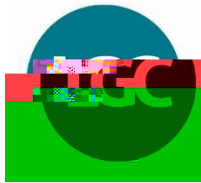
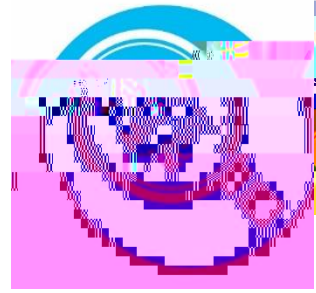


Implications of quantification in TB molecular diagnosis



Novel materials and methods for the detection, traceable monitoring and evaluation of antimicrobial resistance

Quantification of Mtb load in Tuberculosis to guide prognosis and predictive monitoring

- “ Strong requirement for biomarker(s) to assist treatment
 - . Informing treatment of individual
- “ Useful in evaluating new therapies/regimens
 - . Speeding up analysis of outcome (smear . ve after 2 months)
- “ Quantitative assessment of microbial load investigated
 - . Smear positivity grading
 - . Colony forming units
 - . Time to positivity
 - . Molecular quantification
 - “ gDNA
 - “ RNA

The International Journal of Biochemistry &

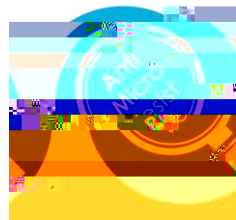
Medicine in focus

Alimuddin Zumla^a

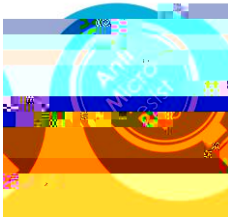
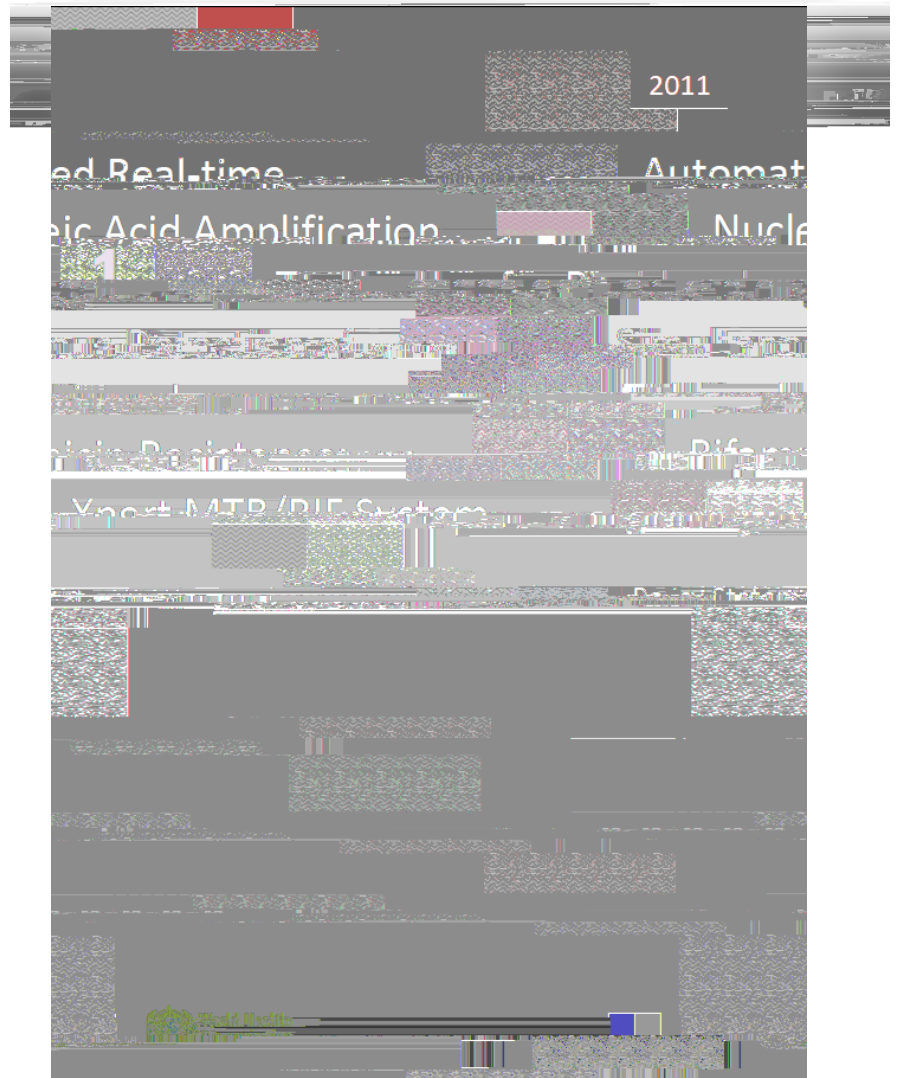
Jim E Huggott^a

