

Supplementary Information

Genotyping simplified: Rationally designed antisense oligonucleotide-mediated PCR amplification-free colorimetric sensing of viral RNA in HCV genotypes 1 and 3

Almas Shamaila Mohammed^{1,3}, Aniket Balapure², Aleem Ahmed Khan⁴, Mahammad Nanne Khaja³, Ramakrishnan Ganesan^{2*}, and Jayati Ray Dutta^{1*}

¹Department of Biological Sciences, BITS Pilani Hyderabad Campus, Jawahar Nagar, Kapra Mandal, Medchal, Hyderabad- 500078, India

²Department of Chemistry, BITS Pilani Hyderabad Campus, Jawahar Nagar, Kapra Mandal, Medchal, Hyderabad-500078, India

³Bioviz Technologies Pvt. Ltd., Plot No. 46, UBI Colony, Road No. 3 Banjara Hills, Hyderabad-500034, India

⁴Centre for Liver Research & Diagnostics, Deccan College of Medical Sciences, Kanchan bagh, Hyderabad - 500058, India

Table 1. Viral load estimated by the RT-qPCR for the HCV, HIV and HBV positive samples used in the study

Sample code	Viral load (IU/mL)	Sample code	Viral load (IU/mL)
G1/HCV-1	1146300	G3/HCV-1	1128610
G1/HCV-2	57000	G3/HCV-2	9670
G1/HCV-3	3033840	G3/HCV-3	2069020
G1/HCV-4	124970	G3/HCV-4	512000
G1/HCV-5	1144570	G3/HCV-5	670000
G1/HCV-6	794560	G3/HCV-6	29800
G1/HCV-7	1082570	G3/HCV-7	12070
G1/HCV-8	120650	G3/HCV-8	700000
G1/HCV-9	200000	G3/HCV-9	864940
G1/HCV-10	700000	G3/HCV-10	3046770
G1/HCV-11	16000	G3/HCV-11	2611960
G1/HCV-12	9380	G3/HCV-12	1307010
G1/HCV-13	33020	G3/HCV-13	40000
G1/HCV-14	454350	G3/HCV-14	34760
G1/HCV-15	2000000	G3/HCV-15	44040
G1/HCV-16	565450	G3/HCV-16	779330
G1/HCV-17	6480	G3/HCV-17	62680
G1/HCV-18	158740	G3/HCV-18	84520
HIV	125,500	HBV	6,500

