

Encontro Investigação Jovem da Universidade do Porto

**BOOK OF
ABSTRACTS**

**06 - 07 - 08
Maio 2026**

19.^a Edição



ORGANIZAÇÃO



APOIO



**Encontro
Investigação
Jovem da
Universidade
do Porto**

**YOUNG
RESEARCHERS
MEETING**

**06 - 07 - 08
Maio 2026**

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ORGANIZAÇÃO



APOIO



TÍTULO | *TITLE*

Livro de Resumos do 19.º Encontro de Investigação Jovem da U.Porto / *Book of Abstracts
Young Researchers Meeting of U.Porto*

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Encontro Investigação Jovem da Universidade do Porto



PROGRAM

**06 - 07 - 08
Maio 2026**

19.^a EDIÇÃO

May, 6th

May, 7th

May, 8th

8H	Opening of the secretariat for all participants		
8H30 > 10H30	PARALLEL ORAL SESSIONS I A1 – Criminology and Law I A2 – Health Sciences I A3 – Sport Sciences I A4 – Architecture I A5 – Engineering I A6 – Biological Sciences I	PARALLEL ORAL SESSIONS IV A1 – AgroFood I A2 – Health Sciences IV A3 – Sport Sciences III A4 – Astronomy A5 – Chemistry I A6 – Biological Sciences IV	PARALLEL ORAL SESSIONS VII A1 – Arts I A2 – Health Sciences VII A3 – HSS IV – History, Archeology, Cultural Studies and Communication Sciences A4 – Physics I A5 – Chemistry III A6 – Biological Sciences VII
10H30 > 11H	Coffee Break		
11H > 13H	PARALLEL ORAL SESSIONS II A1 – Criminology and Law II A2 – Health Sciences II A3 – Sport Sciences II A4 – Architecture II A5 – Engineering II A6 – Biological Sciences II	PARALLEL ORAL SESSIONS V A1 – AgroFood II A2 – Health Sciences V A3 – Sport Sciences IV A4 – Maths & Physics A5 – Engineering IV A6 – Biological Sciences V	PARALLEL ORAL SESSIONS VIII A1 – Environment II A2 – Health Sciences VIII A3 – Psychology & Education Sciences III A4 – Physics II A5 – Chemistry IV A6 – Economics & Management
13H > 14H30	Lunch Break		
14H30 > 16H	POSTER SESSION I Architecture Biological Sciences I Criminology and Law Engineering I Health Sciences I Sport Sciences I	POSTER SESSION II AgroFood Biological Sciences II Chemistry Engineering II Health Sciences II Sport Sciences II	POSTER SESSION III Arts Astronomy, Physics & Maths Economics & Management Environment & Geology Health Sciences III History & Sociology Psychology & Education Sciences
16H > 16H30	Coffee Break		
16H30 > 18H30	PARALLEL ORAL SESSIONS III A1 – HSS I – Political Sciences A2 – Health Sciences III A3 – Psychology & Education Sciences I A4 – HSS II – Political Sciences, Sociology and Geography A5 – Engineering III A6 – Biological Sciences III	PARALLEL ORAL SESSIONS VI A1 – Environment I A2 – Health Sciences VI A3 – Psychology & Education Sciences II A4 – HSS III – History of Art A5 – Chemistry II A6 – Biological Sciences VI	PARALLEL ORAL SESSIONS IX A1 – Arts II A2 – Health Sciences IX A3 – Psychology & Education Sciences IV A4 – HSS V – History A5 – HSS VI – Literature and Philosophy A6 – Health Sciences X