Timothy D McHugh^{b,1}

^a Centre for Infectious Diseases, Royal Free and University College Medical School, University College London, White, 30 Guilford Street, London, WC1E 6BT, UK

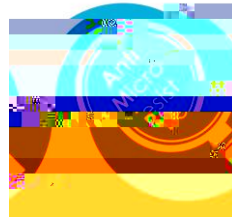
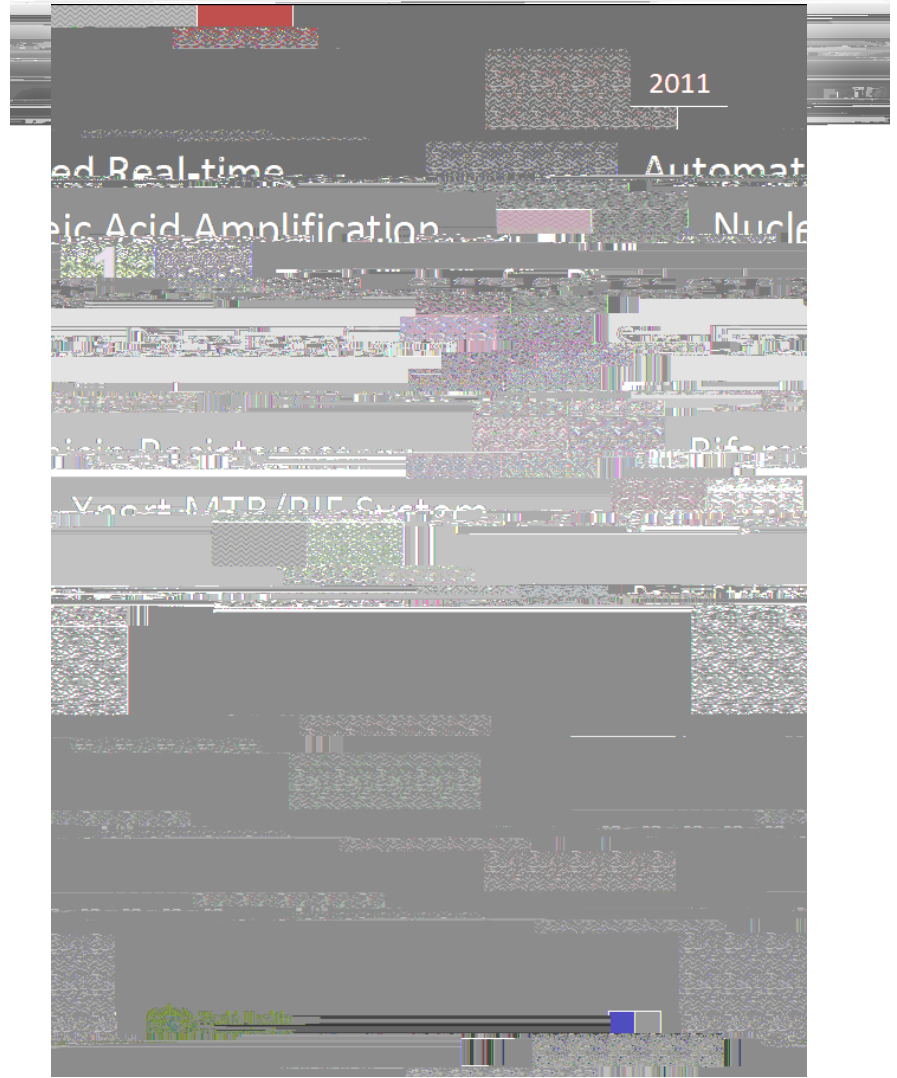


Xpert RIF/MTB



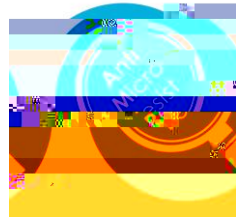
Quantification?