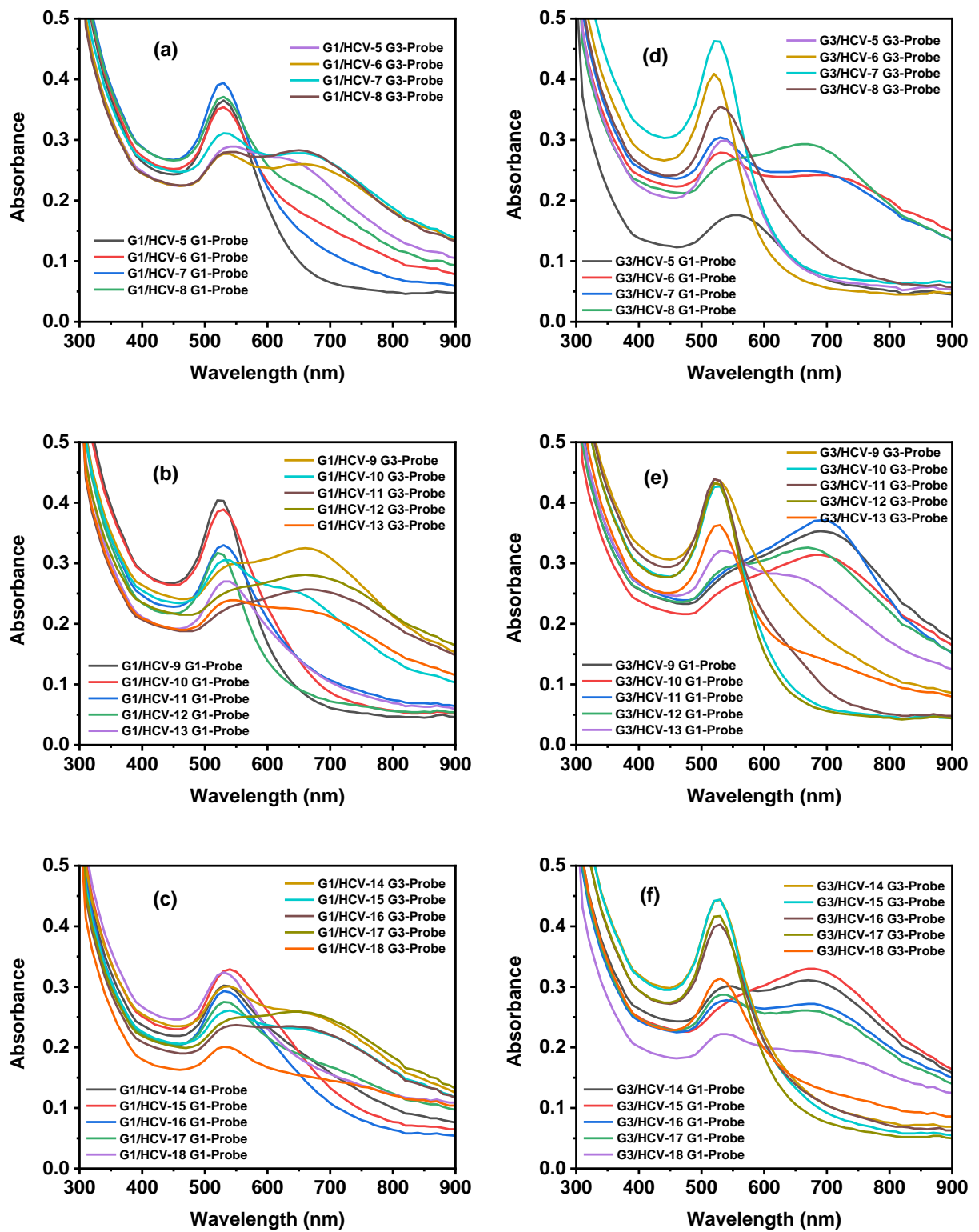


Figure S1. UV-visible spectra of HCV genotype 1 (a-c) and 3 (d-f) clinical samples tested with the Au NPs based assay against both G1 and G3 probes.

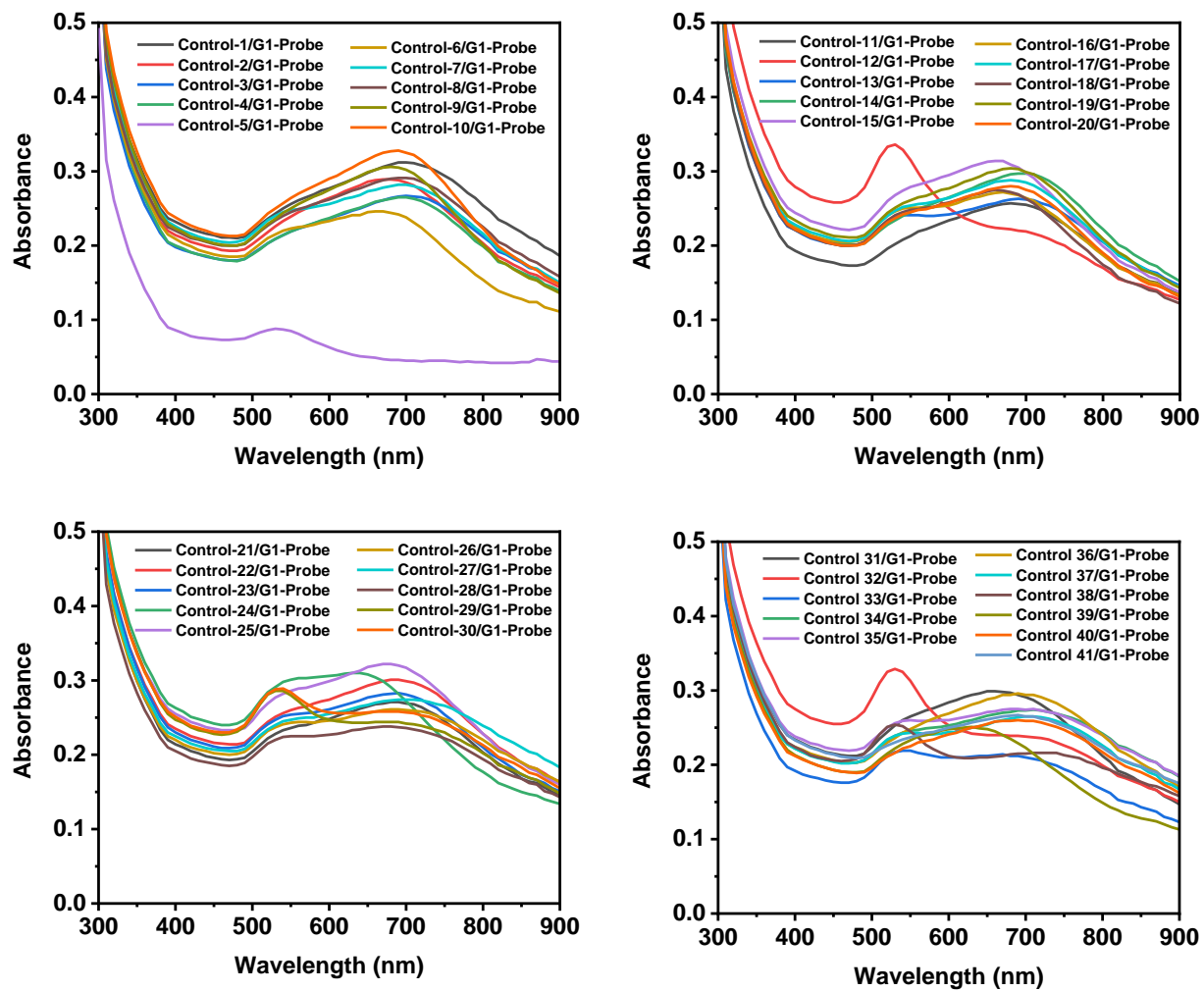


Figure S2. UV-visible spectra of healthy control samples tested against G1-probe with the Au NPs-based assay.

