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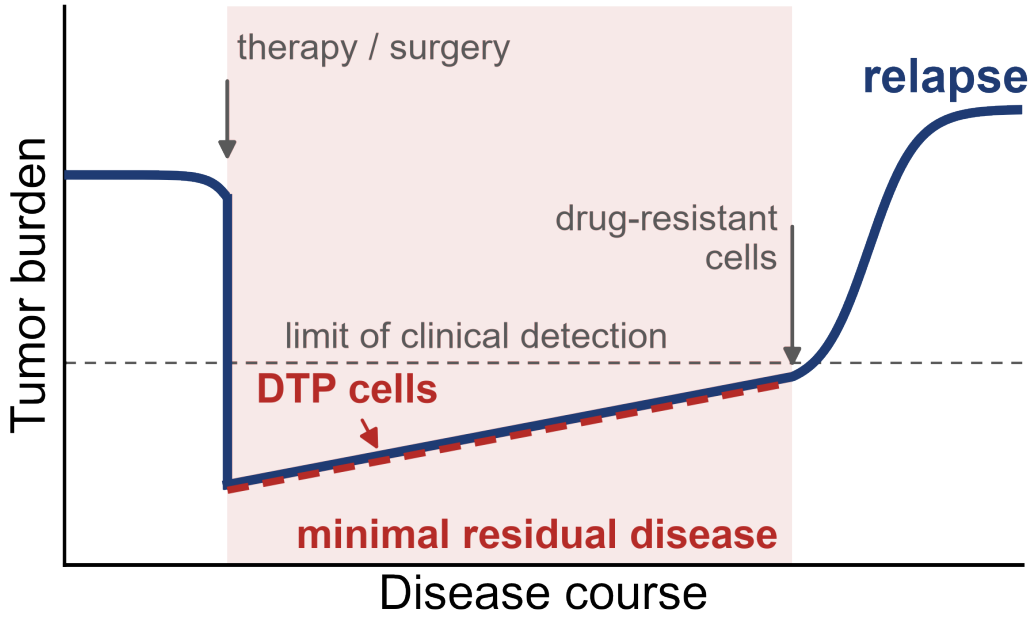
Can sphingosine-like compounds overcome DTPs in cancer?

Cameron Geller, PhD candidate
Edinger Lab, Department of Developmental and Cell Biology
University of California, Irvine

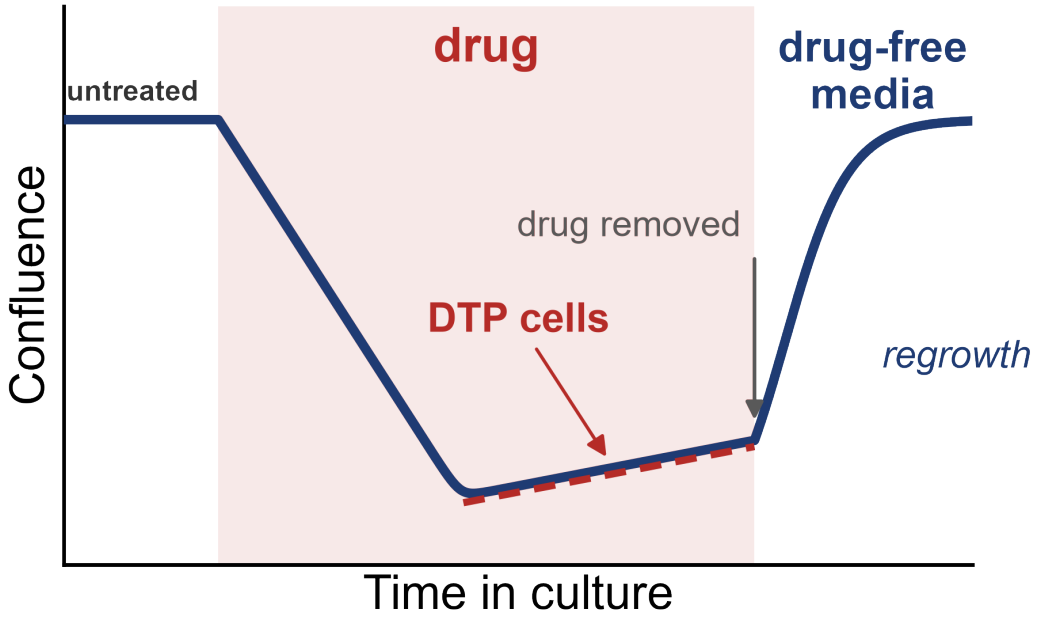
2026 Scientific Retreat
November 5, 2026

