Additional file 1: Summary of Notation

i .... index of the "rounds" of the interlaboratory comparison program

j .... index of the participants in each round

k .... index of the replicate measurements made by each participant in each round

N_m .... number of replicate measurements; N_m is always 3 for the data of this study

N_p .... total number of participants

N_{pi} .... number of participants in the ith round

N_s .... total number of rounds

N_{sj} .... number of rounds the jth participant participated in

N_t .... total number of sets of replicate measurements over all rounds and participants

$s(x_{ij})$ .... participant standard deviation for one set of replicate X measurements

s_L .... between-participant precision of the measurement process

s_{Li} .... between-participant precision in the ith round

s_r .... repeatability of the measurement process

s_{ri} .... repeatability in the ith round

s_{rj} .... repeatability of the jth participant

s_R .... reproducibility of the measurement process

s_{Ri} .... reproducibility in the ith round

$s_{I(T)j}$ .... intermediate precision over time for the jth participant

s_{Wj} .... among-round precision for the jth participant

X .... a particular expression measure; here, $\log_2(\text{MAS5})$

x_{ijk} .... k^{th} X measurement by j^{th} participant in i^{th} round

$\bar{x}_{ij}$ .... average of replicate measurements for the jth participant in i^{th} round

$\bar{\bar{x}}_i$ .... average of averages in the ith round

$\bar{\bar{x}}_j$ .... average of averages for the jth participant over all rounds

$\bar{\bar{\bar{x}}}$ .... grand average of averages over all rounds and participants

$<\cdot>$ .... mean or median of a list of independent values

$\{\cdot,\cdot\}$ .... set of two or more identically ordered lists