Author's response to reviews

Title: Noninvasive Fetal Trisomy Test (NIFTY) An Advanced Noninvasive Prenatal Diagnosis Methodology for Fetal Autosomal and Heterosomal Aneuploidies

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Author's response to reviews: see over
Dear Editors:

On behalf of my co-authors, I am submitting the manuscript “Non-invasive Fetal Trisomy Test (NIFTY): An Advanced Noninvasive Prenatal Diagnosis Methodology for Fetal Autosomal and Heterosomal Aneuploidies” for BMC Genomics.

Fetal aneuploidies is one of the main factors causing birth defect in the world. Our study develops a new noninvasive prenatal diagnosis methodology to detect fetal aneuploidies by massively parallel sequencing from maternal plasma. We combine optimized student’s t-test with locally weighted polynomial regression and binary hypothesizes to improve the accuracy of detection, and after the introduction of fetal gender determination this methodology could be used to classify heterosomal aneuploidies. We also recruit 903 samples to evaluate our methods and perform comparison with previous methods, indicating high specificity and sensitivity to aneuploidies detection. It can be a useful method to detect fetal aneuploidies without the risk of miscarriage and reduce the amount of pregnant women suffering from invasive prenatal diagnosis.

We certify that we have participated sufficiently in the work to take public responsibility for the appropriateness of the experimental design and method, and the collection, analysis, and interpretation of the data. We claim that none of the material in the paper has been published or is under consideration for publication elsewhere.

Best Regards.
Yours Sincerely,
Xiuqing Zhang

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