molecules in comets

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Many interstellar complex organic molecules were observed in hot molecular cores in massive star-forming regions and hot corinos in low-mass young stellar objects within molecular clouds. It is thus essential, astrobiologically, to find complex organic molecules in protoplanetary disks as the next step. However, observations of cometary comae reveal that compositions of comet nuclei are a mixture of products of interstellar chemistry and nebular chemistry. Therefore, comets may provide the important information connecting interstellar clouds and Sun-like young stellar objects with associated protoplanetary disks, or Solar Nebula in our own case. Observing important cometary organic molecules may provide clues fundamental to our knowledge on the formation of prebiotically significant organic molecules in the Solar Nebula, hence, the origin of life in the Solar System and on the Early Earth. We have thus used (sub)millimeter telescopes to look for large organic molecules in recent bright comets such as 73P/S-W 3, Hartley 2, Lulin, Garradd, and F6/Lemmon. In this presentation, we will report some of the interesting results of our most recent findings.