

Special Issue on **Infertility and Recurrent Spontaneous Abortion: Interactions between Innate Immunity, Autoimmunity, and Hormonal and Metabolic Status in Pregnancy Outcome**

CALL FOR PAPERS

The maternal-fetal interface is an immunologically unique site that allows tolerance of the allogenic fetus and maintains host defense against possible pathogens. Balanced immune responses are thus required for the maintenance of successful pregnancy. Interactions between innate immunity and autoimmune factors and hormonal status may be associated with impaired pregnancy. In addition, the Complement System (CS), inflammation, and metabolism appear to be related with pregnancy outcome.

Striking evidence suggests a possible role of natural killer (NK) cells in the pathogenesis of abortive events in autoimmune conditions as well as in women with reproductive failure (RF). The mechanisms through which NK cell changes occur in RF are still unknown and the possibility of an altered hormonal regulation/sensitivity could be a possible explanation. Positive correlations between peripheral blood NK cells and prolactin have been described in women with RF. Moreover, possible associations between NK cells and thyroid function have been suggested. CS dysregulation has an essential and causative role in damage to the fetal-placental unit. Accumulation of “waste products” in the placenta related to an abnormal CS activity together with insufficient repair functions could be related to the pregnancy syndrome.

Maternal hyperglycaemia and insulin resistance are both implicated in RF. The interplay between inflammation and metabolism is still under investigation in several autoimmune conditions and it should be further investigated in women with RF.

The application of genetic association studies focusing on preselected candidate genes with potential pathological effect in recurrent spontaneous abortion (RSA) has been performed. However, polymorphisms in >100 genes have been investigated but association with RSA is often inconclusive.

The focus of this special edition will be to shed further light on this complex interplay between innate immunity such as NK, CS, and metabolic and endocrine pathways in pregnancy outcome.

Moreover, molecular aspects including genetic and epigenetic factors in RF will be explored.

We would like to invite you to submit or recommend original research papers and reviews to this special issue.

Potential topics include but are not limited to the following:

- ▶ The interplay between inflammation/innate immunity and metabolism in RSA
- ▶ The effect of hormonal status (thyroid disorders and prolactin abnormalities) on RSA
- ▶ Genetic and epigenetic factors in autoimmune conditions and pregnancy failure
- ▶ Therapeutic insights and future directions: (I) innate immunity as a potential target of therapy; (II) treating hormonal dysfunction in RF; (III) evaluating the effectiveness of interventions on glucose metabolism in early RF

Authors can submit their manuscripts through the Manuscript Tracking System at <http://mts.hindawi.com/submit/journals/ad/irsa/>.

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First Round of Reviews

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