Electronic Supplementary Material (ESI) for Soft Matter

Supporting Information for: Effect of lipid architecture on cubic phase susceptibility to crystallisation screens

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Well	[Salt]	Salt	pH	[Buffer]	Buffer	pH	[Ppt]	Precipitant
A1	0.2M	Sodium fluoride					20% w/v	PEG 3,350
A2	0.2M	Potassium fluoride					20% w/v	PEG 3,350
A3	0.2M	Ammonium fluoride					20% w/v	PEG 3,350
A4	0.2M	Lithium chloride					20% w/v	PEG 3,350
A5	0.2M	Magnesium chloride hexahydrate					20% w/v	PEG 3,350
A6	0.2M	Sodium chloride					20% w/v	PEG 3,350
A7	0.2M	Calcium chloride dihydrate					20% w/v	PEG 3,350
A8	0.2M	Potassium chloride					20% w/v	PEG 3,350
A9	0.2M	Ammonium chloride					20% w/v	PEG 3,350
A10	0.2M	Sodium iodide					20% w/v	PEG 3,350
A11	0.2M	Potassium iodide					20% w/v	PEG 3,350
A12	0.2M	Ammonium iodide					20% w/v	PEG 3,350
B1	0.2M	Sodium thiocyanate					20% w/v	PEG 3,350
B2	0.2M	Potassium thiocyanate					20% w/v	PEG 3,350
B3	0.2M	Lithium nitrate					20% w/v	PEG 3,350
B4	0.2M	Magnesium nitrate hexahydrate					20% w/v	PEG 3,350
B5	0.2M	Sodium nitrate					20% w/v	PEG 3,350
B6	0.2M	Potassium nitrate					20% w/v	PEG 3,350
B7	0.2M	Ammonium nitrate					20% w/v	PEG 3,350

B8	0.2M	Magnesium formate dihydrate					20% w/v	PEG 3,350
B9	0.2M	Sodium formate					20% w/v	PEG 3,350
B10	0.2M	Potassium formate					20% w/v	PEG 3,350
B11	0.2M	Ammonium formate					20% w/v	PEG 3,350
B12	0.2M	Lithium acetate dihydrate					20% w/v	PEG 3,350
C1	0.2M	Magnesium acetate tetrahydrate					20% w/v	PEG 3,350
C2	0.2M	Zinc acetate dihydrate					20% w/v	PEG 3,350
C3	0.2M	Sodium acetate trihydrate					20% w/v	PEG 3,350
C4	0.2M	Calcium acetate hydrate					20% w/v	PEG 3,350
C5	0.2M	Potassium acetate					20% w/v	PEG 3,350
C6	0.2M	Ammonium acetate					20% w/v	PEG 3,350
C7	0.2M	Lithium sulfate monohydrate					20% w/v	PEG 3,350
C8	0.2M	Magnesium sulfate heptahydrate					20% w/v	PEG 3,350
C9	0.2M	Sodium sulfate decahydrate					20% w/v	PEG 3,350
C10	0.2M	Potassium sulfate					20% w/v	PEG 3,350
C11	0.2M	Ammonium sulfate					20% w/v	PEG 3,350
C12	0.2M	Sodium tartrate dibasic dihydrate					20% w/v	PEG 3,350
D1	0.2M	Potassium sodium tartrate tetrahydrate					20% w/v	PEG 3,350
D2	0.2M	Ammonium tartrate dibasic					20% w/v	PEG 3,350
D3	0.2M	Sodium phosphate monobasic monohydrate					20% w/v	PEG 3,350

