Fang Le et al., Endocrinol Metab Synd 2014, 3:2
http://dx.doi.org/10.4172/2161-1017.S1.005

OMICS Group Conferences
Accelerating Scientific Discovery

2nd International Conference on
Endocrinology
October 20-22, 2014 DoubleTree by Hilton Hotel Chicago-North Shore, USA

Assisted reproductive technology enhances the risk of pulmonary inflammation related to the aberrant expression of INSIG-SCAP-SREBP in the elder mice

Fang Le, Li-Ya Wang and Fan Jin
Zhejiang University, China

Pulmonary inflammation is associated with altered lipid metabolism related to obesity, diabetes, and other metabolic disorders. It has been reported that lipogenesis is regulated at the transcriptional level by the activity of insulin-induced gene (INSIG), sterol regulatory element binding protein (SREBP), and SREBP cleavage-activating protein (SCAP). Epidemiological studies have demonstrated that multiple pregnancies and premature birth can induce the dysfunction of respiratory system in the children conceived by assisted reproductive technology (ART). However, the long-term effects of ART on the respiratory system and molecular mechanisms remain unclear. Therefore, we evaluated the lipid metabolism in the lung of *in vitro* fertilization (IVF) and intracytoplasmic injection (ICSI) mice from birth to the age of 1.5 yr. In our mice models, results showed that ART can not only influence the birth weight and blood lipid metabolism in adult life, but also result in a higher incidence of pulmonary inflammation in aged mice. In addition, the results showed that when compared with the control group, IVF or ICSI-conceived elder mice revealed significantly lower expressions of INSIG-SCAP-SREBP ($P<0.01$). At the same time, there were significant differences in the DNA methylation rates of Insig-Scap-Srebp between ART groups and control group ($P<0.01$). Our results indicate that ART causes pulmonary inflammation in aged mice that may be associated with alterations in INSIG-SCAP-SREBP expression and likely involve their methylation status.

Biography

Fang Le has completed her MD at the age of 28 years from Zhejiang University School of Medicine. Now, she works in the women's hospital, school of Medicine, Zhejiang University. Her research and clinical interests are basic and clinical research in reproductive medicine, gynecological endocrinology and reproductive genetics. Until now, she has authored and co-authored more than 20 papers in the areas of reproductive medicine including assisted reproductive technology, reproductive safety, endometriosis, and reproductive epigenetic. As a researcher, she has achieved some research programmes that were supported by national science foundation of China or Zhejiang Natural Science Fund of China.

lefang851021@126.com