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Interdisciplinarity in the Search for Life SEARRA FOOTE, Arizona State University, ELIFE TEAM — The search for life is an interdisciplinary effort that requires a better understanding of life on Earth. When searching for life, it is necessary to define life and understand characteristics of habitability and signs life produces. Biosignatures and technosignatures, for example, are useful signs that are possible indicators for detecting both primitive and intelligent life. Biosignatures are signs of a biological life process taking place. Technosignatures are overall more specific because they narrow down the search to complex, intelligent life. These two indicators are not necessarily mutually exclusive or even a smoking gun, but they can still be helpful in the possibility of finding life. Furthermore, learning more about the origin of life and abiogenesis can help to understand how life might arise elsewhere in the universe. Determining the probability of certain signs of life through Bayesian methods can also inform the search for life. These methods can help to determine how common life in the universe is in general and can be applied to specific biosignatures. The search for life is an effort that must continue as more ideas are discovered, especially since astrobiology is a developing field that requires collaboration and building ideas between fields.

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