

Kinetic Visualization of Single-Cell Interspecies Bacterial Interactions

 Kaitlin D Yarrington^{*1}, Andrea Sánchez Peña^{*1}, Dominique H Limoli¹
¹Department of Microbiology and Immunology, Carver College of Medicine, University of Iowa

*These authors contributed equally

Corresponding Author

 Dominique H Limoli
 dominique-limoli@uiowa.edu

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Materials

Name	Company	Catalog Number	Comments
Agarose pads			
35 mm Glass Bottom Dish with 20 mm Micro-well #1.5 Cover Glass	Cellvis	D35-20-1.5-N	One for agarose pad molds, one for experiment
KimWipes	Kimberly-Clark Professional	06-666A	
Low-Melt Agarose	Nu-Sieve GTG/Lonza	50081	For making agarose pads
Round-Bottom Spatulas	VWR	82027-492	
Round-Tapered Spatulas	VWR	82027-530	
Silicon Isolators, Press-to-Seal, 1 well, D diameter 2.0 mm 20 mm, silicone/adhesive	Sigma-Aldrich	S6685-25EA	For agarose pad molds
Sterile Petri Plates, 85 mm	Kord-Valmark /sold by RPI	2900	
Tweezers	VWR	89259-944	
M8T Minimal Media			
D (+) Glucose	RPI	G32045	
KH ₂ PO ₄	RPI	P250500	
MgSO ₄	Sigma-Aldrich	208094	
NaCl	RPI	S23025	
Na ₂ HPO ₄ ·7H ₂ O	Sigma-Aldrich	230391	
Tryptone	BD Biosciences	DF0123173	
Microscope			
Andor Sona 4.2B-11	Andor	77026135	Camera. 4.2 Megapixel Back-illuminated sCMOS, 11 μm pixel, 95% QE, 48 fps, USB 3.0, F-mount.
Filter Cube GFP	Nikon	96372	Filter cube
Filter Cube TxRed	Nikon	96375	Filter cube
H201-NIKON-TI-S-ER	Okolab	77057447	Stagetop incubator
Nikon NIS-Elements AR with GA3 and 2D and 3D tracking	Nikon	77010609, MQS43110, 77010603, MQS42950	Software for data analysis
Nikon Ti2 Eclipse	Nikon	Model Ti2-E	Microscope

CFI Plan Apo 120x objective (0.75NA)	Nikon	MRD00205	Objective
CFI Plan Apo 1100x oil Ph3 DM objective (1.45NA)	Nikon	MRD31905	Objective
ThermoBox with built-in fan heaters	Tokai Hit	TI2TB-E-BK	Enclosure
Bacterial Strains			
<i>Pseudomonas aeruginosa</i> PA14 (WT)		PMID: 7604262	Non-mucoid prototroph
<i>Pseudomonas aeruginosa</i> PA14 (WT) pSMC21 (<i>Ptac-GFP</i>)		PMID: 9361441	
<i>Pseudomonas aeruginosa</i> PAO1 (WT) pPrpoD-mKate2		PMID: 26041805	
<i>Staphylococcus aureus</i> USA300 LAC (WT)		PMID: 23404398	USA300 CA-Methicillin resistant strain LAC without plasmids
<i>Staphylococcus aureus</i> USA300 LAC (WT) pCM29 (<i>sarAP1-sGFP</i>)		PMID: 20829608	
<i>Staphylococcus aureus</i> USA300 LAC Δ agrBDCA		PMID: 31713513	
Viability Stain			
Propidium Iodide	Invitrogen	L7012	LIVE/DEAD™ BacLight™ Bacterial Viability Kit