A dead Sirt(3) to protect preimplantation embryos

July 19 2010

Infertility affects approximately 10% of couples worldwide. Although assisted reproductive technologies such as in vitro fertilization are commonly used in developed countries to treat infertile couples, the processes remain relatively inefficient.

Better understanding of events such as embryo development prior to implantation, a time when many potential natural pregnancies fail, could help improve the efficiency of assisted reproductive technologies.

In this context, a team of researchers, led by Hiroki Kurihara, at the University of Tokyo, Japan, has now determined that the protein Sirt3 helps protect preimplantation mouse embryos against stress conditions during in vitro fertilization and culture.

Of potential clinical significance, the negative effects of Sirt3 inactivation on mouse embryos could be overcome by culture in the presence of an antioxidant or in low oxygen conditions.

More information: View this article at: www.jci.org/articles/view/4202 … 4386df088fb2a206cfd0

Provided by Journal of Clinical Investigation