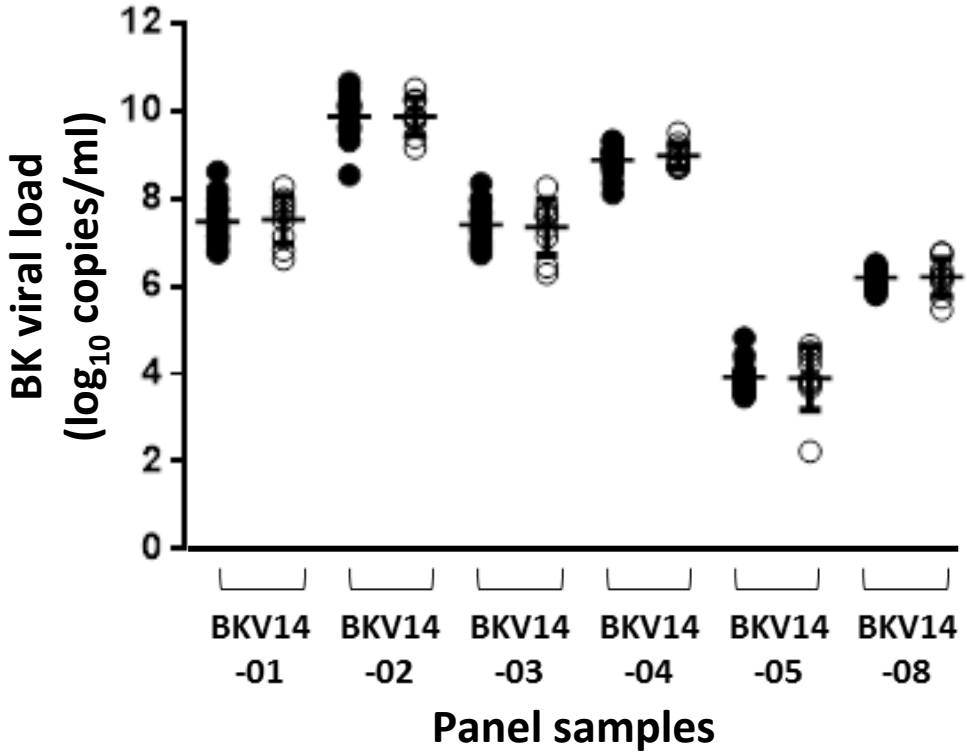

Figure S1: Comparison of R-gene vs other commercial kits for the 2014 panel. BK viral load results from R-gene users (n=15) and other commercial kits users (n=8) are presented in filled and blank circles, respectively. No difference was found between these groups (p>0,05 for each sample, Mann-Whitney test).

