Proposal

Title: Use of anti-plac1 protein antibodies as biomarkers of infertility

Sector: BIOTECHNOLOGY

IP protection level:
Inventors: Prof. Arcangelo Liso and Prof. Maria Matteo
Applicant: Università degli Studi di Foggia
Italian Patent: Identification number: ITRM20100386 (A1) on 2012-01-15; IT1401197 (B1) on 2013-07-12
European patent: Identification number: 2593789 EU granted patent on 29 April 2015 (France, Germany, Spain, United Kingdom, Monaco).

Description:
The invention concerns the use of antibodies against PLAC1 protein as biomarkers of infertility, the diagnostic kit for the detection of the immune response against PLAC1 and the potential use of PLAC1 protein in therapeutic and contraceptive fields. Although several studies have detected in women with infertility a higher prevalence of different kinds of antibodies, the association between the recurrence of implantation failure and the above-mentioned immune factors remains weak and unspecific. The invention could represent a novel diagnostic tool in the pre-pregnancy check-up.

State of development: Patent

Industrial application: Companies active in the diagnostic and medical fields.

Marketing segment: Medical or veterinary market segments, in the field of pre-pregnancy check-up. Data in the USA market show that 1.5 million U.S. women reported infertility; 6.7 million reported impaired ability to get pregnant or carry a baby to term; 7 million have used infertility services; These numbers are comparable to those of other industrialized nations

Advantage factor: Anti-PLAC1 antibodies could represent a new and important biomarker associated with infertility: Higher levels of these antibodies associate with higher probability of repeated implantation failure. This could improve the initial diagnostic work up offered to infertile couples: A test to detect these antibodies could be recommended upfront , as women with higher levels of anti-PLAC1 antibodies could require higher number of repeated IVF cycles to overcome the “immunological barrier”

Commercial challenge: Women and couples with potential or diagnosed infertility are willing to perform specific tests. IVF centers are also interested in performing tests which offer the potential to diagnose previously undetected defects, which can require different therapeutic approaches.


Proposal of: Licensing
APPLICATION FORM

cooperation agreement