

Supplementary

Pharmacokinetics of Sofosbuvir/Velpatasvir and efficacy of an alternate day treatment in hemodialysis patients with chronic hepatitis C infection

Pajaree Chariyavilaskul^{1,2}, Nantaporn Prompila^{1,3}, Supeecha Wittayalertpanya^{1,2,3}, Sookruethai Lekhyananda⁴, Wisit Prasithsirikul⁵, Thananda Trakarnvanich⁶, Somboon Jeenapongsa⁷, Paweena Susantitaphong^{8,9}, Stephen Kerr¹⁰, Anchalee Avihingsanon¹¹, Pisit Tangkitwanich¹², Kearkiat Praditpornsilpa^{8,*}

¹Center of Excellence in Clinical Pharmacokinetics and Pharmacogenomics, Faculty of Medicine, Chulalongkorn University, Bangkok, Thailand.

²Department of Pharmacology, Faculty of Medicine, Chulalongkorn University, Bangkok, Thailand.

³Chula Pharmacokinetic Research Center, Faculty of Medicine, Chulalongkorn University, Bangkok, Thailand.

⁴The Kidney Foundation of Thailand, Bangkok, Thailand.

⁵Bamrasnaradura Infectious Institute, Department of Disease Control, Ministry of Public Health, Thailand.

⁶Faculty of Medicine, Vajira Hospital, Navamindradhiraj University, Bangkok, Thailand.

⁷Phichit Hospital, Ministry of Public Health, Phicit, Thailand.

⁸Division of Nephrology, Department of Medicine, Faculty of Medicine, Chulalongkorn University, Bangkok, Thailand.

⁹Center of Excellence for Metabolic Bone Disease in CKD Patients, Faculty of Medicine, Chulalongkorn University, Bangkok, Thailand.

¹⁰Biostatistics Excellence Center, Faculty of Medicine, Chulalongkorn University, Bangkok, Thailand.

¹¹The HIV Netherlands Australia Thailand Research Collaboration (HIV-NAT), Thai Red Cross AIDS Research Center, Bangkok, Thailand.

¹²Department of Biochemistry, Faculty of Medicine, Chulalongkorn University, Bangkok, Thailand.

***Correspondence**

Kearkiat Praditpornsilpa

Department of Medicine, Faculty of Medicine, Chulalongkorn University, Bangkok, Thailand

Email: kearkiat@hotmail.com

Table S1 LLOQ and accuracy and precision. For plasma

Analytes		Intra-batch		Inter-batch	
		%Accuracy	%CV	%Accuracy	%CV
Sofosbuvir	LLOQ (0.202 ng/ml)	113.168	9.721	103.234	9.407
	LQC (0.606 ng/ml)	100.891	10.416	105.479	3.784
	MQC (1514.801 ng/ml)	92.250	7.218	98.983	5.936
	HQC (3029.602 ng/ml)	90.788	0.569	99.568	8.008
GS-331007	LLOQ (10.110 ng/ml)	94.991	8.454	101.475	5.593
	LQC (30.059 ng/ml)	99.409	2.646	96.671	2.459
	MQC (1001.954 ng/ml)	99.415	2.443	98.668	1.013
	HQC (2504.884 ng/ml)	93.315	0.665	10.256	7.206
Velpatasvir	LLOQ (2.513 ng/ml)	100.390	4.295	97.676	3.307
	LQC (7.536 ng/ml)	98.792	3.864	97.504	2.178
	MQC (609.185 ng/ml)	92.932	2.205	97.982	4.511
	HQC (1218.370 ng/ml)	107.074	1.034	103.308	3.436

For dialysate

Analytes		Intra-batch		Inter-batch	
		%Accuracy	%CV	%Accuracy	%CV
Sofosbuvir	LLOQ (0.203 ng/ml)	97.635	7.094	102.003	5.320
	LQC (0.605 ng/ml)	95.339	8.216	97.928	2.569
	MQC (406.553 ng/ml)	101.584	2.638	98.796	3.256
	HQC (813.106 ng/ml)	97.881	2.520	98.221	0.395
GS-331007	LLOQ (9.995 ng/ml)	100.804	2.838	106.777	5.341
	LQC (29.777 ng/ml)	92.236	2.472	93.050	0.819
	MQC (402.391 ng/ml)	102.548	4.114	98.701	3.392
	HQC (804.782 ng/ml)	100.957	2.253	99.675	2.989
Velpatasvir	LLOQ (3.057 ng/ml)	97.743	5.700	95.656	5.701
	LQC (9.161 ng/ml)	99.985	5.700	98.205	4.565
	MQC (78.750 ng/ml)	97.639	5.630	97.328	2.088
	HQC (157.500 ng/ml)	90.984	2.362	93.147	4.698

Table S2 Post-preparative stability for plasma (autosampler stability).