D4	0.2M	Sodium phosphate dibasic dihydrate					20% w/v	PEG 3,350
D5	0.2M	Potassium phosphate monobasic					20% w/v	PEG 3,350
D6	0.2M	Potassium phosphate dibasic					20% w/v	PEG 3,350
D7	0.2M	Ammonium phosphate monobasic					20% w/v	PEG 3,350
D8	0.2M	Ammonium phosphate dibasic					20% w/v	PEG 3,350
D9	0.2M	Lithium citrate tribasic tetrahydrate					20% w/v	PEG 3,350
D10	0.2M	Sodium citrate tribasic dihydrate					20% w/v	PEG 3,350
D11	0.2M	Potassium citrate tribasic monohydrate					20% w/v	PEG 3,350
D12	0.2M	Ammonium citrate dibasic					20% w/v	PEG 3,350
E1	0.1M	Sodium malonate	4.0				12% w/v	PEG 3,350
E2	0.2M	Sodium malonate	4.0				20% w/v	PEG 3,350
E3	0.1M	Sodium malonate	5.0				12% w/v	PEG 3,350
E4	0.2M	Sodium malonate	5.0				20% w/v	PEG 3,350
E5	0.1M	Sodium malonate	6.0				12% w/v	PEG 3,350
E6	0.2M	Sodium malonate	6.0				20% w/v	PEG 3,350
E7	0.1M	Sodium malonate	7.0				12% w/v	PEG 3,350
E8	0.2M	Sodium malonate	7.0				20% w/v	PEG 3,350
E9	4% v/v	Tacsimate	4.0				12% w/v	PEG 3,350
E10	8% v/v	Tacsimate	4.0				20% w/v	PEG 3,350
E11	4% v/v	Tacsimate	5.0				12% w/v	PEG 3,350
E12	8% v/v	Tacsimate	5.0				20% w/v	PEG 3,350
F1	4%	Tacsimate	6.0				12%	PEG 3,350

	v/v						w/v	
F2	8% v/v	Tacsimate	6.0				20% w/v	PEG 3,350
F3	4% v/v	Tacsimate	7.0				12% w/v	PEG 3,350
F4	8% v/v	Tacsimate	7.0				20% w/v	PEG 3,350
F5	4% v/v	Tacsimate	8.0				12% w/v	PEG 3,350
F6	8% v/v	Tacsimate	8.0				20% w/v	PEG 3,350
F7	0.1M	Succinic acid	7.0				12% w/v	PEG 3,350
F8	0.2M	Succinic acid	7.0				20% w/v	PEG 3,350
F9	0.1M	Ammonium citrate tribasic	7.0				12% w/v	PEG 3,350
F10	0.2M	Ammonium citrate tribasic	7.0				20% w/v	PEG 3,350
F11	0.1M	DL-Malic acid	7.0				12% w/v	PEG 3,350
F12	0.2M	DL-Malic acid	7.0				20% w/v	PEG 3,350
G1	0.1M	Sodium acetate trihydrate	7.0				12% w/v	PEG 3,350
G2	0.2M	Sodium acetate trihydrate	7.0				20% w/v	PEG 3,350
G3	0.1M	Sodium formate	7.0				12% w/v	PEG 3,350
G4	0.2M	Sodium formate	7.0				20% w/v	PEG 3,350
G5	0.1M	Ammonium tartrate dibasic	7.0				12% w/v	PEG 3,350
G6	0.2M	Ammonium tartrate dibasic	7.0				20% w/v	PEG 3,350
G7	2% v/v	Tacsimate	4.0	0.1M	Sodium acetate trihydrate	4.6	16% w/v	PEG 3,350
G8	2% v/v	Tacsimate	5.0	0.1M	Sodium citrate tribasic dihydrate	5.6	16% w/v	PEG 3,350
G9	2% v/v	Tacsimate	6.0	0.1M	BIS-TRIS	6.5	20% w/v	PEG 3,350
G10	2% v/v	Tacsimate	7.0	0.1M	HEPES	7.5	20% w/v	PEG 3,350
G11	2% v/v	Tacsimate	8.0	0.1M	Tris	8.5	16% w/v	PEG 3,350
G12				0.07M	Citric acid,	3.4	16% w/v	PEG 3,350

				0.03M	BIS-TRIS propane			
H1				0.06M	Citric acid,	4.1	16% w/v	PEG 3,350
				0.04M	BIS-TRIS propane			
H2				0.05M	Citric acid,	5.0	16% w/v	PEG 3,350
				0.05M	BIS-TRIS propane			
H3				0.04M	Citric acid,	6.4	20% w/v	PEG 3,350
				0.06M	BIS-TRIS propane			
H4				0.03M	Citric acid,	7.6	20% w/v	PEG 3,350
				0.07M	BIS-TRIS propane			
H5				0.02M	Citric acid,	8.8	16% w/v	PEG 3,350
				0.08M	BIS-TRIS propane			
H6	0M	Calcium chloride dihydrate					20% w/v	PEG 3,350
	0M	Cadmium chloride hydrate						
	0M	Cobalt(II) chloride hexahydrate						
H7	0M	Magnesium chloride hexahydrate		0.1M	HEPES sodium	7.0	15% w/v	PEG 3,350
	0M	Nickel(II) chloride hexahydrate						
H8	0M	Zinc chloride					20% w/v	PEG 3,350
H9	0.2M	Cesium chloride					15% w/v	PEG 3,350
H10	0.2M	Sodium bromide					20% w/v	PEG 3,350
H11	1 % w/v	Tryptone		0.05M	HEPES sodium	7.0	12% w/v	PEG 3,350
H12	1 % w/v	Tryptone		0.05M	HEPES sodium	7.0	20% w/v	PEG 3,350