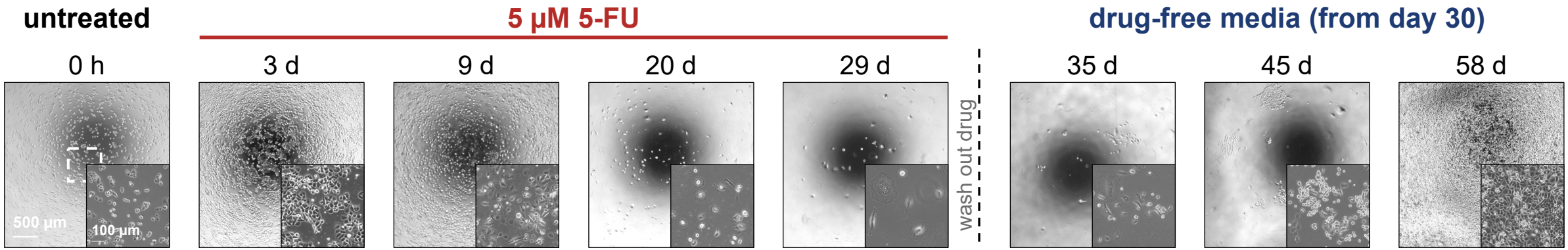
Drug-tolerant persister cells (DTPs) are a major contributor to drug resistance in cancer

In the clinic[1]



In the lab[2]



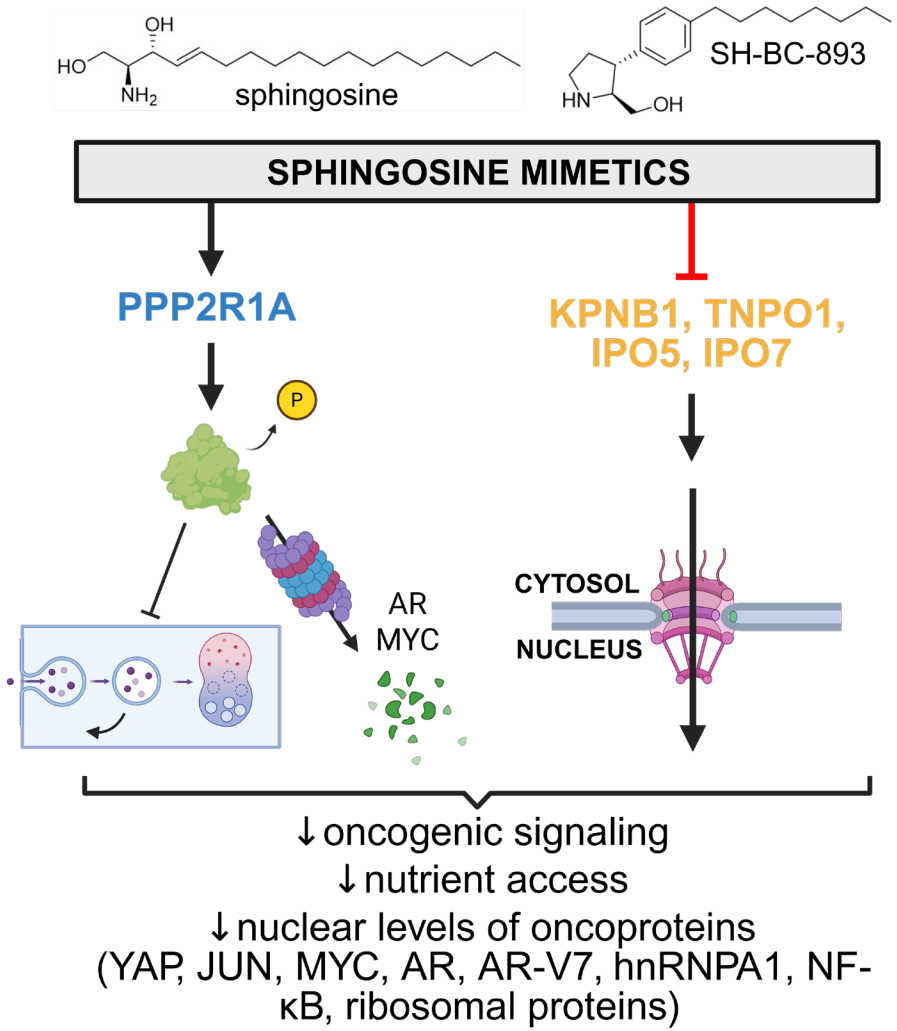


MDA-MB-468 (triple-negative breast cancer cells)

