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10 Scheme of ELISA protocol used to assay of sperm PRM1 levels according to Nova lifetech Science Co.Ltd. Catalog No: E1407h.

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12 Distribution of obese males with respect to Body Mass Index (BMI).

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16 Pedigree analysis of 100 obese infertile cases and 100 controls in Mysore.
Proband consanguinity; BPR.PBCON= Both parental and proband consanguinity).

17 Representative pedigrees of 250 families with male obesity/ and infertility in Mysore. A: Consanguineous non-obese infertility, B: Obese infertility, C: Obesity.

The Roman number in the left side of the figure indicates the number of generation. The Arabic number below the symbol denotes the number of individual in the generation. The arrow directed to the filled symbol represents the proband.

18 Scatter plot showing a significant positive correlation \( (r=0.457, p<0.001) \) between seminal ROS concentration and BMI of all participants.

19 Scatter plot showing a significant positive correlation \( (r=0.372, p<0.001) \) between seminal ROS concentration and Lipid peroxidation (MDA concentration) of all participants.

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29 Result of High Resolution Melting analysis (HRM) for exon 25 of JHDM2A in cases and controls.

30 Multiple DNA sequences alignment of the variants obtained from high resolution melting analysis (HRM).

(C: Control, OBF: Obese fertile, OBIF: Obese infertile, NOI: Non-obese infertile.)

31 Multiple amino acid sequence alignment of all the variants.
(C: Control, OBF: Obese fertile, OBIF: Obese infertile, NOI: Non-obese infertile.)

32 Details of the multiple amino acid sequence alignment of the variants.
(C: Control, OBF: Obese fertile, OBIF: Obese infertile, NOI: Non-obese infertile.)

33 Multiple amino acid sequence alignment of the variants C-7, OBF-15, OBIF-32, OBIF-34, OBIF-29, OBIF-32.
(C: Control, OBF: Obese fertile, OBIF: Obese infertile.)

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(C: Control, OBF: Obese fertile, OBIF: Obese infertile.)

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37 A. Multiple amino acid sequence alignment of the variants OBF-33 (Obese fertile-33). B. Details of the multiple amino acid sequence alignment of the variants OBF-33.

Predicted protein 3D structure of the exon 25 variants. (C: Control, OBF: Obese fertile, OBIF: Obese infertile, NOI: Non-obese infertile.) The red arrows indicate the variation and the white arrows indicate the similarity in the α–helix and β-strands in comparison with the original exon 25 protein structure.

**Obesity**

Obesity is a medical condition in which excess body fat has accumulated to the extent that it may have an adverse effect on health, leading to reduced life