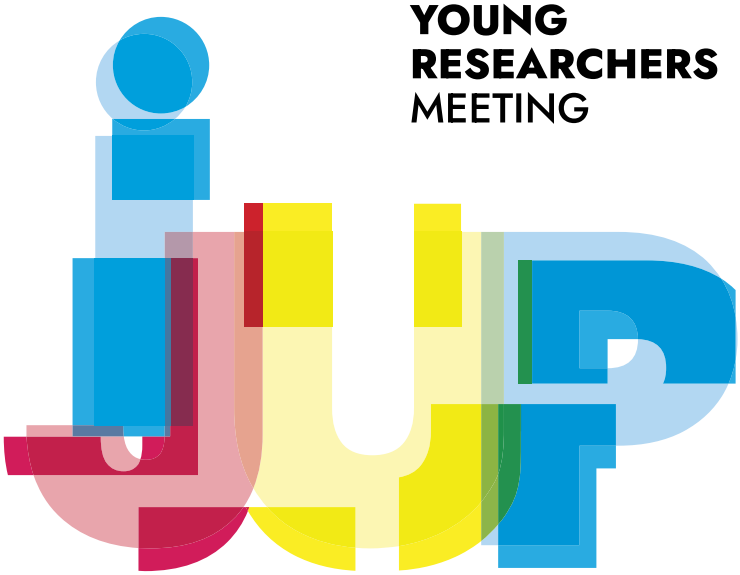
BOOK OF ABSTRACTS

YOUNG RESEARCHERS MEETING



IJUP
4.5.6 MAIO 2022

15.ª EDIÇÃO

ONLINE
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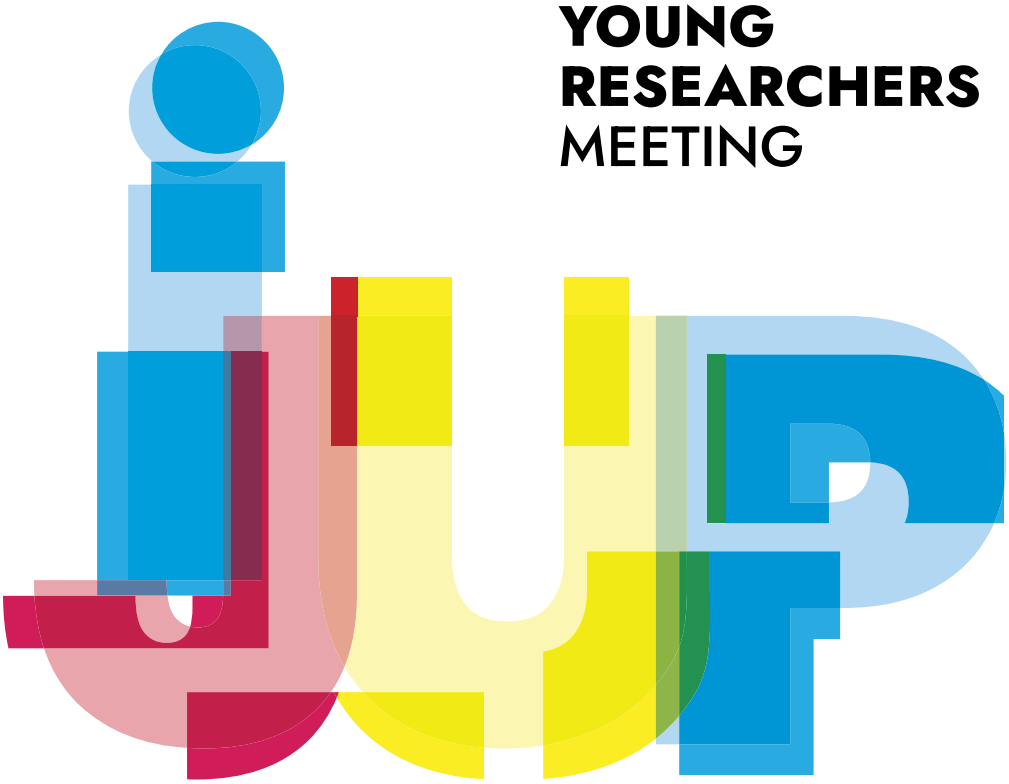
YOUNG RESEARCHERS MEETING



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TÍTULO | *TITLE*

Livro de Resumos do 15.º Encontro de Investigação Jovem da U.Porto

Universidade do Porto

Vice-reitor para a investigação, inovação e internacionalização

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PROGRAMA
PROGRAM

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ONLINE **EVENT LINK** (CLICK HERE)

