

Supplementary Material

***N*-Acetylcysteine improves oocyte and embryo quality in polycystic ovary syndrome patients undergoing intracytoplasmic sperm injection: an alternative to metformin**

Ebrahim Cheraghi^A, Malek Soleimani Mehranjani^{B,E}, Mohammad Ali Shariatzadeh^B, Mohammad Hossein Nasr Esfahani^C and Zahra Ebrahimi^D

^AMedical Sciences Research Laboratory, Biology Department, Faculty of Science, Arak University, PO Box 381-5688138, Arak, Iran.

^BBiology Department, Faculty of Science, Arak University, PO Box 381-5688138, Arak, Iran.

^CDepartment of Reproductive and Development at Reproductive Biomedicine Research Center, Royan Institute, Isfahan 8159358686, Iran.

^DObstetrics and Gynecology Unit, Fellowship of Infertility, Infertility Treatment Center, Qom 3713189934, Iran.

^ECorresponding author. Email: M-soleimani@araku.ac.ir

Fig. S1. Some of the abnormalities in the oocytes retrieved of PCOS patients:

a) MII oocyte with normal homogenous cytoplasm with a thick zona pellucida; **b)** MII oocyte with normal homogenous cytoplasm and normal perivitelline space; **c)** The fertilized oocyte with an amorph & fragmented polar body and the large perivitelline space; **d)** Oocyte with excessive granularity concentrated in the central cytoplasm with a dark zona pellucida; **e)** Oocyte with several large vacuoles distributed throughout the oocyte cytoplasm; **f)** Oocyte with granularity in the central part of the cytoplasm with large perivitelline space; **g)** Oocyte with a spindle located under the first polar; **h)** Oocyte with the two sets of visible spindle body (400× magnification).

