Adaptative Radiation Within Microbial Populations Under Stress

(Talk #24)

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We have developed new approaches based on water-in-oil droplet and semi permeable capsules, to explore large libraries of confined microorganisms or human cells. We are able to follow the growth of each individual culture (up to millions in parallel) over days; each culture is encapsulated and can grow from one individual up to 105. From these data we can explore the diversification within monoclonal populations and particularly how this radiation varies with a given selective pressure. Some conclusions about evolving pathways will be discussed.