	MAY, 4TH	MAY, 5TH
08:00 - 18:00		
	PARALLEL ORAL SESSIONS I	**PARALLEL ORAL SESSIONS VI**
	A1 – Mathematics	A1 – Biological Sciences IV
	A2 – Architecture I	A2 – Engineering I
09:00 - 10:30	A3 – Chemistry I	A3 – Physics II
	A4 – Environment I	A4 – Language & Communication
	A5 – AgroFood I	A5 – Health Sciences VI
	A6 – Health Sciences I	A6 – Psychology & Sciences of Education I
10:30 - 10:40	Break	
	PARALLEL ORAL SESSIONS II	**PARALLEL ORAL SESSIONS VII**
	A1 – Health Sciences II	A1 – Biological Sciences V
	A2 – Architecture II	A2 – Engineering II
10:40 - 12:00	A3 – AgroFood II	A3 – Chemistry II
	A4 – Environment II	A4 – Geo-Politics I
	A5 – Physics I	A5 – Health Sciences VII
		A6 – Psychology & Sciences of Education II
12:00 - 12:20	Break	
	PARALLEL ORAL SESSIONS III	**PARALLEL ORAL SESSIONS VIII**
	A1 – Economics & Management	A1 – Biological Sciences VI
	A2 – Biological Sciences I	A2 – Engineering III
12:20 - 13:40	A3 – Architecture III	A3 – Geo-Politics II
	A4 – Chemistry III	A4 – Health Sciences VIII
	A5 – Sport Sciences I	A5 – Health Sciences IX
	A6 – Health Sciences III	A6 – Psychology & Sciences of Education III
13:40 - 14:30	Lunch Break	
	PARALLEL ORAL SESSIONS IV	**PARALLEL ORAL SESSIONS IX**
	A1 – Arts I	A1 – Biological Sciences VII
	A2 – Biological Sciences II	A2 – Engineering IV
14:30 - 16:00	A3 – Sport Sciences II	A3 – Law and Criminology I
	A4 – Chemistry IV	A4 – Health Sciences X
	A5 – Architecture IV	A5 – Heritage & History I
	A6 – Health Sciences IV	A6 – Psychology & Sciences of Education IV
16:00 - 16:10	Break	
	PARALLEL ORAL SESSIONS V	**PARALLEL ORAL SESSIONS X**
	A1 – Astronomy & Physics	A1 – Law and Criminology II
	A2 – Arts II	A2 – Health Sciences XI
16:10 - 17:40	A3 – Sport Sciences III	A3 – Psychology & Sciences of Education V
	A4 – Biological Sciences III	A4 – Heritage & History II
	A5 – Health Sciences V	

RECTORATE OF THE UNIVERSITY OF PORTO

	MAY, 6TH
08:30 - 09:00	*Opening of the secretariat for all participants*
09:00 - 10:00	**POSTER SESSION I**
10 min	Coffee-break
10:10 - 11:00	**POSTER SESSION I**
11:00 - 11:15	Break
11:15 - 12:00	**POSTER SESSION II**
10 min	Coffee-break
12:10 - 13:15	**POSTER SESSION II**
13:15 - 15:00	Lunch Break
15:00 - 18:00	**CLOSING SESSION AND CELEBRATION OF THE 15-YEARS ANNIVERSARY OF IJUP**

ENCONTRO INVESTIGAÇÃO JOVEM

IJUP

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New highlights into mammalian ovarian aging

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Abstract

Ovarian aging may be related to the presence of a population of giant multinucleated cells (GMC) identified in the ovaries of aged mice. However, it is unknown whether GMC are also present in the ovaries of other mammals and how they contribute to fertility loss. The present work aims to identify GMC in the ovaries of reproductively aged laboratory and domestic animals, correlate GMC with follicle pool depletion and identify possible mechanisms involved in their formation. Ovaries from young and aged animals (mice, rats, queens and bitches) were analysed. H&E and Sudan Black B (SBB) staining techniques were performed to study morphology and to determine lipofuscin deposition (marker of cellular senescence), respectively. In mice, senescence-associated β-galactosidase (SA-β-gal) activity and galactosidase β1 (GLB1) expression were used as additional markers of senescence. Picrosirius Red staining was used to quantify fibrosis. Protein nitration determined by immunohistochemistry techniques was used as a marker of tissue stress. Statistical analyses were performed with GraphPad Prism 9.0.0. GMC were identified in the ovaries of reproductively aged animals. In mice, they were positive for markers of cell senescence (SBB, SA-β-gal and GLB1) and correlated negatively with follicle reserve. The fact that GMC were scarce in the ovaries of the aged queen (an induced ovulator) led us to address the role of ovulation in ovarian aging and the formation of GMC. Our results showed that aged nulliparous mice had significantly higher values for lipofuscin deposition and lower follicle pool than aged breeders (animals with decreased number of ovulations). Surprisingly, ovarian fibrosis did not show significant changes during aging. Aged animals had significantly higher values of protein nitration than young ones, but they did not differ between groups of the same age. Our findings point to ovulation as the promoter of the formation GMC and an important trigger of ovarian aging.