## Supplementary tables

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Subjects (N = 68)	All SYS AE (n = 43)			
	Probable	Possible		
Subjects	14	29		
(%)	(32.6)	(67.4)		
Age (in				
years)				
Median	30	29		
(range)	21 – 40	23 - 50		
Gender				
Male	9	16		
(%)	(64.3)	(55.2)		
Ethnicity				
n (%)				
Chinese	10	22		
	(71.4)	(75.9)		
Malay	2 (14.3)	2 (6.9)		
Indian	0 (0)	3 (10.3)		
Others <sup>A</sup>	2 (14.3)	2 (6.9)		
BMI kg/m <sup>2</sup>				
Mean	22.1	22.0		
(±SD)	(±2.8)	(±3.0)		

Supplementary Table 1. Demographics of subjects with possible and probable systemic AEs. Age, gender, ethnicity and BMI of the subjects that have completed the trial and analyzed for AEs attributed to YFLAV (N = 68). Those with systemic AEs are further subdivided by probable, or possible relatedness to YFLAV.

Toll receptor cascade         1.7540         0.0084         0.2287           NOD1 2 signaling pathway         1.7501         0.0119         0.2108           Innate immune system         1.7489         0.0040         0.1891           Interferon signaling         1.7243         0.0084         0.2206 f           Thrombin signaling through proteinase activated receptor PARS         1.7060         0.0096         0.2433           Signaling by ILS         1.6905         0.0281         0.2389           TRAF6 mediated IRF7 activation         1.6881         0.0103         0.2266           Actiated TAK1 mediates p38 MAPK activation         1.6860         0.0041         0.2160           TRAF6 mediated inducation of NFkB and MAP kinases upon TLR7 8 or 9 activation         1.6744         0.0124         0.2283           ADP signaling through P2RY12         1.6720         0.0057         0.2184           Circadian repression of expression by Rev ErbA         1.6680         0.0142         0.2131           Prostacyclin signaling through PLC β         1.6594         0.0091         0.2173           Prostacyclin receptor         1.6098         0.0115         0.24830	Gene-set name	NES	NOM p-	FDR q-
NOD1 2 signaling pathway   1.7501   0.0119   0.2108			value	value
Innate immune system	Toll receptor cascade	1.7540	0.0084	0.2287
Interferon signaling 1.7243 0.0084 0.2206 f Thrombin signaling through proteinase activated receptor PARS  Signaling by ILS 1.6905 0.0281 0.2389  TRAF6 mediated IRF7 activation 1.6881 0.0103 0.2266  Actiated TAK1 mediates p38 MAPK 1.6860 0.0041 0.2160  activation 1.6744 0.0124 0.2283  and MAP kinases upon TLR7 8 or 9 activation  ADP signaling through P2RY12 1.6720 0.0057 0.2184  Circadian repression of expression by Rev ErbA  G beta γ signaling through PLC β 1.6385 0.0112 0.2478  Prostacyclin receptor	NOD1 2 signaling pathway	1.7501	0.0119	0.2108
Thrombin signaling through proteinase activated receptor PARS  Signaling by ILS  TRAF6 mediated IRF7 activation  Actiated TAK1 mediates p38 MAPK activation  TRAF6 mediated inducation of NFkB and MAP kinases upon TLR7 8 or 9 activation  ADP signaling through P2RY12  Circadian repression of expression by Rev ErbA  G beta γ signaling through PLC β  Prostacyclin signaling through  1.6385  1.7060  1.6905  0.00281  0.2389  1.6881  0.0103  0.2266  1.6880  0.0041  0.2160  0.2283  1.6724  0.0057  0.2184  0.0124  0.2131  0.2173	Innate immune system	1.7489	0.0040	0.1891
activated receptor PARS       1.6905       0.0281       0.2389         TRAF6 mediated IRF7 activation       1.6881       0.0103       0.2266         Actiated TAK1 mediates p38 MAPK activation       1.6860       0.0041       0.2160         TRAF6 mediated inducation of NFkB and MAP kinases upon TLR7 8 or 9 activation       1.6744       0.0124       0.2283         ADP signaling through P2RY12       1.6720       0.0057       0.2184         Circadian repression of expression by Rev ErbA       1.6680       0.0142       0.2131         G beta γ signaling through PLC β       1.6594       0.0091       0.2173         Prostacyclin signaling through prostacyclin receptor       1.6385       0.0112       0.2478	Interferon signaling	1.7243	0.0084	0.2206 f