Analytes	Concentrations	%Deviation
Sofosbuvir	LQC (0.606 ng/ml)	-5.455
	HQC (3029.602 ng/ml)	+0.002
GS-331007	LQC (30.059 ng/ml)	+4.026
	HQC (2504.884 ng/ml)	+8.594
Velpatasvir	LQC (7.536 ng/ml)	-0.738
	HQC (1218.370 ng/ml)	-0.391

Table S3 %Recovery for plasma.

Analytes	Concentrations	%Recovery
Sofosbuvir	LQC (0.606 ng/ml)	88.225
	HQC (3029.602 ng/ml)	95.580
GS-331007	LQC (30.059 ng/ml)	58.996
	HQC (2504.884 ng/ml)	57.952
Velpatasvir	LQC (7.536 ng/ml)	73.389
	HQC (1218.370 ng/ml)	75.111

Figure S1 Individual's plasma sofosbuvir concentrations between dialysis and non-dialysis sessions.

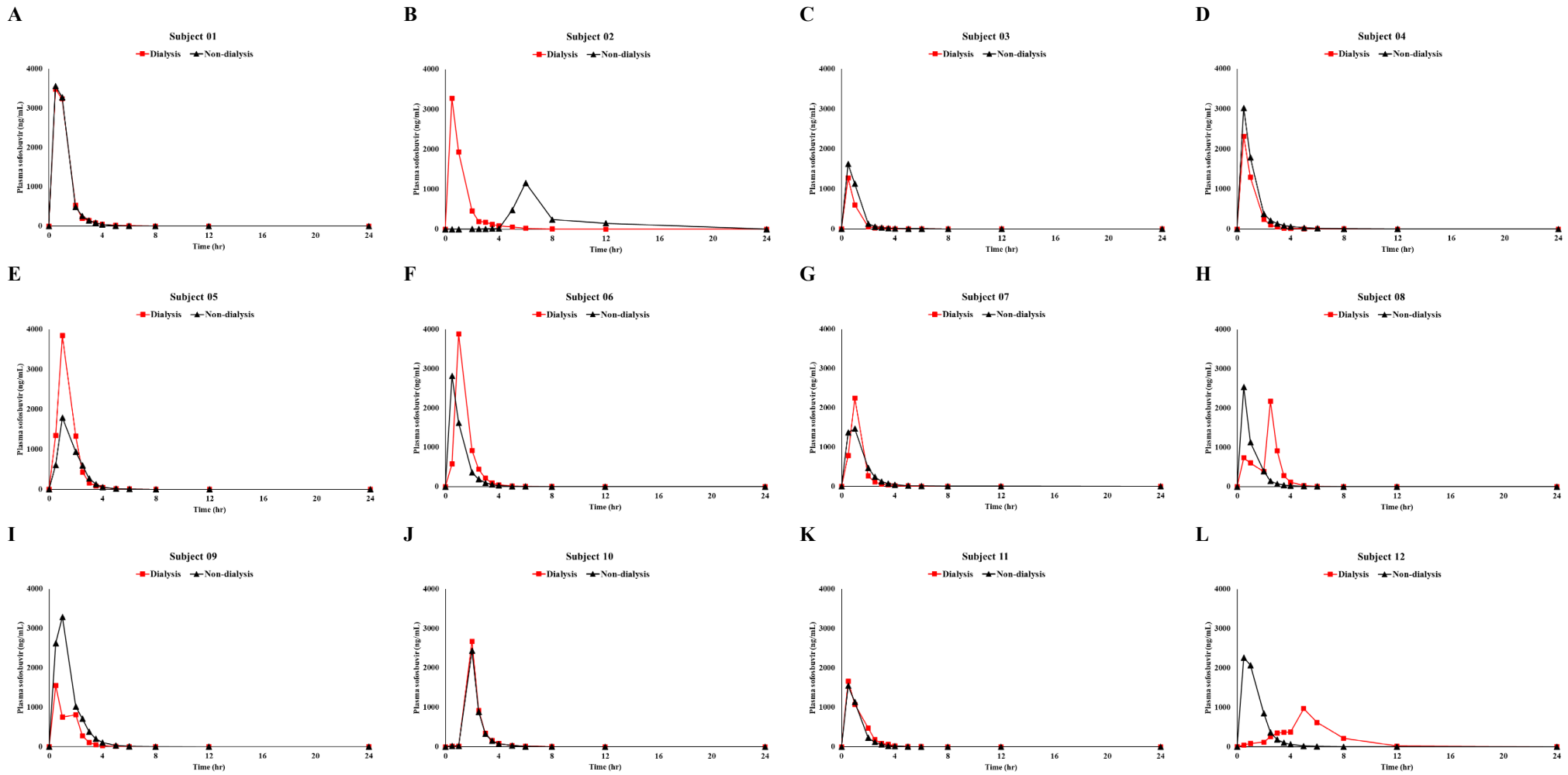


Figure S2 Individual's plasma GS-331007 concentrations between dialysis and non-dialysis sessions.

