



# Global Harmony for Occupational Health

## Bridge the World

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## E-Abstract Book of ICOH Congress 2015

This electronic publication of the abstracts for the ICOH Congress 2015 contains the program overview, abstracts published for the Congress and other associated reference materials.



The title for the **ICOH Congress 2015, Global Harmony for Occupational Health: Bridge the World**, reflects our wish to foster harmonized action for managing complex risks in increasingly diverse work situations.

The structure of the scientific program includes Plenary Sessions, Semi-plenary Sessions, Policy Forums, Special Sessions, Oral Sessions, and Poster Sessions. The scientific program will give delegates an opportunity to learn about the latest research and projects conducted by the world's leading scientists and experts in related fields.

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## OCCUPATIONAL EXPOSURE TO SOLAR RADIATION AND AGE-RELATED MACULAR DEGENERATION: A CASE CONTROL STUDY

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### Introduction:

Age-related macular degeneration (ARMD) is a multifactorial disease, currently the leading cause of visual impairment for people over 50 years in developed countries. Age, smoke, overweight, alcohol abuse and diabetes are among the recognized risk factors. A possible role of solar radiation (SR) in the pathogenesis of the disease has been suggested, since optical radiation reaching the retina, and in particular blue light and ultraviolet-A, may induce a chronic damage to the photoreceptors. Outdoor workers (OW) have a relevant occupational exposure to SR, so the aim of our study was to investigate if they are at a higher risk of developing ARMD.

### Methods:

A case-control study was conducted in patients who underwent an examination in a university ophthalmological clinic. Twenty incident cases of ARMD from May 1st, 2014 were included. As controls, 80 patients with other ophthalmologic diseases not related to SR, matched for sex and age with cases, were selected. In all included subjects, cumulative exposure to SR, both at work and during leisure time, and the main risk factors for ARMD were collected by a specific questionnaire.

### Results:

At multivariate analysis (covariates: sex, age, smoke and BMI), a significantly increased OR for ARMD was observed in OW: 10.92 (95% CI 2.0-58.7). The most represented group of workers was that of farmers, whose OR was of 9.21 (95% CI 1.5-54.5). Other significant risk factors for ARMD were smoke, overweight and myopia: OR were 8.12, 4.1 and 10.95 respectively.

### Discussion:

The results show a significant increased risk of ARMD in outdoor workers, and specifically in farmers. Accordingly, our data appear to support the hypothesis that chronic exposure to SR represents a risk factor of developing macular degeneration. Among other known risk factors for ARMD, smoke, overweight and, possibly, myopia were confirmed be significantly associated to the development of the disease.

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