Table S1. The components of the PEG-ion screen are listed as a function of well number.

	Top		Bottom	
	Phase	LP	Phase	LP
A1	Q_{II}^{D}	83.6	No D	
A1	Q_{II}^{G}	127.7	No D	
A2	Q_{II}^{D}	85.9	No D	
A3	Q_{II}^{D}	88.4	Q_{II}^{D}	89.6
A4	Q_{II}^{D}	89.8	Q_{II}^{D}	90.5
A5	Q_{II}^{D}	89.6	No D	
A6	Q_{II}^{D}	87.1	No D	
A7	Q_{II}^{G}	118.2	No D	
A8	Q_{II}^{G}	125.6	No D	
A9	Q_{II}^{G}	120.9	No D	
A10	Q_{II}^{G}	119.6	No D	
A11	Q_{II}^{G}	120.1	No D	
A12	Q_{II}^{G}	122.8	No D	
B1	Q_{II}^{D}	83.5	No D	
B2	Q_{II}^{D}	87.2	No D	
B3	Q_{II}^{D}	88.4	No D	
B4	Q_{II}^{D}	88.7	No D	
B5	Q_{II}^{D}	89.1	No D	
B6	Q_{II}^{D}	86.9	No D	
B7	Q_{II}^{G}	119.3	No D	
B8	Q_{II}^{G}	124.0	No D	
B9	L_{α}	42.2	No D	
B10	Q_{II}^{G}	118.5	No D	
B11	Q_{II}^{G}	119.5	No D	
B12	Q_{II}^{G}	124.2	No D	
C1	Q_{II}^{D}	88.4	Q_{II}^{D}	88.3
C2	Q_{II}^{D}	89.2	Q_{II}^{D}	88.3
C3	Q_{II}^{D}	88.2	Q_{II}^{D}	88.9
C4	Q_{II}^{D}	88.7	Q_{II}^{D}	90.0
C5	Q_{II}^{D}	89.9	Q_{II}^{D}	90.8
C6	Q_{II}^{D}	83.9	Q_{II}^{D}	88.4
C7	Q_{II}^{G}	127.4	Q_{II}^{G}	129.1
C8	Q_{II}^{G}	129.5	Q_{II}^{G}	129.6
C9	L_{α}	42.2	Q_{II}^{G}	128.4
C10	Q_{II}^{G}	127.3	Q_{II}^{G}	128.2
C11	L_{α}	42.1	Q_{II}^{G}	128.7
C12	L_{α}	43.6	No D	
D1	Q_{II}^{D}	84.8	No D	
D2	L_{α}	42.4	No D	
D3	Q_{II}^{D}	87.6	Q_{II}^{D}	87.8
D4	Q_{II}^{D}	86.8	Q_{II}^{D}	88.0
D5	Q_{II}^{D}	90.1	Q_{II}^{D}	90.2
D6	Q_{II}^{D}	82.8	Q_{II}^{D}	87.3
D7	Q_{II}^{G}	118.0	Q_{II}^{G}	123.5
D8	Q_{II}^{G}	118.2	No D	
D9	Q_{II}^{G}	125.5	Q_{II}^{G}	128.4
D10	Q_{II}^{G}	125.3	Q_{II}^{G}	128.5
D11	Q_{II}^{G}	124.5	QIIG	128.2
D12	Q_{II}^{G}	119.8	No D	
E1	Q_{II}^{G}	121.1	No D	