Xpert RIF/MTB



Inter laboratory study to investigate

- “ The technical error of molecular quantification of Mtb (independent of the patient)
- “ Quantitative reproducibility
 - . Methods (qPCR, Xpert MTB/RIF)
 - . Laboratories
- “ Potential role of EQA materials for quantification of Mtb using molecular methods



Inter-laboratory comparison

- “ Materials sent to eight clinical laboratories (3 vials of each)
 - . Three perform qPCR
 - . Six perform Xpert RIF/MTB
- “ 8 Laboratories

analytical
chemistry

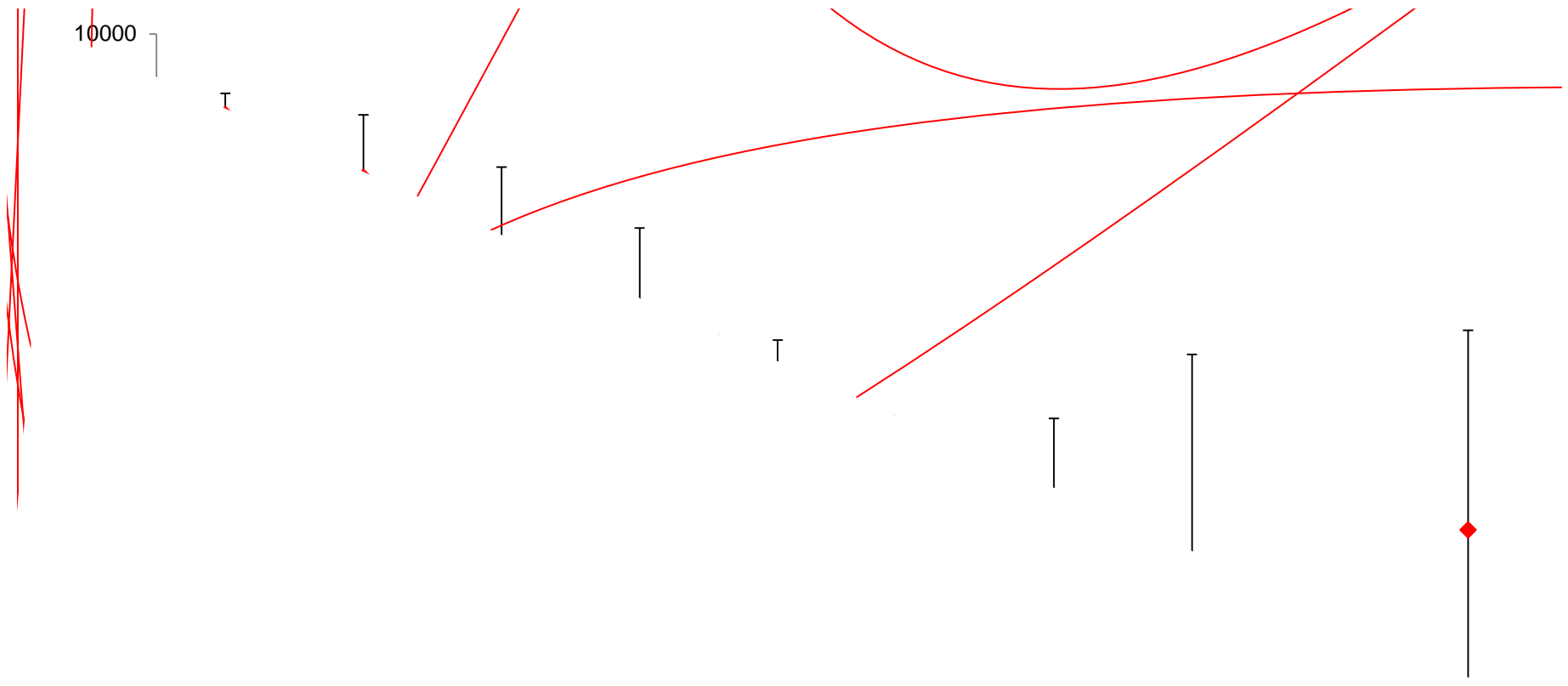
Article

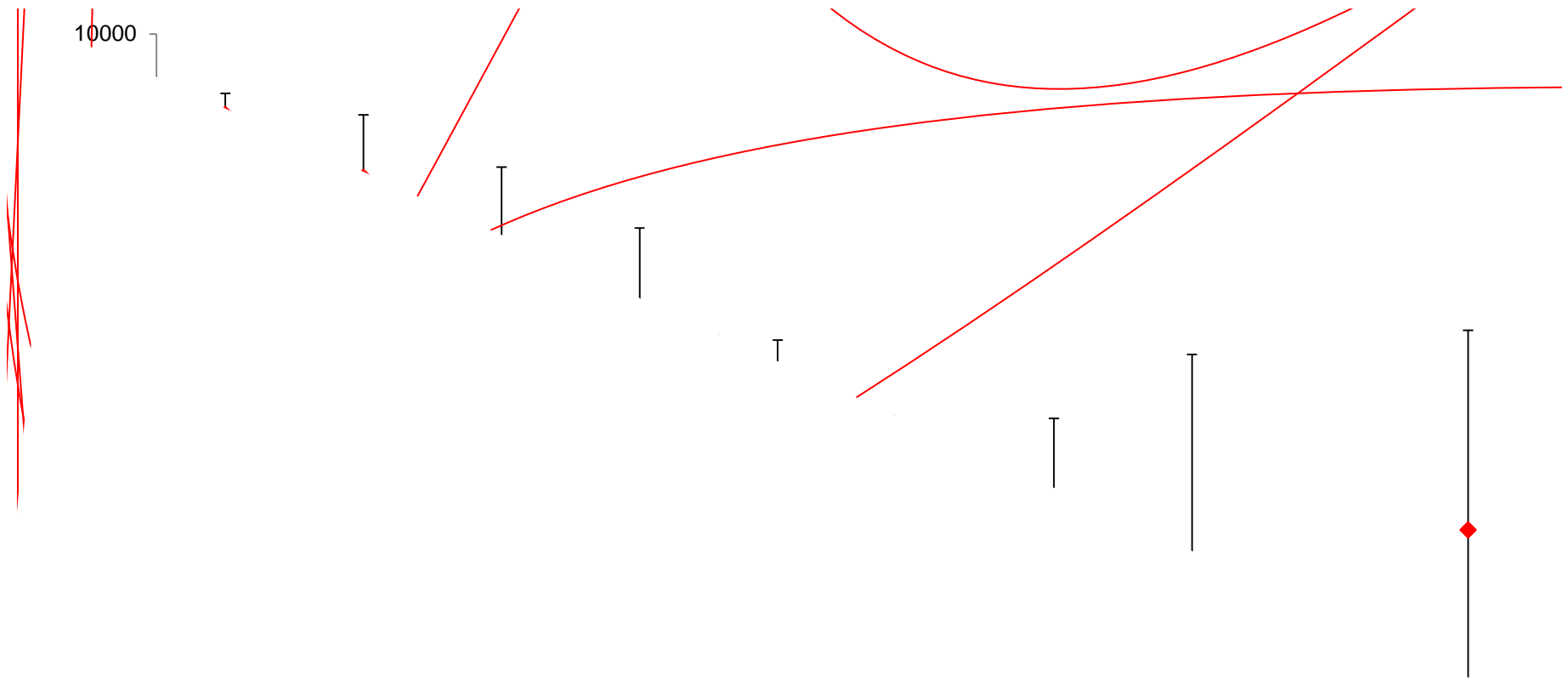
pubs.acs.org/ac

tuberculosis Complex by Digital PCR

Statistics Team, IGC, Teddington, Middlesex, TW11 0LY, United Kingdom







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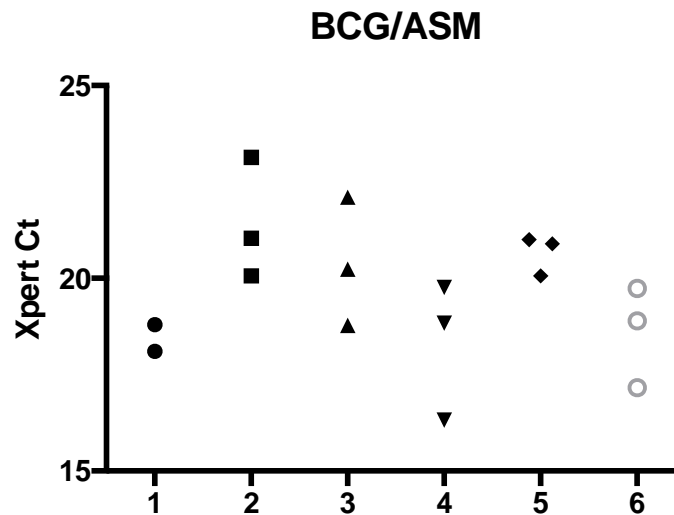
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One way anova to estimate within and between laboratory SD. Rough estimate of precision



