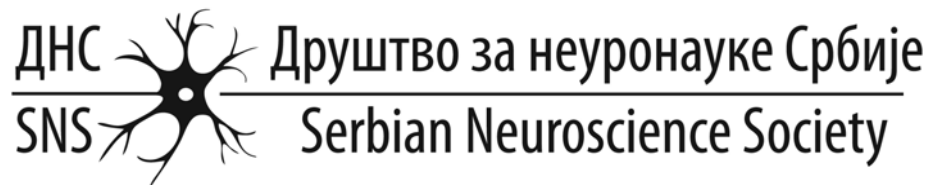




7th CONGRESS OF SERBIAN NEUROSCIENCE SOCIETY
with international participation

BOOK OF ABSTRACTS

Belgrade
October 25-27, 2017.



**7th CONGRESS OF SERBIAN NEUROSCIENCE
SOCIETY**

with international participation

October 25-27, 2017.

Belgrade, Serbia

BOOK OF ABSTRACTS

**7th CONGRESS OF SERBIAN NEUROSCIENCE SOCIETY with international participation
October 25-27, 2017. Belgrade, Serbia - BOOK OF ABSTRACTS**

Published by:

Serbian Neuroscience Society

Bulevar despota Stefana 142, 11060 Belgrade, Serbia

Serbian Ministry of Education, Science and Technological development

Nemanjina 22-26, 11000 Belgrade, Serbia

Institute for Biological Research "Sinisa Stankovic", University of Belgrade

Bulevar despota Stefana 142, 11060 Belgrade, Serbia

Edited by:

Selma Kanazir and Ivana Bjelobaba

Text editors:

Ivana Bjelobaba,

Kosara Smiljanic,

Danijela Savić

Designed by Mirna Jovanovic

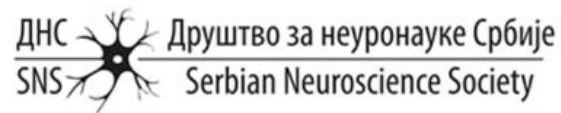
Copyright © 2017 by Serbian Neuroscience Society and associates. All rights reserved. No part of this publication may be reproduced in any form without written permission from the publisher.

ISBN: 978-86-917255-1-8

Printed by Faculty of Medicine, University of Belgrade, Belgrade, Serbia

Circulation: 300 copies

CONGRESS ORGANIZERS



HONORARY SPONSORS



Ministry of Education, Science and Technological Development of the Republic of Serbia



International Brain Research Organization (IBRO)
IBRO Pan-European Regional Committee (PERC)

Ana Milosevic¹, Irena Lavrnja¹, Marija Jakovljevic¹, Iva Bozic¹, Sanja Pekovic¹, Ivana Bjelobaba¹

¹Department of Neurobiology, Institute for Biological Research "Sinisa Stankovic", University of Belgrade, Belgrade, Serbia

Introduction. Multiple sclerosis (MS) is a chronic neuroinflammatory disease that is at least twice as common in women as it is in men. Since the effects of neuroinflammation on reproductive functions haven't been thoroughly investigated in MS or its animal models, we wanted to explore the changes in the hypothalamo-pituitary-gonadal axis, in a rat model of MS, experimental autoimmune encephalomyelitis (EAE), focusing on kisspeptin as a key regulator of the mammalian reproductive axis. **Methods.** Dark-Agouti rats were used and EAE actively induced by an intradermal injection of 150 µl mixture of the spinal cord homogenate and complete Freund's adjuvant (CFA). Naïve animals served as controls. The rats were examined daily for disease symptoms, weight changes, and estrous cycle phase. The animals were sacrificed 9, 14 and 28 days after induction, corresponding to the phases of the disease – onset, peak, and recovery, respectively. The hypothalamic tissue was isolated and the obtained cDNA used for qRT-PCR. For kisspeptin immunohistochemistry, the whole brains were fixed, cryo-preserved and cut on a cryotome. **Results.** With the onset of the disease, females stop cycling and get arrested in diestrus phase, which is accompanied with a significant drop in serum luteinizing hormone levels. Hypothalamic *Kiss1* mRNA expression was significantly lower at the peak of the disease, compared to the control group. Immunohistochemical analysis indicates a decrease of kisspeptin immunoreactivity in the arcuate nucleus and median eminence. **Conclusion.** Our results implicate that EAE affects the expression of kisspeptin and thus the regulation of hypothalamo-pituitary-gonadal axis, but further analyses are needed to explain the details of this process.

Acknowledgement. Supported by Ministry of Education, Science and Technological Development of the Republic of Serbia, Grant No III 41014.