1) Pu et al. 2023 Nat Rev Clin Oncol. 20:799–813
2) Sharma et al. 2010 Cell. 141(1):69–80

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SH-BC-893's multifaceted mechanism of action may eliminate DTPs



Experimental design

	Phase 1	Phase 2
1	5-FU → *generates DTPs*	drug-free media → *do DTPs expand?*
2	5-FU + 893 → *does 893 prevent DTP formation in response to SOC drug?*	drug-free media → *do DTPs expand?*
3	5-FU → *generates DTPs*	893 → *does 893 eliminate DTPs?*

Jayashankar et al. 2025 EMBO J. 44(16):4473–4498
Kim et al. 2016 J Clin Invest. 126(11):4088–4102
Kubiniok et al. 2019 Mol Cell Proteomics. 18(3):408–422
Finicle et al. 2023 Nucleic Acids Res. 51(4):1583–1599

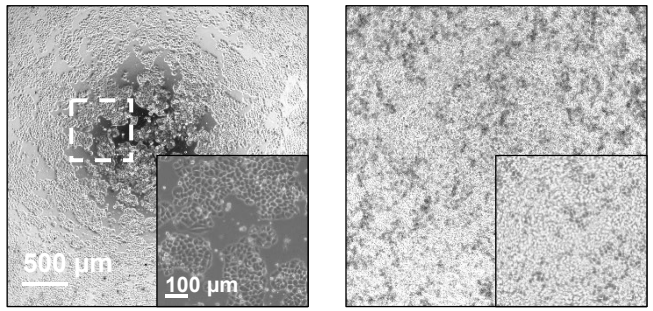
Low-dose SH-BC-893 eliminates DTPs that would have formed with 5-FU

Phase 1 (days 0–30)

Phase 2: drug-free media

3 d | 9 d | 20 d | 29 d | 35 d | 45 d | 58 d

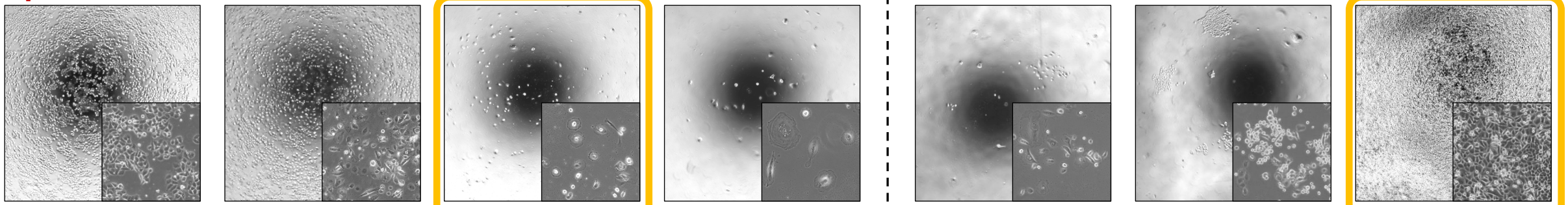
2.5 µM 893 alone (ineffective dose)



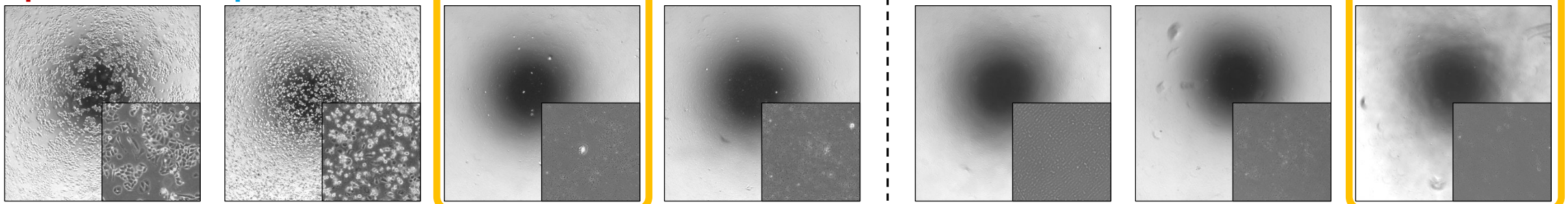
fixed at 13 d (confluent)