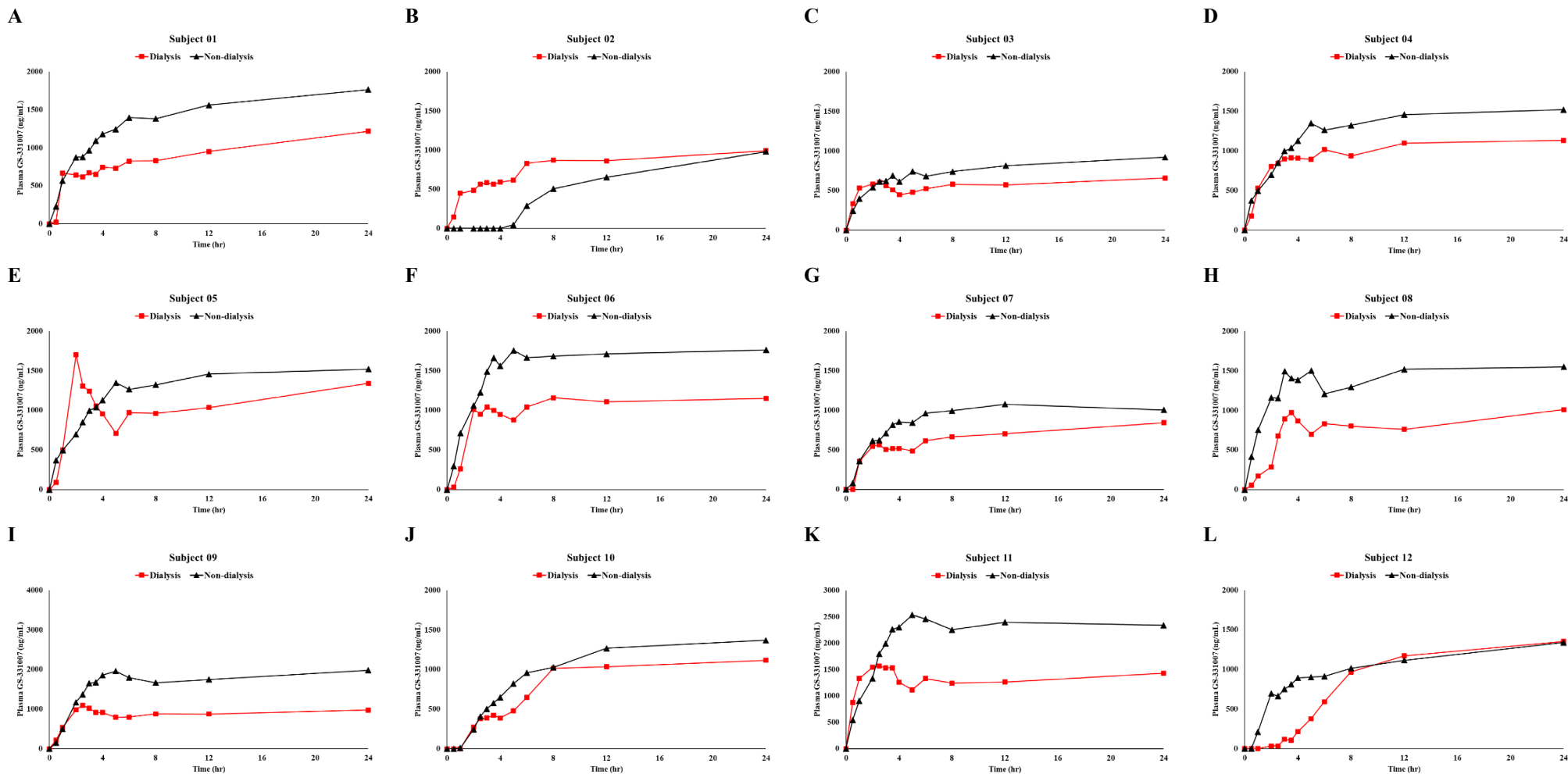


Figure S3 Individual's plasma velpatasvir concentrations between dialysis and non-dialysis sessions.

