Reliable Detection of Duffy x (Fy^x) – A Weak Variant of Duffy b (Fy^b) by a New Reagent Using Lateral Flow Technique.

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RESULTS
All samples with genotypic Fy^a positivity were correctly recognized as Fy^a positive by the MDMmulticard device (Figure 1A), but not always with Gel Technique and Tube method (Figure 1B; e.g. sample 158 is negative with all 4 Anti-Fy^b reagents, sample 150 shows a doubtful reaction with Anti-Fy^b monoclonal and a weak with ID-Card system).

METHODS
Freshly drawn and EDTA anticoagulated samples were from 42 random individuals previously determined serologically for Fy^a and Fy^b and 21 samples with standard Fy serotypes and FY^* genotypes previously derived by MALDI-TOF MS [2]. The 9 previously known FY^A/ FY^02W.01/02 heterozygous individuals were of specific interest for evaluation purpose and included 3 samples with previously identified phenotypic Fy^a positivity and 6 previously serologically “overseen” Fy^a cases (Table 1). All samples were tested by one person without prior knowledge of the existent phenotypes. Fy^a serology using a MDMmulticard lateral flow blood grouping device (Medion Grifols Diagnostics, Duedingen, Switzerland) was performed as follows: 100 µl of diluted whole blood were transferred to the application zone of the MDMmulticard cassette, followed by 300 µl of a rinsing solution. Results were interpreted after 5 minutes. Positive results were interpretable as distinct red bands, whereas negative results lack the respective bands.

SUMMARY/CONCLUSIONS
The MDMmulticard Anti-Fy^b reagent seems to reliably detect all Fy^b and Fy^a positive phenotypes. This study is ongoing as more data are needed in order to have statistically significant results. Technically, the combination of well selected clones with appropriate diagnostic techniques may lead to novel methods with increased diagnostic sensitivity. As shown previously, genotyping may serve as a valuable tool to create more specific and better characterized testing panels [3].

BIBLIOGRAPHY