

RESEARCH TOPIC MEM24
Nutrition, Endometriosis, and Immunity: Investigating Molecular Interactions

Curriculum MEM

Laboratory name

Mucosal Immunology and Microbiota Unit
Humanitas university

Pre-clinical Supervisor

Prof. Maria rescigno
maria.rescigno@hunimed.eu

Dr. Silvia Giugliano
silvia.giugliano@hunimed.eu

Abstract

This PhD proposal aims to explore the interplay between nutrition, endometriosis, and immunity¹. Objectives include evaluating dietary components' impact², characterizing molecular pathways³, and assessing dietary interventions as adjuvant therapies⁴. Methodology involves literature review, in vitro and animal models, molecular analyses, and clinical studies. Expected outcomes include identifying key dietary factors, elucidating molecular mechanisms, validating dietary interventions, and contributing to personalized medicine⁵. This research will advance understanding and improve endometriosis management for women's well-being.

Main technical approaches

Basic knowledge of immunology.

Scientific references

- 1) Bulun SE. Endometriosis. N Engl J Med. 2009;360(3):268-279.
- 2) Missmer SA, Chavarro JE, Malspeis S, et al. A prospective study of dietary fat consumption and endometriosis risk. Hum Reprod. 2010;25(6):1528-1535.
- 3) Simsek Y, Celik O, Demirtas C, Simsek H, Celik N, Karaer A. Serum interleukin-6 levels in postmenopausal women with and without endometriosis: a case-control study. Gynecol Obstet Invest. 2005;59(4):202-206.
- 4) Oner G, Muderris II. Clinical effects of omega-3 fatty acids and micronutrients supplementation in endometriosis patients: a randomized controlled study. Arch Gynecol Obstet. 2018;298(3):531-538.

5) Parazzini F, Cipriani S, Bravi F, Pelucchi C, Chiaffarino F, Ricci E, Viganò P, La Vecchia C. Risk factors for deep infiltrating endometriosis: a comparison with pelvic and ovarian endometriosis. J Epidemiol Community Health. 2004;58(9):810-814.

Brief description of the coherence of the project in relation to the PNRR objectives

This project aligns with the Precision Medicine objectives of the PNRR by investigating the interplay between nutrition, endometriosis, and immunity. It aims to identify key dietary factors and molecular mechanisms to develop personalized dietary interventions for improved management of endometriosis. This research contributes to targeted and effective healthcare interventions for women with endometriosis.

N. of months abroad

6 months, at Trinity College Dublin

Type of contract

PhD scholarship of € 18.000 gross per year awarded by Humanitas University on institutional funds and cofounded with PNRR funds under M.D.M. D.D. N. 118/2023.

This sum is exempt from IRPEF income tax according to the provisions of art. 4 of Law no. 476 of 13th August 1984, and is subject to social security contributions according to the provisions of art. 2, section 26 and subsequent sections, of Law no. 335 of 8th August 1995 and subsequent modifications.

Borsa di dottorato pari a € 18.000 annui lordi erogata da Humanitas University su fondi istituzionali e fondi da D.M. 118/2023. Importo non soggetto a tassazione IRPEF a norma dell'art. 4 della L. 13 agosto 1984 n. 476 e soggetto, in materia previdenziale, alle norme di cui all'art. 2, commi 26 e segg., della L. 8 agosto 1995, n. 335 e successive modificazioni.