## Synthetic Life in Extreme Conditions

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We have developed a program that simulates the behavior of individual cells and of their interactions in a multicell environment, with the aim of providing a detailed description of the growth of tumor spheroids. This simulation framework also includes harsh conditions like highly acidic and hypoxic environments that are common in human tumors. In turn, this means that the framework can give useful indications on the behavior of primitive eukaryotes in harsh environments. Here we discuss some specific simulations to this end, and the challenges to develop a framework of wider usability.

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