We would like to thank you for your careful and thorough reviewing our submitted manuscript. We sincerely appreciate your thoughtful comments and constructive suggestions, which help improve the quality of this manuscript.

All changes are made in the revised manuscript according to your scholastic suggestions. The questions raised by you are sincerely and respectfully answered in the revised manuscript and in this response letter.

**Your Comment:**1. The authors didn't give any information about statistical analysis, name of statistical tools, number of replicates.

Our Response:

All statistical analyses were performed with the Statistical Analysis System “R” software package. Data for the absorbance value, live and dead sperm, and hole number were subjected to one-way ANOVA, followed by the Tukey-Kramer test. Values are presented as the mean ± SEM (n = 5).

**Your Comment:**2. Figures containing cell images doesn't revealed data on the graphs. The quality of cell images is very poor and required changes. Now they aren't clear and scale bar on them isn't visible.

Our Response:

We have changed pictures in figure 4 and rearranged pictures in figure 6. For clear visibility, we have manually added scale bars in the pictures.

**Your Comment:**3. The Percoll density gradient centrifugation should be always performed in the same temperature, because density the Percoll vary in relation with temperature. The Authors didn't precise the stable and replicate temperature of cell separation via Percoll. This information is very important to replicate this method successfully by other scientists.

Our Response:

We revised the manuscript as follows:

Page 4, line 154:Perform the entire process of PDGC at room temperature.