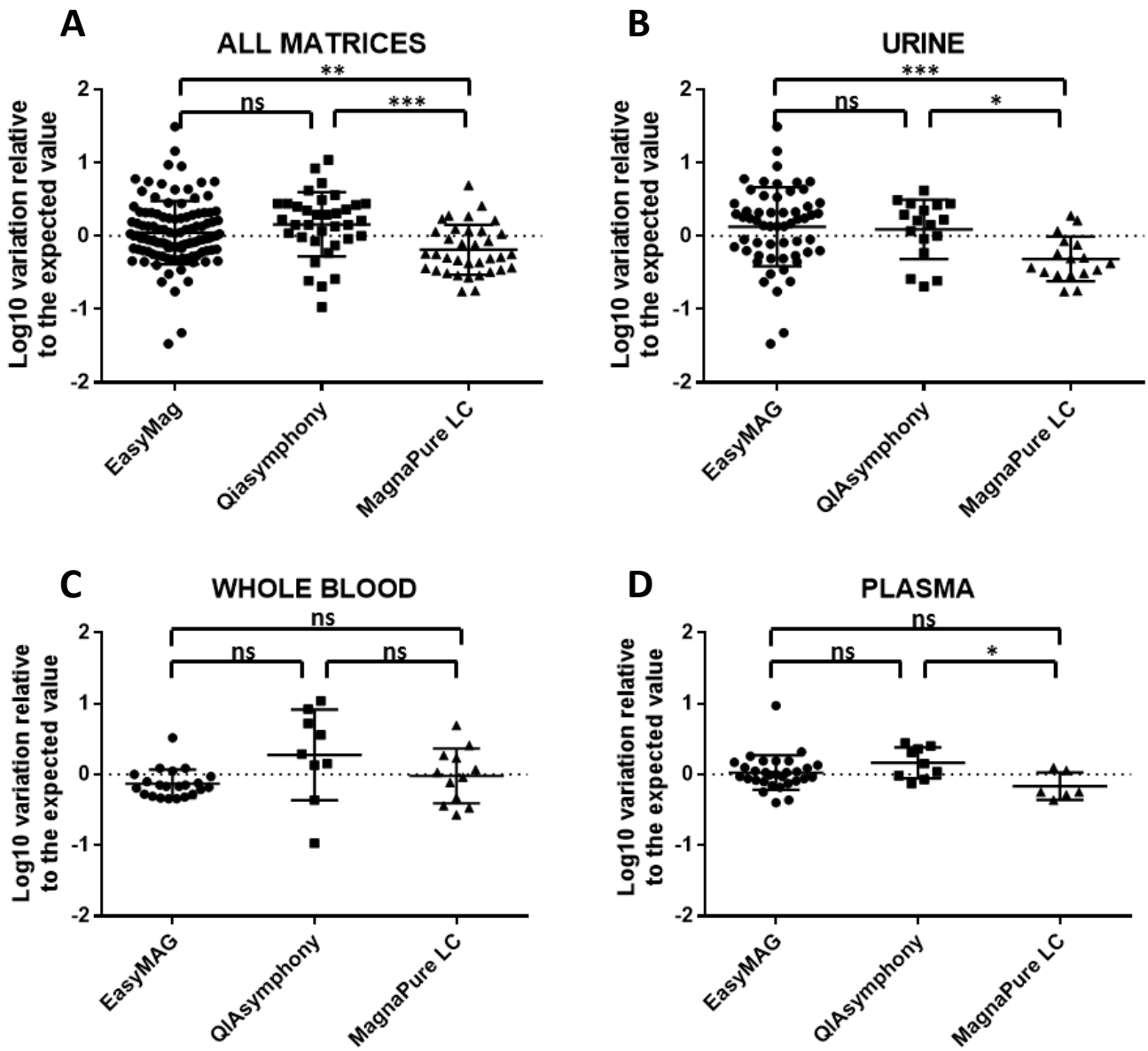

Figure S2: Comparison of the 3 main extractors for R-gene users. Log_{10} variation in reported results relative to the expected value for each positive sample was calculated. Results from R-gene users in 2013 (n=12) and 2014 (n=15) have been analyzed depending on the extraction method for all matrices (panel A) and for urine, whole blood and plasma samples in panels B, C and D, respectively. The expected value was the geometric mean of the results obtained specifically by R-gene users. The performance of DNA extraction was significantly different between the 3 platforms ($p<0.001$, Kruskall-Wallis test), especially for urine samples ($p=0.02$ between MagNA Pure LC and QIAsymphony, $p<0.001$ between MagNA Pure LC and EasyMAG, Dunn's test).* stands for $p < 0.05$, ** for $p < 0.01$, *** for $p < 0.001$ and ns for not significant.

