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Source / Izvornik: **The Eleventh ISABS Conference on Forensic and Anthropologic Genetics and Mayo Clinic Lectures in Individualized Medicine: Program and abstracts, 2019, 347 - 347**

Conference paper / Rad u zborniku

Publication status / Verzija rada: **Published version / Objavljena verzija rada (izdavačev PDF)**

Permanent link / Trajna poveznica: <https://um.nsk.hr/um:nbn:hr:220:056190>

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Download date / Datum preuzimanja: **2025-01-22**



Repository / Repozitorij:

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PROGRAM AND ABSTRACTS

The Eleventh ISABS Conference
on Forensic and Anthropologic Genetics
and Mayo Clinic Lectures in Individualized Medicine

June 17-22, 2019, Split, Croatia

Publisher:

International Society for Applied Biological Sciences (ISABS)
Hondlova 2/11, Zagreb, Croatia

Editors:

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Prepress:

Luka Bočkor, Miran Čoklo, Ivan Dolanc, Nives Fuchs, Natalija Novokmet, Jelena Šarac

Printed by:

Printera Grupa d.o.o.

Circulation:

750 copies

ISBN 978-953-57695-3-8

A CIP catalogue record for this book is available in the Online Catalogue of the National and University Library in Zagreb as 001031150.

Video and/or audio-taping of any session is not permitted without prior approval from the speakers and Scientific Committee of the 11th ISABS Conference on Forensic and Anthropologic Genetics and Mayo Clinic Lectures in Individualized Medicine

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Zagreb, 2019.



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THE ELEVENTH ISABS CONFERENCE
ON FORENSIC AND ANTHROPOLOGIC GENETICS
AND MAYO CLINIC LECTURES IN INDIVIDUALIZED MEDICINE

JUNE 17-22, 2019
Le Méridien Lav Hotel
Split
CROATIA

Presentation number: CSHG 5

IL10 AND IL-1B GENETIC POLYMORPHISM IN CERVICAL CANCER

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Introduction: Cervical cancer is the fourth most common type of cancer for women worldwide. Human papillomavirus (HPV) is found in about 99% of cervical cancers. By the age of 50, approximately 80% of women have been infected with some type of HPV. The majority of women infected with the HPV virus do not develop cervical cancer. A small number of women do not clear the HPV virus and are considered to have a persistent infection. Disordered inflammation and immune response is an acknowledged risk factor for cervical cancer development. Recent investigations showed that interaction between HPV and IL10 can lead to immunosuppressive environment in cervix, while T allele of IL-1B gene is correlated with chronic inflammation and persistent infection with HPV16/18. **Objectives:** In this study, we aimed to evaluate the relationships between IL-10 (rs16944) and IL-2B (rs1800896) genetic polymorphisms and cervical cancer risk in a cohort of women from Croatia. **Participants and methods:** A case-control study of 81 women with invasive cervical carcinoma and 80 age matched healthy controls (women with at least 3 normal recent cytological examinations) was performed. We collected peripheral blood samples, extracted DNA and analysed two SNPs (rs16944 and rs1800896) using Taqman assays and real time PCR. We investigated a possible association between two cytokines genetic polymorphism and occurrence of cervical carcinoma. **Results:** There was no significant difference between the frequency of IL-10 and IL-1B genotypes between the patients and the controls (χ^2 test, $P < 0,05$). There were no statistically significant associations of IL-10 and IL-1B polymorphism and age of onset of cervical cancer (Mann-Whitney U test, $P < 0,05$) **Conclusion:** In this study, no association was found between IL-10 and IL-1B genetic polymorphism and cervical cancer development.

Keywords: cervical cancer, cytokines, genetic polymorphism, il-10, il-1b