E2	Q_{II}^{G}	125.0	No D	
E3	Q_{II}^{G}	131.6	No D	
E4	Q_{II}^{G}	135.2	No D	
E5	Q_{II}^{G}	129.6	No D	
E6	Q_{II}^{G}	126.6	No D	
E7	Q_{II}^{G}	129.9	Q_{II}^{G}	130.1
E8	Q_{II}^{G}	132.4	Q_{II}^{G}	132.5
E9	Q_{II}^{G}	131.9	No D	
E10	Q_{II}^{G}	124.8	No D	
E11	Q_{II}^{G}	126.8	No D	
E12			No D	
F1	Q_{II}^{G}	120.6	No D	
F2	Q_{II}^{G}	118.3	No D	
F3	Q_{II}^{G}	129.1	No D	
F4	Q_{II}^{G}	133.6	No D	
F5	Q_{II}^{G}	129.4	No D	
F6	Q_{II}^{G}	123.2	No D	
F7	Q_{II}^{G}	128.5	Q_{II}^{G}	130.4
F8	Q_{II}^{G}	133.7	Q_{II}^{G}	133.9
F9	Q_{II}^{G}	133.1	Q_{II}^{G}	133.4
F10	Q_{II}^{G}	133.2	Q_{II}^{G}	133.8
F11	L_{α}	40.9	No D	
F12	Q_{II}^{G}	125.2	No D	
G1	Q_{II}^{G}	123.1	No D	
G2	Q_{II}^{G}	120.4	No D	
G3	Q_{II}^{G}	128.9	No D	
G4	Q_{II}^{G}	134.1	No D	
G5	Q_{II}^{G}	130.1	No D	
G6	Q_{II}^{G}	129.6	No D	
G7	Q_{II}^{G}		Q_{II}^{G}	130.2
G8	Q_{II}^{G}	133.3	Q_{II}^{G}	133.6
G9	L_{α}	42.2	No D	
G10	L_{α}	41.5	No D	
G11	Q_{II}^{G}	128.3	No D	
G12	L_{α}	41.4	No D	
H1	Q_{II}^{G}	118.7	No D	
H2	Q_{II}^{G}	120.2	No D	
H3	Q_{II}^{G}	129.9	No D	
H4	Q_{II}^{G}	122.2	No D	
H5	L_{α}	43.5	No D	
H6	L_{α}	41.8	No D	
H7	L_{α}	41.8	No D	
H8	L_{α}	41.3	No D	
H9	L_{α}	42.4	No D	
H10	Q_{II}^{G}	125.7	No D	
H11	Q_{II}^{G}	132.6	No D	
H12	L_{α}	41.5	Q_{II}^{G}	121.6

Table S2. The phase adopted and associated lattice parameter adopted in the top and bottom sub-wells for each individual well in the 96-well plate following addition of

PACT screen to monoolein. Errors, not listed, were generally < 0.5 Å. *No D indicated that no diffraction was observed.

	Top		Bottom	
	Phase	LP (Å)	Phase	LP (Å)
A1	L_α	33.9	L_α	33.9
A2	L_α	33.9	L_α	33.8
A3	L_α	34.0	L_α	34.0
A4	L_α	33.9	L_α	33.9
A5	L_α	33.9	L_α	34.0
A6	L_α	33.9	L_α	34.0
A7	L_α	94.5	Q_{II}^D	94.8
A8	L_α	35.0	L_α	35.1
A9	L_α	34.9	L_α	35.0
A10	L_α	34.7	L_α	34.9
A11	L_α	34.9	L_α	35.0
A12	L_α	34.8	L_α	34.8
B1	L_α	34.0	L_α	34.0
B2	L_α	33.8	L_α	33.9
B3	L_α	33.9	L_α	33.9
B4	L_α	34.0	L_α	34.0
B5	L_α	34.1	L_α	34.1
B6	L_α	34.1	L_α	34.2
B7	L_α	34.8	L_α	34.8
B8	L_α	34.9	L_α	34.9
B9	L_α	34.7	L_α	34.8
B10	L_α	34.8	L_α	34.8
B11	L_α	34.8	L_α	34.9
B12	L_α	34.9	L_α	34.9
C1	L_α	33.7	L_α	33.7
C2	L_α	33.9	L_α	33.9
C3	L_α	33.9	L_α	33.9
C4	L_α	33.9	L_α	34.0
C5	L_α	34.1	L_α	34.1
C6	L_α	33.9	L_α	33.9
C7	L_α	34.7	L_α	34.8
C8	L_α	34.8	L_α	34.8
C9	L_α	34.8	L_α	34.8
C9	Q_{II}^D	93.8	Q_{II}^D	94.0
C10	No D		Q_{II}^D	94.0
C11	L_α	34.8	L_α	34.8
C12	No D		L_α	34.7
D1	L_α	33.9	L_α	33.9
D2	L_α	33.4	L_α	33.7
D3	L_α	33.9	L_α	33.9
D4	L_α	33.8	L_α	33.9
D5	L_α	33.8	L_α	33.9
D6	L_α	33.9	L_α	34.0
D7	L_α	35.0	L_α	35.1
D8	L_α	35.0	L_α	35.1
D9	L_α	35.0	No D	

