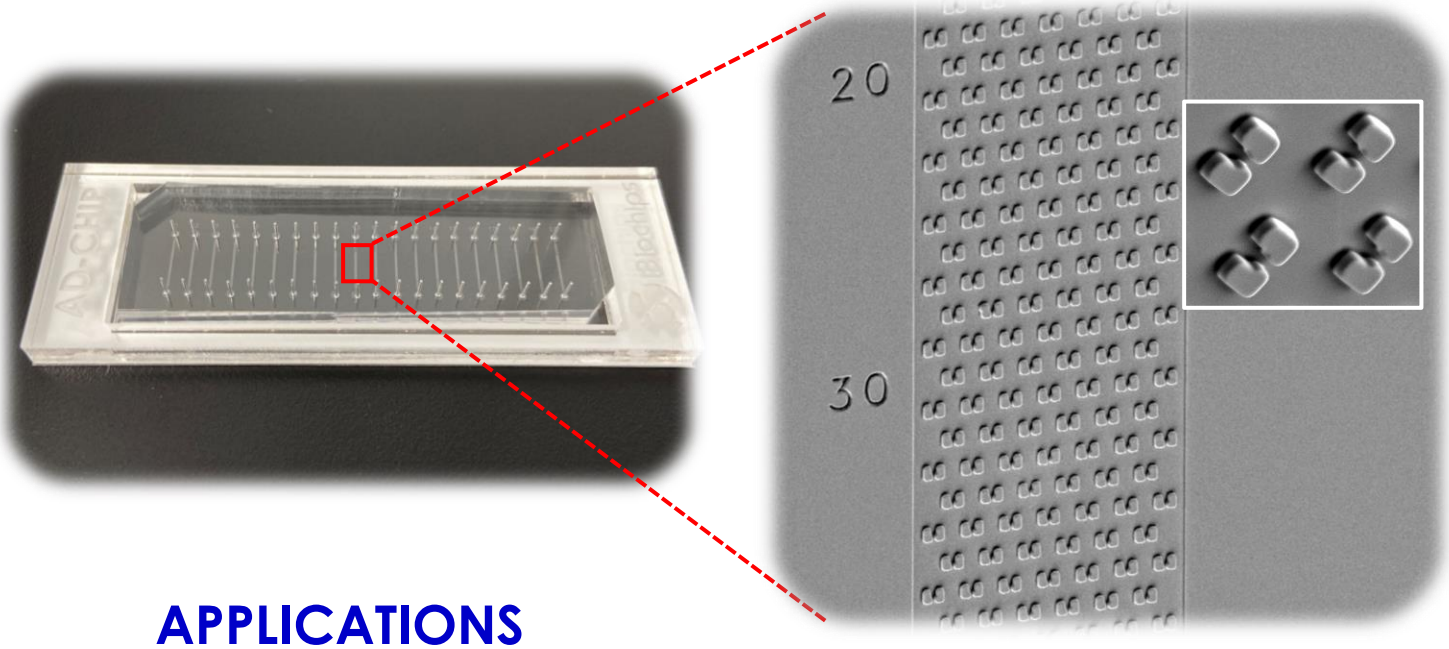
Automated Dissection Chip

High-throughput Analysis of Yeast-Based Studies



APPLICATIONS

High-Throughput Replicative Lifespan Assay

Genetic Screening for Longevity Associated Genes

Proteomic Screening for Protein Turnover and Relocalization

Nutrient Sensing and Signaling Pathways

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Features of AD-Chip

High-Throughput To Reduce Labor & Time Costs:

Automated whole-lifespan tracking of over 10,000 single yeast cells for 20 different strains in 3 days

High-Resolution Imaging:

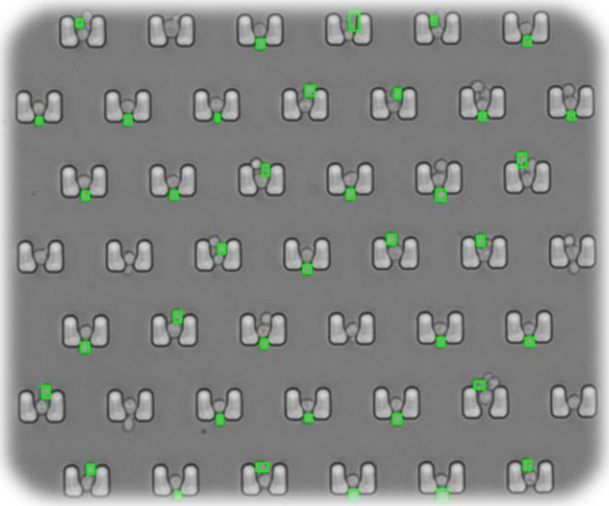
Compatible with continuous high-resolution (fluorescent) imaging of single cells during entire aging process

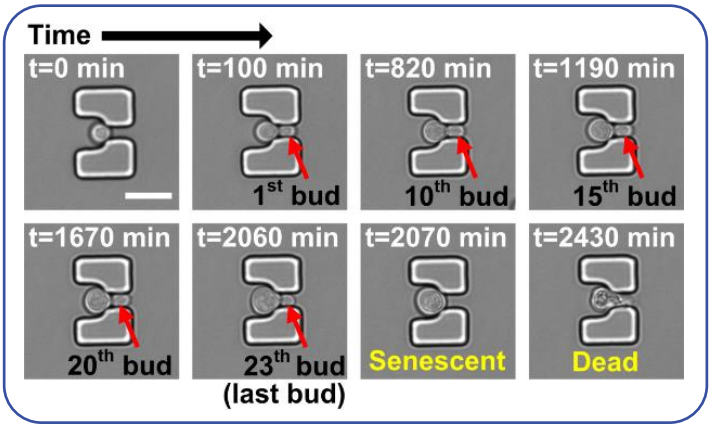
Maintaining Constant Growth Condition:

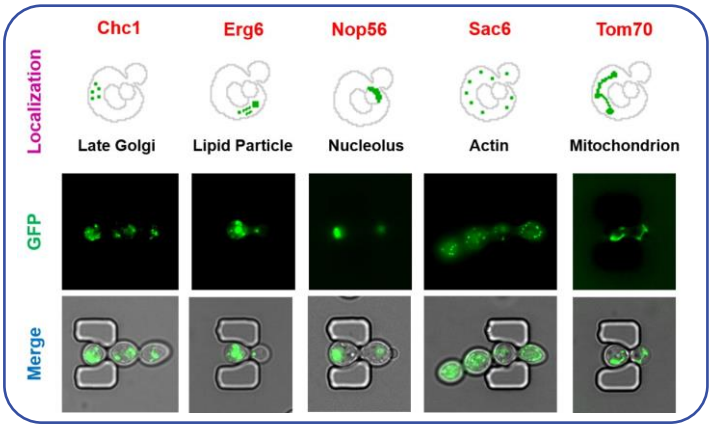
Supply of continuous flow of fresh medium, minimizing variations introduced by operators and environment

Time-Lapse Image Analysis Software:

Automatic counting of daughter cells produced by individual mothers (upon request)







Reference: M.C. Jo, et al. "High-throughput analysis of yeast replicative aging using a microfluidic system." *PNAS,* vol. 112 (2015), 9364–9369.

Specifications of AD-Chip SC

Material	• PDMS, PMMA, Glass
Dimensions (L x W x H)	• 75 x 25 x 4mm
Substrate	• Glass coverslip (0.17mm thickness) allowing up to 100X oil objective
Number of single-cell traps	• Total 18,000 traps (900 traps x 20 separate channels)
Number of inlets	• 20 media & cells inlets