## **Peer Review File**

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## <mark>Reviewer A</mark>

I appreciate this research that has included this type of male infertility. However, I would like to give following suggestions for the improvement of the manuscript.

Comment 1. Scientific language should be used. Reply: We have modified our text as advised. Changes in the text: all page.

Comment 2: There should be proper sequencing of the article. The introduction should be elaborated with rationale and objectives.

Reply: We have modified our text as advised and added the sequencing of each section. Changes in the text: All Page / the first section (Introduction).

Comment 3. Why was the testis tissue taken from patients with normal spermatogenesis? Is it ethically right to take testicular tissue of male with normal spermatogenesis.

Reply: Obstructive azoospermia (OA) patients were regarded as normal spermatogenesis and underwent the operation of testicular sperm aspiration. We have modified our text and added this information. We are very grateful to the reviewer A for this important comment. Thank you so much.

Changes in the text: Page 5 line 14 (section: 2.1 Testis samples).

Comment 4. Explain the method of selection of patients. Reply: We have modified our text and added the method of selection of patients. We are also very grateful to this important comment. Thank you so much. Changes in the text: Page 5 line 2 (section: *2.1 Testis samples*).

Comment 5. Statistical analysis should be explained with the tests applied. Reply: We have modified our text as advised. Changes in the text: Page 6 line 34 (section: *2.6 Statistical analysis*).

Comment 6. How did you classify upregulated and downregulated genes? A heat map should be given.

Reply: We have added the statistical method of classification of upregulated and downregulated genes and heat map. We are also very grateful to this important comment.

Changes in the text: Page 6 line 5 and figure 1 (section: 2.3 Image acquisition and gene expression analysis, Figure 1).

Comment 7. Give references of systems (line no. 163-170). Reply: We have modified our text as advised. Changes in the text: line 163-170 and Reference 22-24 (section: 2.3 Image acquisition and gene expression analysis and Reference 22-24).

Comment 8: Word "testis tissue" should be replaced by "testicular tissue" throughout the article. Reply: We have modified our text as advised. Changes in the text: Page 4 line 34/Page 5 line 22, 26/Page 7 line 24/Page 8 line 18.

Comment 9: Corrections are needed in the text on line no. 81, 100-103. Reply: We have modified our text as advised. Changes in the text: Page 3 line 14, 31.

## <mark>Reviewer B</mark>

It is a well-conceived, structured research, which provided valuable data that examined one new aspect of the molecular mechanisms behind SCOS. Thank you very much for your comments for our article.

Comment 1: It would be appropriate to summarize the introduction, transferring certain parts to the Discussion section. Reply: We have modified our text as advised. Changes in the text: Page 3-4.

Comment 2: It is necessary to specify the statistical methods and tests that were used in the section provided for this.

Reply: We have modified our text as advised. Changes in the text: Page 6 line, 34.