D10	L_α	94.6	Q_{II}^D	94.5
D11	L_α	35.1	L_α	35.1
D12	L_α	35.2	L_α	35.3
E1	L_α	34.9	L_α	34.9
E2	L_α	35.0	L_α	35.0
E3	L_α	35.1	L_α	35.2
E4	L_α	35.5	L_α	35.6
E5	L_α	34.9	L_α	35.0
E6	L_α	34.9	L_α	34.9
E7	L_α	34.7	L_α	34.7
E8	Q_{II}^D	94.8	Q_{II}^D	95.0
E8	L_α	34.8		
E9	Q_{II}^D	95.0	Q_{II}^D	95.3
E9	L_α	34.8		
E10	Q_{II}^D	94.9	Q_{II}^D	95.2
E11	FI		FI	
E12	No D		L_α	34.7
F1	L_α	34.7	L_α	34.7
F2	L_α	34.6	L_α	34.7
F3	L_α	34.7	L_α	34.9
F4	L_α	35.0	L_α	35.1
F5	L_α	34.7	L_α	34.8
F6	L_α	34.7	L_α	35.1
F7	L_α	34.8	L_α	34.8
F8	L_α	34.3	FI	
F9	L_α	34.4	FI	
F10	L_α	33.0	Q_{II}^D	94.4
F11	L_α	32.3	L_α	32.2
F12	FI		FI	
G1	L_α	34.8	L_α	34.8
G2	L_α	34.8	L_α	34.8
G3	L_α	34.9	L_α	34.9
G4	L_α	35.2	L_α	35.3
G5	L_α	34.8	L_α	34.9
G6	L_α	34.8	L_α	34.9
G7	No D		L_α	34.8
G8	FI		FI	
G9	L_α	32.5	L_α	32.6
G10	L_α	32.9	L_α	33.0
G11	FI		L_α	32.6
G12	L_α	32.4	L_α	32.7
H1	L_α	33.0	L_α	34.9
H2	L_α	34.7	L_α	34.8
H3	L_α	34.9	L_α	35.0
H4	L_α	33.6	L_α	33.6
H5	L_α	33.2	L_α	33.3
H6	L_α	33.2	L_α	33.3
H7	L_α	33.0	L_α	33.1
H8	L_α	32.8	FI	
H9	L_α	32.6	L_α	32.7
H10	No D		L_α	33.0
H11	No D		L_α	33.0
H12	L_α	32.6	FI	

Table S3. The phase adopted and associated lattice parameter adopted in the top and bottom sub-wells for each individual well in the 96-well plate following addition of PACT screen to phytantriol. Errors, not listed, were generally < 0.5 Å. *No D indicated that no diffraction was observed.