Signaling by ILS1.69050.02810.2389TRAF6 mediated IRF7 activation1.68810.01030.2266Actiated TAK1 mediates p38 MAPK activation1.68600.00410.2160TRAF6 mediated inducation of NFkB and MAP kinases upon TLR7 8 or 9 activation1.67440.01240.2283ADP signaling through P2RY121.67200.00570.2184Circadian repression of expression by Rev ErbA1.66800.01420.2131G beta $\gamma$ signaling through PLC $\beta$ 1.65940.00910.2173Prostacyclin signaling through prostacyclin receptor1.63850.01120.2478	Thrombin signaling through proteinase	1.7060	0.0096	0.2433
TRAF6 mediated IRF7 activation  1.6881  0.0103  0.2266  Actiated TAK1 mediates p38 MAPK     activation  TRAF6 mediated inducation of NFkB     and MAP kinases upon TLR7 8 or 9     activation  ADP signaling through P2RY12  1.6720  0.0057  0.2184  Circadian repression of expression by Rev ErbA  G beta γ signaling through PLC β  Prostacyclin signaling through  1.6385  0.0112  0.2266  0.0041  0.2160  0.2184  0.2283  1.6720  0.0057  0.2184  0.0112  0.2131	activated receptor PARS			
Actiated TAK1 mediates p38 MAPK1.68600.00410.2160activation1.67440.01240.2283TRAF6 mediated inducation of NFkB and MAP kinases upon TLR7 8 or 9 activation1.67200.00570.2184ADP signaling through P2RY121.67200.00570.2184Circadian repression of expression by Rev ErbA1.66800.01420.2131G beta γ signaling through PLC β1.65940.00910.2173Prostacyclin signaling through prostacyclin receptor1.63850.01120.2478	Signaling by ILS	1.6905	0.0281	0.2389
activation $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	TRAF6 mediated IRF7 activation	1.6881	0.0103	0.2266
TRAF6 mediated inducation of NFkB  and MAP kinases upon TLR7 8 or 9  activation  ADP signaling through P2RY12  Circadian repression of expression by  Rev ErbA  G beta γ signaling through PLC β  Prostacyclin signaling through  prostacyclin receptor  1.6720  0.0057  0.2184  0.0142  0.2131  0.2173	Actiated TAK1 mediates p38 MAPK	1.6860	0.0041	0.2160
and MAP kinases upon TLR7 8 or 9   activation   ADP signaling through P2RY12 1.6720 0.0057 0.2184   Circadian repression of expression by 1.6680 0.0142 0.2131   Rev ErbA 1.6594 0.0091 0.2173   Prostacyclin signaling through prostacyclin receptor 1.6385 0.0112 0.2478	activation			
activation $\begin{array}{c ccccccccccccccccccccccccccccccccccc$	TRAF6 mediated inducation of NFkB	1.6744	0.0124	0.2283
ADP signaling through P2RY12 1.6720 0.0057 0.2184  Circadian repression of expression by 1.6680 0.0142 0.2131  Rev ErbA 1.6594 0.0091 0.2173  Prostacyclin signaling through PLC β 1.6385 0.0112 0.2478  prostacyclin receptor	and MAP kinases upon TLR7 8 or 9			
Circadian repression of expression by $1.6680$ $0.0142$ $0.2131$ Rev ErbA $0.0091$ $0.0091$ $0.0091$ Prostacyclin signaling through $0.0091$	activation			
Rev ErbA	ADP signaling through P2RY12	1.6720	0.0057	0.2184
G beta $\gamma$ signaling through PLC $\beta$ 1.6594 0.0091 0.2173  Prostacyclin signaling through 1.6385 0.0112 0.2478  prostacyclin receptor	Circadian repression of expression by	1.6680	0.0142	0.2131
Prostacyclin signaling through 1.6385 0.0112 0.2478 prostacyclin receptor	Rev ErbA			
prostacyclin receptor	G beta $\gamma$ signaling through PLC $\beta$	1.6594	0.0091	0.2173
	Prostacyclin signaling through	1.6385	0.0112	0.2478
Signaling by hippo         1.6098         0.0115         0.24830	prostacyclin receptor			
	Signaling by hippo	1.6098	0.0115	0.24830

Supplementary Table 2. GSEA findings of systemic AEs following YF vaccination. Summary of up-regulated gene-sets from venous blood microarray data in subjects with delayed AEs (n=18) compared to subjects without AEs (n=8), at day 1 versus day 0 post-vaccination. Gene-sets with FDR q < 0.25, ranked based on normalized enrichment scores (NES). Nominal (NOM) p-values of the gene sets are shown.