Statistical Analysis of data for "Controlling Cell Morphology on Amino Acid Modified Cellulose" by Kalaskar *et al.*

Key:

ns- no significant difference ($p>0.05$)
x – significant difference ($p<0.05$)
Cell – untreated cellulose

Contact Angle data (Fig. 1c)

Fmoc amino acids

Fmoc-amino acids	1	2	3	4	5	6	7	8	9
	F-Ser	F-Gly	F-Ala	F-Val	F-Leu	F-Ile	F-Phe	F-Tyr	F-Trp
F-Ser	-	ns	ns	ns	x	x	ns	ns	ns
F-Gly	ns	-	ns	x	x	ns	ns	x	ns
F-Ala	ns	ns	-	ns	ns	ns	ns	ns	ns
F-Val	ns	ns	ns	-	ns	ns	ns	ns	ns
F-Leu	x	x	ns	ns	-	ns	ns	ns	ns
F-Ile	x	x	ns	ns	ns	-	x	ns	ns
F-Phe	ns	ns	ns	ns	ns	x	-	ns	ns
F-Tyr	ns	x	ns	ns	ns	ns	ns	-	ns
F-Trp	ns	ns	ns	ns	ns	ns	ns	ns	-
Amino acids	1	2	3	4	5	6	7	8	9
	Ser	Gly	Ala	Val	Leu	Ile	Phe	Tyr	Trp
Ser	-	ns	x	x	x	x	x	x	x
Gly	ns	-	x	x	x	x	x	x	x
Ala	x	x	-	ns	x	x	x	ns	x
Val	x	x	ns	-	x	x	x	ns	x
Leu	x	x	x	x	-	ns	x	x	x
Ile	x	x	x	x	ns	-	x	x	x
Phe	x	x	x	x	x	x	-	ns	ns
Tyr	x	x	ns	ns	x	x	ns	-	ns
Trp	x	x	x	x	x	x	ns	ns	-

Mean Cell Area data (Figure 4a and b – serum (FBS))

Average cell area 4 hrs 10% FBS

4 hrs										
	Cell	Ser	Gly	Ala	Val	Leu	Ile	Phe	Tyr	Trp
Cell	-	ns	ns	ns	ns	ns	ns	x	x	x
Ser	ns	-	ns	ns	ns	ns	ns	x	x	x
Gly	ns	ns	-	ns	ns	ns	ns	x	x	x
Ala	ns	ns	ns	-	ns	ns	ns	x	x	x
Val	ns	ns	ns	ns	-	ns	ns	x	x	x
Leu	ns	ns	ns	ns	ns	-	ns	x	x	x
Ile	ns	ns	ns	ns	ns	ns	-	x	x	x
Phe	x	x	x	x	x	x	x	-	ns	ns
Tyr	x	x	x	x	x	x	x	ns	-	x
Trp	x	x	x	x	x	x	x	ns	x	-

Average cell area 4 hrs 0% FBS

4 hrs										
	Cell	Ser	Gly	Ala	Val	Leu	Ile	Phe	Tyr	Trp
Cell	-	ns	ns	ns	x	ns	ns	ns	ns	x
Ser	ns	-	ns	ns	x	ns	ns	ns	ns	x
Gly	ns	ns	-	ncs	x	ns	ns	ns	ns	x
Ala	ns	ns	ns	-	x	ns	ns	ns	x	x
Val	x	x	x	x	-	x	x	x	x	ns
Leu	ns	ns	ns	ns	x	-	ns	ns	ns	x
Ile	ns	ns	ns	ns	x	ns	-	ns	ns	x
Phe	ns	ns	ns	ns	x	ns	ns	-	x	ns
Tyr	ns	ns	ns	x	x	ns	ns	ns	-	x
Trp	x	x	x	x	x	x	x	ns	x	-

Average cell area 24 hrs 10% FBS

24 hrs										
	Cell	Ser	Gly	Ala	Val	Leu	Ile	Phe	Tyr	Trp
Cell	-	ns	ns	ns	ns	ns	ns	ns	ns	x
Ser	ns	-	ns	ns	ns	ns	ns	x	ns	x
Gly	ns	ns	-	ns	ns	ns	ns	x	ns	x
Ala	ns	ns	ns	-	ns	ns	ns	x	ns	x
Val	ns	ns	ns	ns	-	ns	ns	x	ns	x
Leu	ns	ns	ns	ns	ns	-	ns	x	ns	x
Ile	ns	ns	ns	ns	ns	ns	-	x	ns	x
Phe	ns	x	x	x	x	x	x	-	x	ns
Tyr	ns	ns	ns	ns	ns	ns	ns	x	-	x
Trp	x	x	x	x	x	x	x	ns	x	-

Average cell area 24 hrs 0% FBS

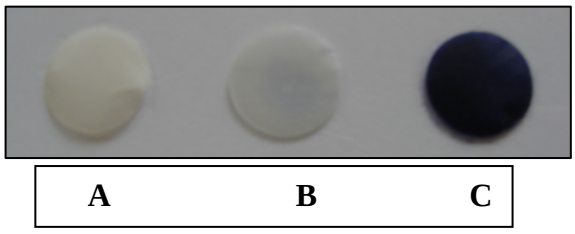
24 hrs										
	Cell	Ser	Gly	Ala	Val	Leu	Ile	Phe	Tyr	Trp
Cell	-	ns	ns	x	x	x	x	ns	ns	x
Ser	ns	-	ns	x	x	X	ns	ns	ns	x
Gly	ns	ns	-	x	x	X	ns	ns	ns	x
Ala	x	x	x	-	x	x	x	x	x	ns
Val	x	x	x	x	-	ns	ns	ns	ns	ns
Leu	x	x	x	x	ns	-	ns	x	ns	ns
Ile	x	ns	ns	x	ns	ns	-	ns	ns	ns
Phe	ns	ns	ns	x	ns	x	ns	-	ns	x
Tyr	ns	ns	ns	x	ns	ns	ns	ns	-	ns
Trp	x	x	x	ns	ns	ns	ns	x	ns	-

Fibronectin absorption from 10% FBS data (Fig.5a)

1 hr	1	2	3	4	5	6	7	8	9	10
	Cell	Ser	Gly	Ala	Val	Leu	Ile	Phe	Tyr	Trp
Cell	_	ns	ns	*	*	ns	*	*	*	*
Ser	ns	_	ns	*	*	ns	*	*	*	*
Gly	ns	ns	_	*	*	ns	*	*	*	*
Ala	*	*	*	_	*	*	ns	*	*	*
Val	*	*	*	*	_	*	*	*	*	*
Leu	ns	ns	ns	*	*	_	*	*	*	*
Ile	*	*	*	Ns	*	*	_	*	*	*
Phe	*	*	*		*	*	*	_	ns	ns
Tyr	*	*	*	*	*	*	*	ns	_	ns
Trp	*	*	*	*	*	*	*	ns	ns	_

Kaiser Test Result

A image of a typical Kaiser test is shown below



where (A) is an unmodified cellulose sample (Cell), (B) an Fmoc-protected Trp modified sample and (C) is an Fmoc-deprotected Trp modified sample.

ToF-SIMS data for amino acid modified cellulose samples