	Top		Bottom	
Well	Phase	LP (Å)	Phase	LP (Å)
A1	Q_{II}^{G}	93.0	Q_{II}^{G}	93.3
A2	Q_{II}^{G}	92.7	Q_{II}^{G}	92.8
A3	Q_{II}^{G}	92.4	Q_{II}^{G}	92.6
A4	Q_{II}^{G}	92.1	Q_{II}^{G}	92.2
A5	Q_{II}^{G}	92.0	Q_{II}^{G}	92.3
A6	Q_{II}^{G}	92.3	Q_{II}^{G}	92.1
A7	Q_{II}^{G}	92.8	Q_{II}^{G}	93.3
A8	Q_{dis}		Q_{dis}	
A9	Q_{II}^{G}	93.1	Q_{II}^{G}	93.9
A10	Q_{II}^{G}	92.7	Q_{II}^{G}	93.1
A11	Q_{II}^{G}	92.2	Q_{II}^{G}	93.2
A12	Q_{dis}		Q_{dis}	
B1	Q_{II}^{G}	92.7	Q_{II}^{G}	93.1
B2	Q_{II}^{G}	93.0	Q_{II}^{G}	93.1
B3	Q_{II}^{G}	92.5	Q_{II}^{G}	92.9
B4	Q_{II}^{G}	92.6	Q_{II}^{G}	92.6
B5	Q_{II}^{G}	92.8	Q_{II}^{G}	92.8
B6	Q_{II}^{G}	92.4	Q_{II}^{G}	92.6
B7	Q_{dis}		Q_{dis}	
B8	Q_{dis}		Q_{II}^{D}	94.2
B9	Q_{II}^{G}	90.1	Qdis	
B10	Q_{dis}		Q_{II}^{G}	93.3
B11	FI		FI	
B12	Q_{II}^{G}	94.7	Q_{II}^{G}	95.3
C1	Q_{II}^{G}	91.9	Q_{II}^{G}	92.3
C2	Q_{II}^{G}	91.9	Q_{II}^{G}	91.9
C3	Q_{II}^{G}	92.3	Q_{II}^{G}	92.1
C4	Q_{II}^{G}	92.2	Q_{II}^{G}	92.2
C5	Q_{II}^{G}	92.6	Q_{II}^{G}	92.5
C6	Q_{II}^{G}	92.3	Q_{II}^{G}	92.5
C7	Q_{dis}		Q_{dis}	
C8	Q_{dis}		Q_{dis}	
C9	Q_{II}^{G}	93.7	Q_{dis}	
C10	Q_{II}^{G}	93.5	Q_{II}^{G}	93.4
C11	Q_{dis}		Q_{II}^{G}	93.1
C12	Q_{dis}		Q_{II}^{G}	94.9
D1	Q_{II}^{G}	92.8	Q_{II}^{G}	93.7
D2	Q_{II}^{G}	92.6	Q_{II}^{G}	93.1
D3	Q_{II}^{G}	92.5	Q_{II}^{G}	92.8
D4	Q_{II}^{G}	92.4	Q_{II}^{G}	93.0
D5	Q_{II}^{G}	92.3	Q_{II}^{G}	92.8
D6	Q_{II}^{G}	92.4	Q_{II}^{G}	92.1

D7	Q_{II}^{G}	94.7	Q_{II}^{G}	94.2
D8	Q_{dis}		Q_{dis}	
D9	Q_{dis}		Q_{II}^{G}	94.8
D10	Q_{II}^{D}	59.6	Q_{II}^{D}	59.7
D11	Q_{II}^{D}	59.3	Q_{II}^{D}	59.6
D12	Q_{II}^{G}	96.0	Q_{dis}	
E1	H_{II}	45.2	H_{II}	45.3
E2	H_{II}	46.1	H_{II}	46.1
E3	H_{II}	47.2	H_{II}	47.3
E4	H_{II}	48.1	H_{II}	48.3
E5	H_{II}	46.2	H_{II}	46.5
E6	L_{α}	22.9	L_{α}	22.9
E7	L_{α}	22.9	L_{α}	22.9
E8	H_{II}	44.2	L_{α}	22.9
E9	H_{II}	44.3	FI	
E10	H_{II}	44.8	H_{II}	44.8
E11	FI		FI	
E12	No D		FI	
F1	L_{α}	22.5	L_{α}	22.5
F2	H_{II}	46.0	L_{α}	22.9
F3	L_{α}	23.5	L_{α}	23.6
F3	H_{II}	46.8		
F4	L_{α}	48.3	H_{II}	48.4
F4			L_{α}	22.6
F5	L_{α}	22.9	L_{α}	22.9
F5			H_{II}	46.0
F6	H_{II}	45.2	H_{II}	45.1
F6	L_{α}	22.5		
F7	L_{α}	22.5	L_{α}	22.6
F8	FI			
F9	FI			
F10	L_{α}	22.2	L_{α}	22.3
F10			H_{II}	44.4
F11	FI			
F12	FI			
G1	H_{II}	44.9	H_{II}	45.1
G2	H_{II}	46.4	L_{α}	23.2
G3	H_{II}	47.4	H_{II}	47.5
G4	H_{II}	48.6	H_{II}	48.5
G5	L_{α}	23.2	L_{α}	23.2
G5	H_{II}	46.4	H_{II}	46.5
G6	L_{α}	22.7	L_{α}	22.7
G6	H_{II}	45.4		
G7	No D			
G8	FI			
G9	FI			
G10	FI			
G11	FI			
G12	FI			
H1	H_{II}	45.0	H_{II}	44.9
H2	H_{II}	46.5	H_{II}	46.3
H3	H_{II}	48.0	H_{II}	47.7
H3	L_{α}	23.9		
H4	H_{II}	49.0	H_{II}	48.9

