Supplemental data for:

Impaired Activity of Blood Coagulant Factor XIII in Patients with Necrotizing Enterocolitis

Guo-Zhong Tao¹, Bo Liu¹, Rong Zhang¹, Gigi Liu^{1,2}, Fizan Abdullah², Mary Cay Harris³, Mary Brandt⁴, Richard Ehrenkranz⁵, Corinna Bowers^{6,7}, Camilia R. Martin⁸, R. Lawrence Moss^{6,7} and Karl G. Sylvester^{1,9,10} ¹Department of Surgery, Stanford University School of Medicine, Stanford, USA ²Department of Surgery, Johns Hopkins University School of Medicine, Baltimore, USA ³Department of Pediatrics, Children's Hospital of Philadelphia, Philadelphia, USA ⁴Department of Surgery, Texas Children's Hospital, Baylor College of Medicine, Houston, USA ⁵Department of Pediatric Surgery, Nationwide Children's Hospital, Columbus, USA ⁶Division of Pediatric Surgery, Nationwide Children's Hospital, Columbus, USA ⁸Department of Neonatology, Beth Israel Deaconess Medical Center, Boston, USA ⁹Lucile Packard Children's Hospital Stanford, USA ¹⁰ Center for Fetal and Maternal Health, Stanford Children's Health, Stanford, USA

Corresponding Author:

Karl G. Sylvester, M.D. Department of Surgery, Division of Pediatric Surgery Stanford University School of Medicine Hagey Laboratory for Regenerative Medicine 257 Campus Drive Stanford, CA 94305-5148 Email: sylvester@stanford.edu Phone: (650) 804-0597 Fax: (650) 725-557

		Modif	Platelet count (~ x1000 per μl)				
	IA	IB	IIA	IIB	IIIA	IIIB	Mean ± SD
NEC-M (n=20)	3	6	7	4	0	0	307 ±142
NEC-S (n=20)	0	0	0	0	3	17	190 ±100*

Supplemental Table-1. Bell's stage and platelet count for enrolled patients with NEC

(Student *t*-test, *p=0.04 compared to NEC-M cohort)

		NEC	Sepsis
		N=40	N=20
Culture result			
	Positive	3	4
	Negative	32	7
	Unknown**	5	9
Microorganism			
0	Candida	1	0
	Enterococcus faecalis	1	0
	Staphylococcus aureus	0	1
	Staphylococcus epidermidis	1	3

Supplemental Table-2. Blood culture result for preterm infants enrolled in this study

(**including pending/uncertain data for NEC or clinical sepsis)



Supplemental Fig 1. Comparison of plasma abundant proteins by SDS-PAGE

Pooled plasma samples from indicated newborn cohorts were separated by onedimensional SDS-PAGE and visualized by staining of coomassie brilliant blue. Note that protein bands indicated by arrows were altered among the groups and excised for MS/MS assay.

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13		Pechame: Full=Alpha-2-macroglobulin: Short=Alpha-2-M: Al	TP100478003	163 kDa	+ Homo																		0.914	0.009		
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15		RecName: Full=Hemoglobin subunit alpha: AltName: Full=Alp	h IPI00410714	15 kDa	Homo																۰.				1	
16	1	RecName: Full=Coagulation factor X: AltName: Full=Stuart fa	c IPI00019576	55 kDa	Homo		•				•															
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21	4	RecName: Full=Complement factor I; AltName: Full=C3B/C48	IPI0029186	66 kDa	Homo	•	•					•			•	•				•	•				0	
22	V	alpha-2-HS-glycoprotein [Homo sapiens].	IPI0095368	39 kDa	Homo																			0.359	6 0	
23	1	RecName: Full=Junction plakoglobin; AltName: Full=Catenin	g IPI00554711	82 kDa	Homo	•	•	•			• •			•	•	•	•	•		•	٠	•		0.02.	0	
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25	5	RecName: Full=Hemoglobin subunit gamma-2; AltName:	IPI00554676	16 kDa	* Homo	•					•	•								•			•	-	0	
26	2	RecName: Full=Beta-2-glycoprotein 1; AltName: Full=APC inh	i IPI0029882	38 kDa	Homo	•	•	•	•		•										•••			0.07.	0	
27	V	RecName: Full=Haptoglobin; Contains: RecName: Full=Haptoglobin; Contains; RecName: Full=Haptoglobin; Contains; RecName: Full=Haptoglobin; Contains; RecName: Full=Haptoglobin; RecName; Full=Haptoglobin; Contains; RecName; Full=Hapt	J IPI00641737	45 kDa	Homo		•										3			••			0.009	6	0	
28		RecName: Full=Alpha-1-antichymotrypsin; Short=ACT; AltNa	IPI0055099	48 kDa	Homo	•					•				••		•				•••			0.219		
29		Rechame: Full=Dermcidin; AltName: Full=Preproteolysin; Cor	IL IPI00027547	11 KDa	Homo						-									1			-			
30		Rechame: Full=Protein AMBP; Contains: Rechame:	1P100022426	39 KDa	Homo			1			•				•	-					•		0.119	0.02.	. 0	
31		Rechame: Full=Desmoplakin; Short=DP; Althame: Full=250/2	···· 1P10001393	332 KDa	Homo			3								•								-	- 0	

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IPI00219713 (100%), 51,513.3 Da

RecName: Full=Fibrinogen gamma chain; Flags: Precursor.

30 exclusive unique peptides, 48 exclusive unique spectra, 117 total spectra, 309/453 amino acids (68% coverage)



Supplemental Fig 2. Identification of the target protein by mass spectrometry

A) FGG as indicated by arrow was identified as the most likely candidate protein with the highest score.
B) 68% of the full length FGG amino acid sequence (yellow highlight) was identified (upper), and spectra data from one peptide is shown as an example.



Supplemental **Fig 3.** Receiver-operating characteristic (ROC) curve analysis for NEC and control neonates



Supplemental Fig 4. FGG-dimer detection is different from D-dimer assay

Pooled plasma samples were subjected to immunoblot by D-dimer antibody after separation using non-reducing SDS-PAGE. A) D-dimer is detected at ~180kDa under non-reducing condition; but undetectable under reducing condition (not shown). Arrowhead is D-dimer protein band. B) The same plasma samples were analyzed by immunoblot using FGG monoclonal antibody and the ~100kDa protein band as indicated by the arrow is FGG-dimers. *Indicated FGG-monomer. Note that FGG-dimer differs from D-dimer.



Supplemental Fig 5. NEC classification by Bell's staging decision tree