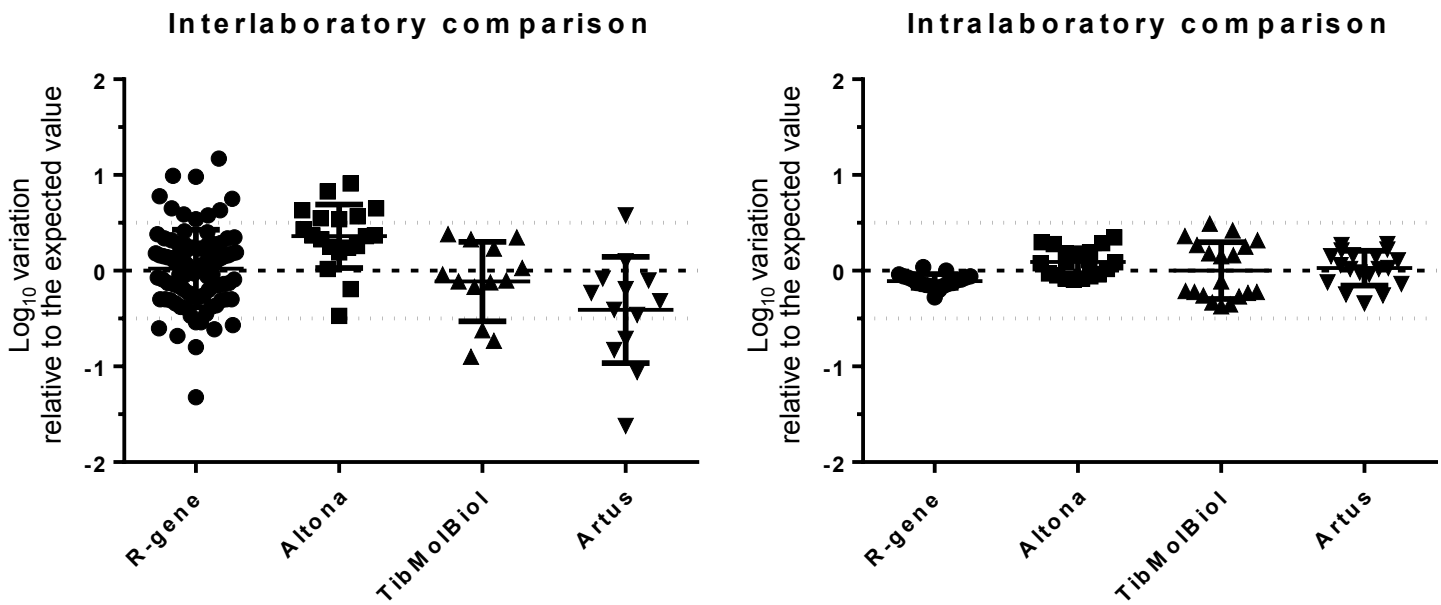

Figure S3: Interlaboratory and intralaboratory comparison of 4 commercial assays. Log_{10} variation in reported results relative to the expected value was calculated for each positive sample. Dashed lines indicate a difference of ± 0.5 log_{10} compared to the expected value. As for the intralaboratory comparison, DNA was purified using a single extraction platform.

Table S1: Target gene, amplicon size, calibrator and quantification range of all assays used by the participants.

Assay	Target gene	Amplicon size	Calibrator	Quantification range[a]
RealStar® BKV (Altona Diagnostics/Eurobio)	*LTAg*	-	Altona [b]	1×10^1 - 1×10^{10} copies/reaction
BK Virus R-gene™ (bioMérieux)	*StAg*	158 bp	Argène [b]	5×10^1-2×10^9 copies/reaction
Artus® BK Virus RG PCR (Qiagen GmbH)	*VP2-VP3*	274 bp	Artus [b]	5×10^1 - 9.26×10^7 copies/ml in plasma 1×10^2 - 1×10^9 copies/ml in urine
BKV ELITe MGB® (ELITechGroup Molecular Diagnostics)	*LTAg*	-	ELITe [b]	1×10^1 - 1×10^6 copies/reaction
LightMix® Polyomaviruses JC and BK (TibMolBiol)	*StAg*	175 bp	TibMolBiol [b]	1×10^2 - 1×10^6 copies/reaction
In-house 1	*StAg*	85 bp	Vircell [c]	3×10^2 - 1×10^{10} copies/ml 1.7×10^3 – 1.7×10^{14} copies/ml
In-house 2	*LTAg*	173 bp	ABI [d]	5×10^2 - 1×10^{10} copies/ml
In-house 3	*VP1*	182 bp	pBKV [e]	1×10^1 - 1×10^6 copies/reaction
In-house 4	*VP1/StAg*	97/67 bp	ABI [d]	2×10^2 - 2×10^8 copies/ml

[a] Quantification ranges are expressed in copies/reaction or copies/ml as indicated by the participating laboratories.
[b] Constitution of the commercial assays calibrators is proprietary.
[c] Vircell: AmpliRun® BK Virus DNA control (Vircell S.L, Granada, Spain)
[d] ABI: BKVMM Quantitated DNA Control (Advanced Biotechnologies, Columbia, USA)
[e] pBKV: PCR amplification product cloned into a vector

Table S2: Details on the extraction platforms, programs and real-time qPCR instruments used by the participants.

Extraction platforms		Number of users in 2013	2014	Extraction kit	Initial volume of sample (µl)	Elution volume (µl)	Extraction protocol	Real-time qPCR instruments
EasyMAG®	BioMérieux	7	11	NucliSENS®	200-500	50-100	Specific B	Mx3005p, Rotorgene, LightCycler 2.0, LightCycler 480, ABI 7500
QIAsymphony®	Qiagen	4	7	DSP Virus/pathogen mini kit	200	90	na	Rotorgene, LightCycler 480, ABI 7500
				DSP Virus/pathogen midi kit	400-1000	60-140		
				DSP DNA mini kit	200	90-100		
				DSP DNA midi kit	400	110-140		
EZ1	Qiagen	1	3	EZ1 DSP virus kit	200-300	120	na	Rotorgene, LightCycler480, CFX and Dx real-time systems
				EZ1 virus mini kit	150-200	90-120		
QIAxtractor®	Qiagen	1	0	QIAxtractor DX reagents	200	50	na	LightCycler 480
Biorobot M48	Qiagen	1	0	na	200	100	na	Rotorgene
MagNA Pure LC	Roche	3	6	DNA isolation kit High Performance	200	50-100	na	Rotorgene, Opticon, LightCycler 480, ABI 7500, ABI 7900
				Total Nucleic Acid High Performance	200	100		
MagNA Pure 96	Roche	2	2	DNA and Viral Nucleic Acid Small Volume Kit	200	100	na	LightCycler 2.0, LightCycler 480
MagNA Pure compact	Roche	1	0	na	200	50-100	na	ABI 7500

na : not available