wash out drug

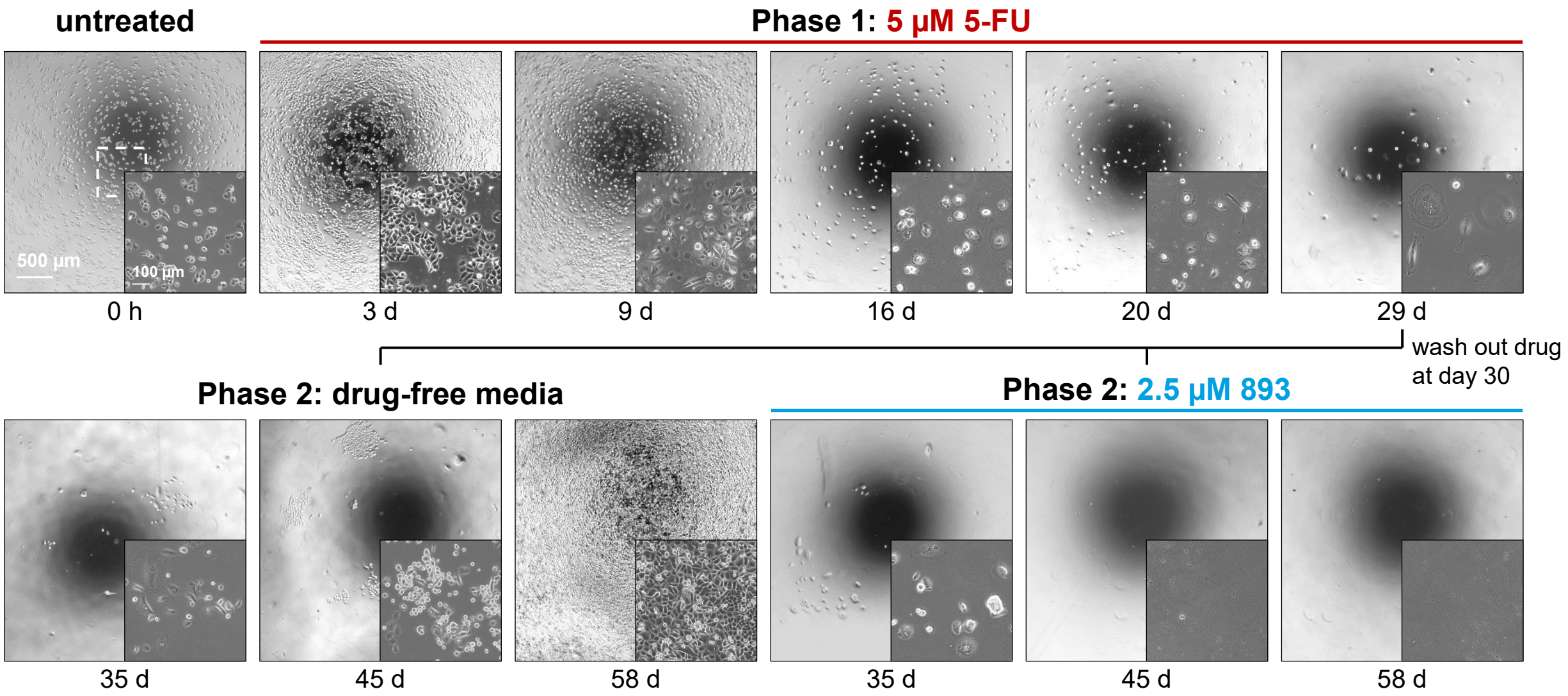
5 µM 5-FU alone



5 µM 5-FU + 2.5 µM 893



Low-dose SH-BC-893 eliminates pre-existing DTPs



THANK YOU

Acknowledgements

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Check out my poster

Parallel actions of sphingosine mimetic SH-BC-893 overcome and avoid drug resistance across cancer classes