

Medicina

# PARTNER SEARCH HEALTH-PT-SMCP-1

01 dicembre 2017

Oggetto: PARTNER SEARCH HEALTH-PT-SMCP-1

Richiesta di un Istituto bielorusso alla ricerca di partner italiani da includere in un loro progetto nella tematica Health nei topic HEALTH-2007-3.5-4: Health care intervention research- improving pre-natal and maternal care.

Di seguito, una breve descrizione del progetto e le caratteristiche del partner richiesto.

Per informazioni sul progetto contattare [tegas@apre.it](mailto:tegas@apre.it) facendo riferimento al codice PARTNER SEARCH HEALTH-PT-SMCP-1

----- PARTNER SEARCH HEALTH-PT-SMCP-1 -----

<Reference n.: HEALTH-PT-SMCP-1>

<Deadline: 18/09/2007>

<Programme: >

<Project Title: New express method of diagnostics of preeclampsia >

<Financial Scheme: >

<Description: Priorities' Main Research Areas:

Development of the new express method of diagnostics of preeclampsia on the basis of the platelets ability to the trypsin-induced aggregation.

The problem of preeclampsia is one of the most important in obstetrics. Preeclampsia develops after 20-th week of pregnancy and is the frequent reason of maternal and perinatal mortality. For improvement of antenatal and postnatal medical help, development of effective ways of preeclampsia diagnostics is of high importance.

Because of the preeclampsia development connected with damages of a hemostasis and aggregative activity of platelets, creation of a new express method of diagnostics of this

pathology on the basis of an estimation of aggregative activity of platelets under the action of activators can become perspective.

Using the standard stimuli of aggregation (ADP, adrenaline, arachidonic acid) for the diagnostic purposes is not advisable because of the absence of correlation between its possibility to induce the aggregation of platelets and preeclampsia. Possibility of using the serine protease trypsin in low concentration (1 - 50 mkg/ml) as stimuli of platelets aggregation for diagnostic of preeclampsia was shown in the Institute of biophysics and cell engineering of National academy of sciences of Belarus. As the preliminary results, the trypsin-induced aggregation of platelets of healthy pregnant women is characterized by parameters close to those of donors. Development of preeclampsia is linked to essential decrease in a degree and speed of the trypsin-induced aggregation of platelets. However the trypsin-induced aggregation of platelets at preeclampsia in details are not studied. The reasons of decreased ability of platelets to aggregate under the action of trypsin in low concentration are also not elucidated.

The purpose of the project is creation of a new express method of diagnostics of preeclampsia. The method will be based on measurement by means of automated aggregometer (after the manner of № 2110 «SOLAR», Belarus) kinetics of trypsin-induced aggregation and subsequent definition of its parameters (degree, speed). It is supposed, that on the basis of the analysis of kinetic parameters of the trypsin-induced aggregation of platelets, statement of the preeclampsia and definition of its degree will be carried out. For achievement of an object it is planned to analyse the process of the

trypsin-induced aggregation of platelets of women with normal pregnancy (1), risk factors of preeclampsia (2), preeclampsia without clinical displays (3), preeclampsia with clinical displays (4). The opportunity to use the other serine proteases - thrombin and a-chymotrypsin as stimulus of platelets aggregation for diagnostics of preeclampsia as will be studied.

With the purpose of elucidation of the mechanisms of aggregative activity of platelets at preeclampsia disturbance, it is planned to study by means of tryptophan phosphorescence at a room temperature method the structural and dynamic condition of membrane proteins of platelets of women with normal pregnancy (1), risk factors of preeclampsia (2), preeclampsia without clinical displays (3), preeclampsia with clinical displays (4). Carrying out of such researches expediently, considering importance of a membrane proteins in realization of functional activity of cells in norm and pathology.

Researches in the frame of the project will be carried out in Institute of biophysics and cell engineering of National academy of sciences of Belarus together with obstetrics department of the Belarus state medical university (Minsk). There are highly skilled experts and the corresponding equipment, necessary for successful performance of the work.

For the project objects achievement it is necessary to elucidate the mechanisms of decrease in ability of platelets to the trypsin-induced aggregation at preeclampsia. Such researches could be spent in directions of the analysis of damage at preeclampsia proteomic (1) and genomic (2) statuses of platelets, elucidation of biochemical (3) and morphological (4) changes of platelets, researches of shifts specificity occurring in platelets (5), studying of interrelation between damage of aggregative activity of platelets and clinical displays of preeclampsia (6).

Workprogramme Topic :  
FP7 HEALTH HEALTH-2007-3.5-4

Project description :

Development of a new express method of diagnostics of preeclampsia on the basis of the ability of platelets to the aggregation, induced by trypsin in low concentration.

Keywords:

Preeclampsia, aggregation, platelets, trypsin, diagnostics/

<Organisation Type: Centro di Ricerca>

<Partner Sought: Profile of Partner sought:

Role

- technology development
- research
- training
- dissemination

Country /region: Any country

Start of partnership:

- start-up phase
- mid-term