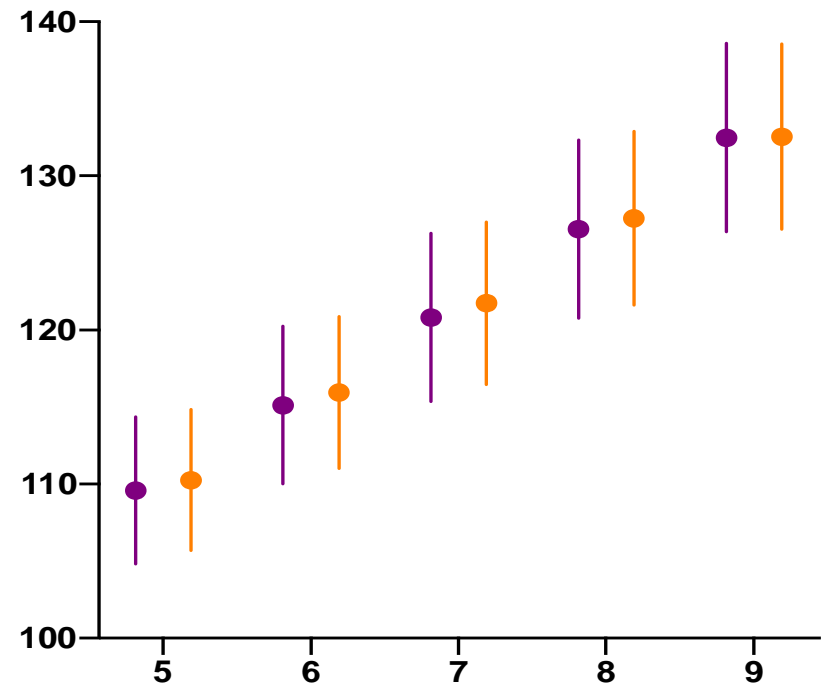
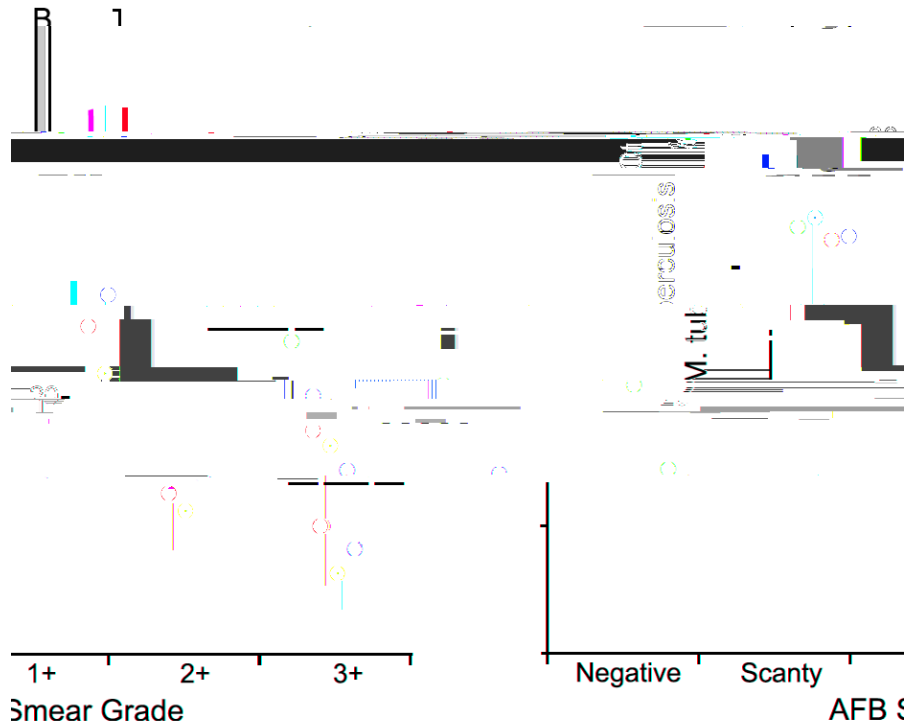
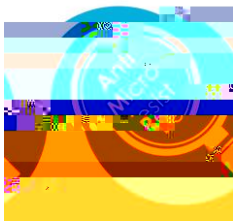
SD = ~1.7 Ct

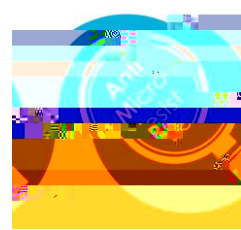
SD = ~1.4 Ct



Conclusions: Yersin MTP/DIF sensitization offers a novel and reliable
 to measure bacterial burden in the respiratory tract of patients. A research
 group is currently evaluating the utility of this assay in a clinical trial.

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Professor Marcus du Sautoy,