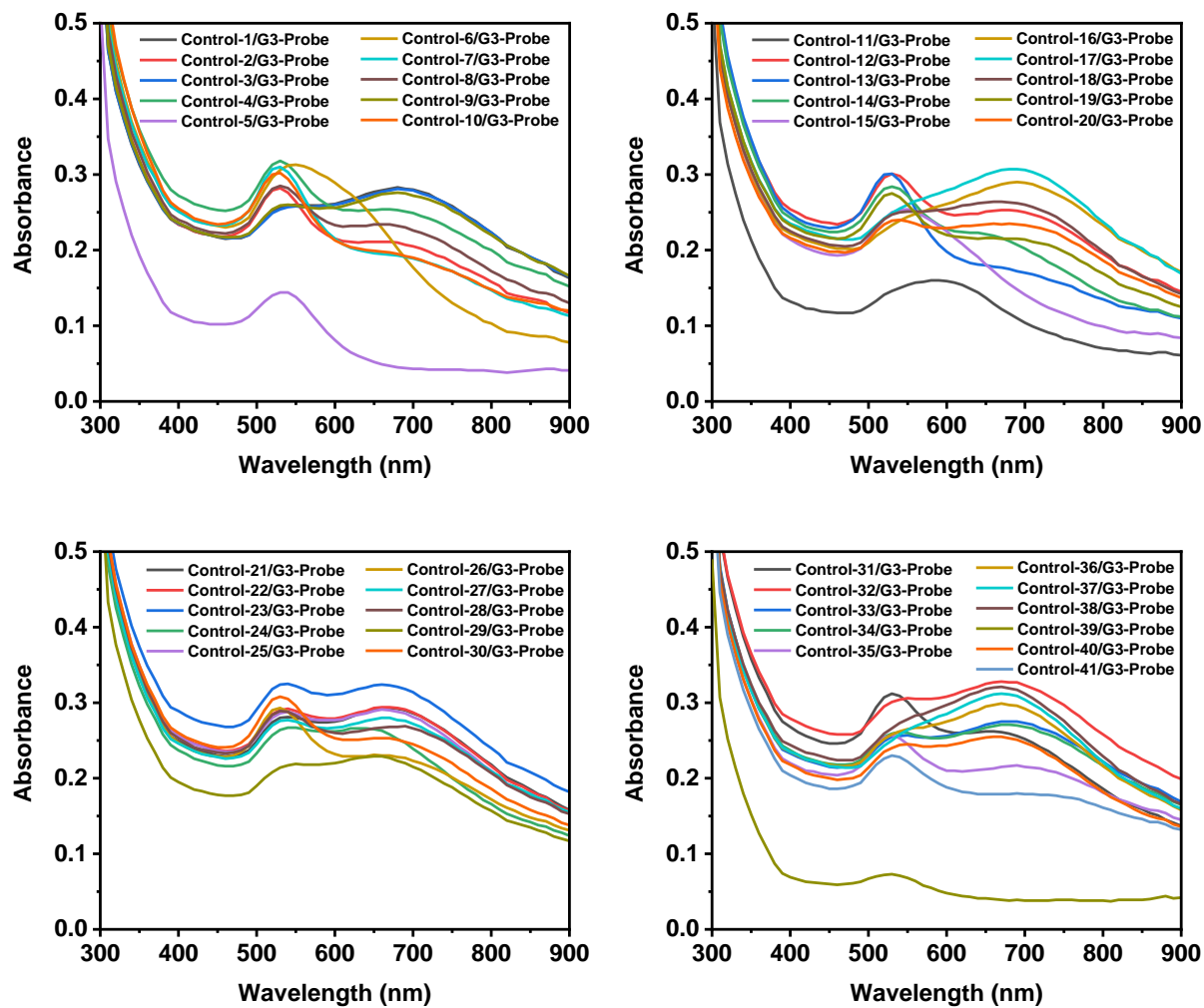


Figure S3. UV-visible spectra of healthy control samples tested against G3-probe with the Au NPs-based assay.



Figure S4. Digital photograph of the HCV genotype 1 clinical samples tested against both G1 and G3-probes in the Au NPs-based assay.



Figure S5. Digital photograph of the HCV genotype 3 clinical samples tested against both G1 and G3-probes in the Au NPs-based assay.



Figure S6. Digital photograph of the control clinical samples tested against G1-probe in the Au NPs-based assay.



Figure S7. Digital photograph of the control clinical samples tested against G3-probe in the Au NPs-based assay.