H5	L_α	23.3	L_α	23.3
H6	L_α	22.8	L_α	22.8
H6	H_{II}	45.7		
H7	L_α	23.9	L_α	22.8
H7			H_{II}	45.6
H8	FI			
H9	FI			
H10	FI			
H11	FI			
H12	FI			

Table S4. The phase adopted and associated lattice parameter adopted in the top and bottom sub-wells for each individual well in the 96-well plate following addition of PACT screen to phytanyl monoethanolamide. Errors, not listed, were generally < 0.5 Å. *No D indicated that no diffraction was observed.

	Top		Bottom	
	Phase	LP	Phase	LP
A1	Q_{II}^G	123.0	No D	
A2	Q_{II}^G	123.8	No D	
A3	Q_{II}^G	130.5	Q_{II}^G	133.5
A4	Q_{II}^G	129.9	No D	
A5	Q_{II}^G	119.4	No D	
A6	Q_{II}^G	118.8	No D	
A7	Q_{II}^G	120.9	Q_{II}^G	124.1
A8	Q_{II}^G	122.0	No D	
A9	Q_{II}^G	130.4	No D	
A10	Q_{II}^G	140.1	No D	
A11	Q_{II}^G	132.8	No D	
A12	Q_{II}^G	129.6	No D	
B1	Q_{II}^G	131.2	Q_{II}^G	135.9
B2	Q_{II}^G	134.7	Q_{II}^G	137.4
B3	Q_{II}^G	130.8	Q_{II}^G	133.2
B4	Q_{II}^G	122.1	Q_{II}^G	125.7
B5	Q_{II}^G	132.0	Q_{II}^G	132.5
B6	Q_{II}^G	132.3	Q_{II}^G	132.7
B7	Q_{II}^G	129.9	No D	
B8	Q_{II}^G	128.7	Q_{II}^G	130.4
B9	L_α	43.7	Q_{II}^G	130.3
B10	Q_{II}^G	119.8	Q_{II}^G	122.2
B11	Q_{II}^G	118.4	No D	
B12	Q_{II}^G	123.6	No D	
C1	Q_{II}^G	127.0	Q_{II}^G	128.3
C2	Q_{II}^G	124.9	Q_{II}^G	129.3
C3	Q_{II}^G	122.2	Q_{II}^G	125.5
C4	Q_{II}^G	122.6	Q_{II}^G	126.4
C5	Q_{II}^G	131.5	Q_{II}^G	132.7