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Background & Aim: Pregnancy induces cardiovascular (CV) adaptations that normally regress postpartum through cardiac reverse remodeling (CRR). Inflammatory and gut-derived factors may influence this process. This study aimed to evaluate associations between faecal calprotectin (FC), serum zonulin (Zn), *Akkermansia muciniphila* and CRR. **Methods:** This study assessed women in the 3rd trimester (3T), (30–35 weeks) and 6 months postpartum (6MP) from the PERIMYR/OralBioBorn cohort study. Clinical, dietary (MEDAS questionnaire), echocardiographic, anthropometric and biological samples (stool and blood) were collected. **Results:** Thirty-four pregnant women (median age 33 years) with at least one cardiovascular (CV) risk factor were included. From 3T to 6MP, FC, Zn, and *A. muciniphila* significantly decreased (all $p < 0.05$). FC correlated with left ventricular (LV) mass (LVM) in the 3T ($p = 0.405$; $p = 0.024$) and with E/e' at 6MP ($p = 0.424$; $p = 0.017$). Zn correlated with diastolic blood pressure ($p = 0.468$; $p = 0.021$), LVM ($p = 0.517$; $p = 0.010$), and LV volume ($p = 0.484$; $p = 0.019$). *A. muciniphila* showed no significant CV associations. Greater adherence to the Mediterranean diet at 6MP was correlated with better LV diastolic function ($p = -0.510$; $p = 0.015$) and lower LV relative wall thickness ($p = -0.560$; $p = 0.007$). Higher red meat intake was associated with increased Zn levels ($p = 0.004$) and PP2 weight ($p = 0.637$, $p = 0.020$). Olive oil as the main fat source was associated with lower LVM, whereas higher saturated fat intake at 6MP was linked to adverse echocardiographic findings. **Conclusions:** Maternal inflammation and intestinal permeability biomarkers are associated with CRR and may indicate early CV risk. Mediterranean diet adherence supports intestinal and CV health in the perinatal period, reinforcing integrated maternal CV prevention strategies.

Keywords

Pregnancy, cardiac reverse remodelling, intestinal biomarkers, Mediterranean diet

Acknowledgments:

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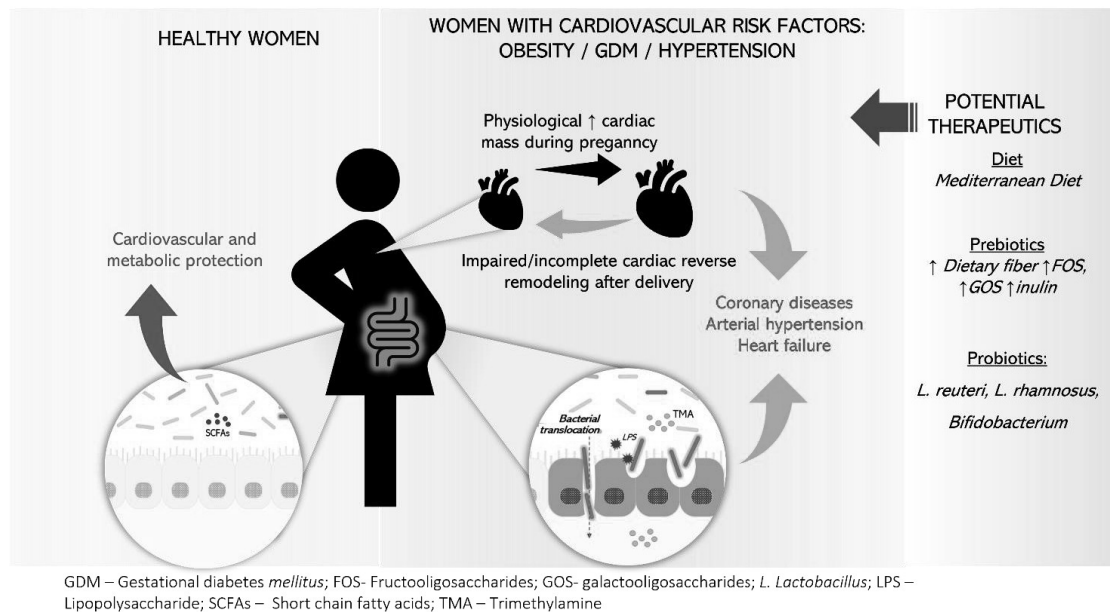


Figure 1: Schematic overview of the proposed gut–heart axis during pregnancy. Maternal gut dysbiosis and increased gut permeability may promote systemic inflammation by translocating bacterial components, such as lipopolysaccharide, while reduced production of short-chain fatty acids impairs anti-inflammatory signalling. These processes, influenced by dietary patterns (e.g., Mediterranean diet) and probiotic intake, may modulate cardiovascular adaptation and cardiac remodelling in pregnancy, especially in the presence of comorbidities. Image originally submitted as part of a review article to the journal *Acta Portuguesa de Nutrição* (submitted, decision pending).