General research activities related to optical radiation health
In 2017, the Italian Workers’ Compensation Authority (INAIL) has funded two projects carried out in collaboration with INAIL itself by “Sapienza” University of Rome and by the Institute for Applied Physics “Nello Carrara” of the National Research Council (IFAC-CNR), respectively. The first project aims at developing “smart” personal sensors for monitoring exposure of outdoor workers to solar UV radiation, the second one at developing web tools for the assessment of occupational risks related to electromagnetic fields and artificial optical radiation exposures. The Institute for Oncological Study, Prevention and Network (ISPRO) of Tuscany, along with local health authorities and INAIL, is conducting a research on skin cancers in beach workers. The first results of the study, which has identified cases of photoaging of the skin and skin cancers in an interviewed sample, show that there is poor awareness of solar radiation risks among beach workers who often had an extra exposure with recreational activities after their worktime.
IFAC-CNR coordinates the AURORA “Advanced Ultraviolet Radiation and Ozone Retrieval for Applications” space research project funded by the European Community’s H2020 programme in the field of Earth Observation (2016-2019). Based on satellite data, one of the project’s outputs is to provide people with accurate information related to sun exposures by mobile apps.

New policies and legislation regarding optical radiation exposure
European Directive 2006/25/EC about protection of workers against risks arising from exposures to artificial optical radiation has been transposed inside the national framework law on safety at work (Legislative Decree 2008/81) and its provisions came into force in April 2012. Following the publication of Legislative Decree 2008/81, the coordination body of regional occupational safety and health authorities, with the contribution of former National Institute for Occupational Safety and Prevention (ISPESL, now part of INAIL) and of the Italian National Institute of Health (ISS), has issued a non-binding guidance to physical agents risk assessment and management. This document underlines that according to Legislative Decree 2008/81, where there are no provisions specific for natural optical radiation, employers have nonetheless the obligation to evaluate all risks for safety and health of workers, implicitly including those related to solar radiation exposure, adopting the proper protection measures when necessary. As regards artificial tanning, since 2011 (Ministerial Decree 110/2011) professional operators (aestheticians) are prohibited to use sunbeds on people below 18 years, pregnant women, people suffering, or that have suffered, from skin cancers and people who do not tan or that are easily sunburned (skin types 1 and 2).
A survey performed during 2017 by the Regional Agency for the Protection of the Environment (ARPA) of Piedmont has shown that just 40 out of a sample of 116 artificial tanning devices are compliant with technical standard EN 60335-2-27, a result similar to those of analogous surveys performed in past years. Apart from the need to verify compliance to technical standards, there is also the need to verify if operators of aesthetical centres respect all the prescriptions of the above-mentioned Ministerial Decree 110/2011, including those regarding the information that they must communicate to customers. For this purpose, in December 2017 Tuscany Region has issued checklists for bodies
responsible of controls and information sheets that operators of aesthetical centres must provide to customers.

Areas of public concern and national responses
There is not much public concern about the risks posed by UV radiation, probably due to the voluntary nature of exposures, differently from the case of electromagnetic fields.
An objective of the Italian National Prevention Plan (NPP) for years 2014-2018 is to raise the awareness of the population, mainly young people and children, along with the involved professionals, about the risks associated with the excessive exposure to UV radiation. The NPP has to be implemented by Regional Prevention Plans (RPP, see next section).

New public information activities
In the framework of the RPP 2014-2018 of Tuscany Region, two ongoing projects are dedicated to communication and prevention of UV radiation risks for children and teenagers and for outdoor workers, respectively. The first project consists in one-week summer camps for 7-17 years old children and teenagers aimed to promote correct lifestyles, including prevention of risks from UV radiation. The second project aims at developing guidelines on prevention measures in relation to solar radiation risks in outdoor workers, looking for new approaches for their diffusion, primarily among physicians responsible for the medical surveillance of workers and workers’ safety representatives.
In the framework of its RPP 2014-2018, Veneto Region has implemented a program of communication of risks associated to excessive exposures to Sun. Multimedia educational material targeting children and their parents has been developed and widely disseminated in the territory and on web.
The University of Modena and Reggio Emilia and INAIL are carrying out the project “Occupational risk prevention from solar radiation: development of a training program for workers and students of the agricultural sector and construction”. In the first months of 2018, they have organized eight training courses targeting workers of the involved sectors, six courses targeting students of secondary schools related to the involved sectors (e.g. agricultural technical high schools) and one course for teachers of the same schools.
UV Index monitoring and real-time (or near real-time) publishing is performed by different bodies, some of which listed in Schmalwieser et al. 2017 [UV Index monitoring in Europe. Photochem Photobiol Sci. 16(9):1349-1370]: “Sapienza” University of Rome, Italian Institute for Environmental Protection and Research (ISPRA), ARPA Valle d’Aosta, LaMMA Consortium, Institute of Biometeorology of the National Research Council, ARPA Veneto, Institute of Atmospheric Sciences and Climate of the National Research Council, Italian National Agency for new Technologies, Energy and Sustainable Economic Development (ENEA), ARPA Emilia Romagna, ARPA Piedmont, APPA (Provincial Agency for the Protection of the Environment) Bolzano and ARPA Lombardy are also publishing online previsions of the UV-Index.

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