C6	Q_{II}^{G}	132.3	Q_{II}^{G}	133.0
C7	Q_{II}^{G}	128.9	Q_{II}^{G}	129.9
C8	Q_{II}^{G}	134.6	Q_{II}^{G}	135.4
C9	Q_{II}^{G}	134.8	Q_{II}^{G}	135.7
C10	Q_{II}^{G}	128.9	Q_{II}^{G}	134.8
C11	Q_{II}^{G}	121.3	L_{α}	42.3
C12	L_{α}	42.3	L_{α}	42.4
D1	Q_{II}^{G}	132.7	Q_{II}^{G}	134.6
D2	L_{α}	42.3	L_{α}	42.5
D3	Q_{II}^{G}	122.5	Q_{II}^{G}	125.2
D4	Q_{II}^{G}	124.9	Q_{II}^{G}	126.5
D5	Q_{II}^{G}	124.8	Q_{II}^{G}	126.1
D6	Q_{II}^{G}	132.3	Q_{II}^{G}	135.6
D7	Q_{II}^{G}	124.6	Q_{II}^{G}	126.7
D8	Q_{II}^{G}	133.8	Q_{II}^{G}	134.7
D9	Q_{II}^{G}	131.8	Q_{II}^{G}	133.7
D10	Q_{II}^{G}	131.6	Q_{II}^{G}	137.4
			QIID	87.3
D11	Q_{II}^{G}	128.4	Q_{II}^{G}	135.6
D12	Q_{II}^{G}	122.4	Q_{II}^{G}	125.8
E1	Q_{II}^{G}	141.4	Q_{II}^{G}	142.5
E2	Q_{II}^{G}	124.0	Q_{II}^{G}	125.7
E3	Q_{II}^{G}	139.0	Q_{II}^{G}	140.2
E4	Q_{II}^{G}	125.1	Q_{II}^{G}	126.4
E5	Q_{II}^{G}	142.1	Q_{II}^{G}	143.0
E6	Q_{II}^{G}	133.7	Q_{II}^{G}	134.4
E7	Q_{II}^{G}	143.0	Q_{II}^{G}	143.4
E8	Q_{II}^{G}	129.9	Q_{II}^{G}	133.2
E9	Q_{II}^{G}	141.9	Q_{II}^{G}	143.0
E10	L_{α}	43.4	L_{α}	131.0
E11	Q_{II}^{G}	125.7	Q_{II}^{G}	142.1
E12	L_{α}	42.1	L_{α}	42.3
F1	Q_{II}^{G}	140.8	Q_{II}^{G}	141.8
F2	Q_{II}^{G}	123.7	Q_{II}^{G}	125.3
F3	Q_{II}^{G}	141.8	Q_{II}^{G}	142.0
F4	Q_{II}^{G}	134.8	Q_{II}^{G}	135.3
F5	Q_{II}^{G}	141.6	Q_{II}^{G}	143.0
F6	Q_{II}^{G}	133.6	Q_{II}^{G}	134.3
F7	Q_{II}^{G}	142.7	Q_{II}^{G}	144.4
F8	Q_{II}^{G}	133.0	Q_{II}^{G}	135.1
F9	Q_{II}^{G}	144.0	Q_{II}^{G}	145.3
F10	Q_{II}^{G}	117.0	Q_{II}^{G}	134.2
F11	Q_{II}^{G}	131.3	Q_{II}^{G}	143.5
F12	Q_{II}^{G}	125.8	Q_{II}^{G}	127.2
G1	Q_{II}^{G}	144.0	No D	
G2	Q_{II}^{G}	122.2	No D	
G3	Q_{II}^{G}	142.0	Q_{II}^{G}	143.0
G4	Q_{II}^{G}	131.5	Q_{II}^{G}	132.1
G5	Q_{II}^{G}	143.0	Q_{II}^{G}	143.9
G6	Q_{II}^{G}	132.5	Q_{II}^{G}	133.2
G7	No D		Q_{II}^{G}	137.1
G8	Q_{II}^{G}	136.5	Q_{II}^{G}	136.9
G9	Q_{II}^{G}	132.2	Q_{II}^{G}	132.5
G10	L_{α}	48.4	Q_{II}^{G}	132.5

G11	Q_{II}^{G}	133.9	Q_{II}^{G}	134.2
G12	Q_{II}^{G}	125.9	Q_{II}^{G}	133.7
H1	Q_{II}^{G}	136.4	No D	
H2	Q_{II}^{G}	134.3	No D	
H3	Q_{II}^{G}	131.5	Q_{II}^{G}	131.9
H4	Q_{II}^{G}	123.8	Q_{II}^{G}	130.4
H5	Q_{II}^{G}	135.2	No D	
H6	Q_{II}^{G}	132.1	No D	
H7	Q_{II}^{G}	131.3	Q_{II}^{G}	131.9
H8	Q_{II}^{G}	131.9	Q_{II}^{G}	132.0
H9	Q_{II}^{G}	130.8	Q_{II}^{G}	136.6
H10	Q_{II}^{G}	125.2	Q_{II}^{G}	130.3
H11	Q_{II}^{G}	133.9	Q_{II}^{G}	140.5
H12	L_{α}	44.1	Q_{II}^{G}	130.7

Table S5. The phase adopted and associated lattice parameter adopted in the top and bottom sub-wells for each individual well in the 96-well plate following addition of PEG-ion screen to monoolein. Errors, not listed, were generally < 0.5 Å. *No D indicated that no diffraction was observed.