Encontro Investigação Jovem da Universidade do Porto

BOOK OF ABSTRACTS

06 - 07 - 08 Maio 2026

19.ª Edição

ORGANIZAÇÃO

U.PORTO

iUP INVESTIGAÇÃO JOVEM DA UNIVERSIDADE DO PORTO

APOIO

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YOUNG RESEARCHERS MEETING

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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

HSS – Humanities and Social Sciences

24932 | Hippocampal Neuroplasticity and Cognitive Impairment in a Metabolic Risk-Related Rat Model of Heart Failure with Preserved Ejection Fraction

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Background & Aim: Heart failure (HF) is increasingly associated with cognitive impairment and hippocampal vulnerability (1–2). Although nearly 50% of the cases of HF fall under the category of HFpEF, research on hippocampal neuroplasticity and cognitive impairment on this category remains limited (3). HFpEF is usually a result of chronic cardiometabolic diseases (4), and the ZSF1-Obese rat is a validated preclinical model of HFpEF that reproduces cardiometabolic dysfunction observed in patients (5). We aimed to determine whether the frequent clinical presentation of HFpEF with metabolic syndrome is associated with behavioral deficits and impaired neurogenesis. **Methods:** Adult male ZSF1 Obese (n=7) and Lean (n=6) rats were evaluated in novel object recognition (NOR) and object location recognition (OLR), paradigms sensitive to hippocampal integrity (6). Anxiety-like and locomotor behavior were assessed using the open field (OF) and elevated plus maze (EPM) (7). Doublecortin (DCX)-immunoreactive cells were quantified in the dentate gyrus (8). Hippocampal mRNA levels of BDNF, CDK5, GAD1 and RELn were measured by qPCR. Group comparisons were performed using Welch's t-test or Wilcoxon tests when appropriate, and Hedges' g was calculated. **Results:** Obese rats showed deficits in recognition and spatial memory, with reduced discrimination index in NOR and OLR. Obese animals also exhibited reduced locomotor activity, while anxiety-related indices showed no consistent differences. No differences were found in DCX+ cell density. Exploratory outcomes showed possible downregulation of GAD1 mRNA, whereas BDNF, RELn, and CDK5 mRNA

expression were unchanged. **Conclusions:** The combination of HFpEF and metabolic syndrome in ZSF1-Obese rats is associated with hippocampal-dependent memory impairment and dysregulation of plasticity-related genes. Although DCX+ cell numbers were unchanged, indicating preserved proliferation of newborn granule neurons, this does not imply preserved neuronal survival or functional integration.

Keywords: HFpEF, Metabolic Syndrome, Hippocampal formation, Neurogenesis, Behavior

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