

Report on the outcomes of a Short-Term Scientific Mission¹

Action number: CA18211

Grantee name: Rosita Gabbianelli

Details of the STSM

Title: **Going inside maternal psychological stress due to birth-related trauma: can epigenetics be disturbed?**

Start and end date: **05/06/2023 to 12/06/2023**

Description of the work carried out during the STSM

Description of the activities carried out during the STSM. Any deviations from the initial working plan shall also be described in this section.

(max. 500 words)

Grantee enters max 500 word summary here.

According to the working plan, the applicant prepared, the following questions to be used in the interview/discussion with Olga Gouni;

1)How can be define phycological stress following birth-related trauma? 2) How can these emotional events perturb maternal mental health (i.e. psychological sequelae)? 3) Which are the typical symptoms of phycological stress? 4) Can (and how) maternal behavior change following birth-related trauma? 5) To what extent does the individual response to stress differ among women and which factors can contribute to its perception? 6) How intense should the stress due of trauma be to induce epigenetic changes? 7) Can early trauma induce long term effect on the health of the mother? 8) Can early trauma induce long term effect on the health of children? 9) What is the impact of early trauma on family wellness? 10) To what extent is the education of the mother important to prevent/avoid the birth-related trauma of the mother? 11) At what time should start the education of women to prevent birth-related trauma? 12) What should young women know about pregnancy? (i.e. what happens? How the body changes? Which practices will be done by midwife/gynecologists during pregnancy/delivery?) 13) Who should be the promoter of this education? 14) Should education be addressed to both genders? 15) Can education work on all women? 16) Is the presence of family members during pregnancy and after birth important? 17) To what extent are parents/Institutions/ middle schools /universities responsible for

¹ This report is submitted by the grantee to the Action MC for approval and for claiming payment of the awarded grant. The Grant Awarding Coordinator coordinates the evaluation of this report on behalf of the Action MC and instructs the GH for payment of the Grant.

education of young about this topic? 18) Which is the more useful approach to support maternal birth-related trauma?

The working plan was followed as programmed during the STSM:

Day 1: interview/discussion with Olga Gouni on “how can psychological stress following birth-related trauma be defined?” Working on associated concepts and distinction from similar or easily confused concepts. Report about the collected data.

Day 2, interview/discussion with Olga Gouni on “how high intensity emotional experiences can impact maternal mental health” (ie psychological sequelae). The connection between the unintegrated past traumatic experience and the present. Triggering factors.

Day 3, interview/discussion with Olga Gouni on “which are the typical symptoms of psychological stress?” How to read it in the quality of language used, face/body observation, somatic symptoms and or behaviour as well as in the relational patterns she presents. Is it only the mother or the father as well? Similarities and differences. Working with polarities.

Day 4, interview/discussion with Olga Gouni on How these emotional events can impact the maternal health, the new-born, the babies to be born next the family relations. Tocophobia, c-section, stillbirth, cot death, late abortions, witnessing traumatic birth of other mothers, the toxic micro/ meso/ macro environment. The element of unpredictability and the fear instinct.

Day 5, interview/discussion with Olga Gouni on Can (and how) Parental behaviour changes when the unintegrated past trauma (both individual/ historical and collective) is not treated and then reinforced with the new birth-related trauma. The relational, familial, social impact.

Day 6, interview/discussion with Olga Gouni on Which is the more useful approach to support maternal birth-related trauma?

Description of the STSM main achievements and planned follow-up activities

Description and assessment of whether the STSM achieved its planned goals and expected outcomes, including specific contribution to Action objective and deliverables, or publications resulting from the STSM. Agreed plans for future follow-up collaborations shall also be described in this section.

(max. 500 words)

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Personally, my perspective on the impact of prenatal life on child health underwent a significant transformation as a result of the STSM. Previously, my focus was primarily on the mother, father, and grandfather. However, after receiving an excellent overview from Olga Gouni, my vision became more comprehensive.

An analogy that comes to mind is that of water flowing from a river to the sea. The water represents the child, and the sea represents their birth. However, upon closer examination, we realize that the water in the river originates from the mountains, symbolizing our past and previous generations. The water in the sea can evaporate, form clouds, and return as rain to the mountains, ultimately flowing back to the sea through the river, giving rise to a new generation. This continuous cycle influences each newborn generation, spanning across generations.

Additionally, the STSM aimed to explore whether birth trauma can have an epigenetic impact on both the mother and her child. Emotional experiences stemming from prolonged exposure to high-intensity stressors and subsequent similar encounters form the foundation for potential effects on maternal mental health. Through discussions with Olga Gouni, it became evident that all the conditions are present for birth trauma to impact the epigenome of both the mother and the child.

Furthermore, this STSM has contributed to enhancing knowledge in specific areas of interest. It has deepened understanding regarding the short-term and long-term impacts on women, infants, and family relationships (area 3). It has also shed light on the impact of stress on epigenetic changes and intergenerational inheritance (area 4). Moreover, it has addressed optimizing the birth environment to reduce and prevent negative and traumatic birth experiences, which aligns with the goals of CA18211.

As planned, the data collected during the STSM will be utilized to produce a white paper that will be valuable for parents, midwives, and clinicians. Additionally, it aims to raise awareness among universities to improve dedicated programs for midwives and obstetricians. Furthermore, the collected data can be leveraged through collaborations with local groups to develop informative materials for stakeholders. Involving advocates who can effectively communicate this information to policymakers is crucial in raising awareness and providing support to women and parents who have experienced traumatic births.