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REPORT ON THE L'ORÉAL-UNESCO PRIZE 'FOR WOMEN IN SCIENCE' – MANCA PESKAR

This year, three outstanding young female researchers were awarded in the framework of the 19th L'Oréal-UNESCO Slovenian National Programme 'For Women in Science': Tajda Klobučar, Sara Orehek, and Manca Peskar. The programme, which has been running in Slovenia since 2006 in cooperation between L'Oréal Adria, the Slovenian National Commission for UNESCO, and the Ministry of Higher Education, Science and Innovation, aims to identify and support young women scientists in the early stages of their research careers. Each year, an expert committee selects three outstanding female researchers to receive a €5,000 scholarship to further their scientific work.

The programme aims to recognize the outstanding contributions of women in science, promote gender equality in research, and give young women scientists greater visibility, networking and career development. The focus is not only on research excellence but also on the wider societal impact and potential to improve the quality of life.

Manca Peskar – a Pioneer of Mobile Brain and Motion Imaging

Manca Peskar, MSc in Biopsychology and MSc in Cognitive Neuroscience, works at the Institute for Kinesiology Research at the Science and Research Centre Koper (ZRS Koper), where she focuses on the study of neurodegenerative diseases, especially Parkinson's disease. Her work is based on the innovative Mobile Brain/Body Imaging (MoBI) approach, which combines the monitoring of brain activity by electroencephalography (EEG) and full-body movement through actual space.

Compared to traditional neuroscience research which is conducted under static, laboratory conditions, MoBI allows the analysis of brain function during everyday movements such as walking, turning, or avoiding obstacles. This approach reveals how the brain processes movement in Parkinson's patients and how this differs from healthy individuals.

Using mobile EEG and motion sensors, Manca Peskar explores how different parts of the brain work together to maintain balance, adapt to the environment, and react to disturbances. Her ultimate goal is to develop personalized therapeutic approaches to detect disease progression, reduce the risk of falls, and prolong the patients' independence and quality of life.

Her research combines neuroscience, kinesiology, and advanced technology, and is one of those projects with clear and measurable benefits for society. As pointed out by ZRS Koper, this is an outstanding example of research that connects science with real human needs while breaking the boundaries of traditional research methods.

Through its support for Manca Peskar, the L'Oréal-UNESCO 'For Women in Science' programme not only promotes scientific excellence but also makes an important contribution to recognizing the role of women in shaping the future of science and society.

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POROČILO O NAGRADI L'ORÉAL-UNESCO ZA ŽENSKE V ZNANOSTI – MANCA PESKAR

V okviru 19. nacionalnega programa L'Oréal-Unesco Za ženske v znanosti 2025 so bile nagrajene tri izjemne mlade raziskovalke: Tajda Klobučar, Sara Orehek in Manca Peskar. Program, ki v Sloveniji poteka od leta 2006 v sodelovanju med družbo L'Oréal Adria, Slovensko nacionalno komisijo za UNESCO in Ministrstvom za visoko šolstvo, znanost in inovacije, je namenjen prepoznavanju in podpiranju mladih znanstvenic v zgodnjih fazah raziskovalne poti. Vsako leto strokovna komisija izbere tri izstopajoče raziskovalke, ki prejmejo štipendijo v višini 5.000 evrov za nadaljnje znanstveno delo.

Cilji programa so prepoznati izjemen prispevek žensk v znanosti, spodbujati enakost spolov na raziskovalnem področju ter mladim znanstvenicam omogočiti večjo vidnost, povezovanje in razvoj kariere. Poudarek ni le na odličnosti raziskav, temveč tudi na širšem družbenem vplivu in potencialu za izboljšanje kakovosti življenja.

Manca Peskar – pionirka mobilnega slikanja možganov in gibanja

Manca Peskar, magistrica biopsihologije in magistrica kognitivne nevroznanosti, deluje na Inštitutu za kineziološke raziskave Znanstveno-raziskovalnega središča Koper (ZRS Koper), kjer proučuje nevrodegenerativne bolezni, predvsem Parkinsonovo bolezen. Njeno delo temelji na inovativni raziskovalni metodi Mobile Brain/Body Imaging (MoBI), ki združuje spremljanje možganske aktivnosti s pomočjo elektroencefalografije (EEG) in natančno analizo gibanja med dejanskim premikanjem v prostoru.

Gre za prebojno metodo, saj poteka večina nevroznanstvenih raziskav v statičnih, laboratorijskih pogojih, medtem ko MoBI omogoča analizo možganske funkcije med vsakdanjimi gibi, kot so hoja, obračanje ali izogibanje oviram. Ta pristop razkriva, kako možgani pri bolnikih s Parkinsonovo boleznijo procesirajo gibanje in kako se to razlikuje od zdravih posameznikov.

Z uporabo mobilnega EEG in senzorjev gibanja Manca Peskar raziskuje, kako različni deli možganov sodelujejo pri ohranjanju ravnotežja, prilagajanju okolju in reakciji na motnje. Njen končni cilj je razvoj personaliziranih terapevtskih pristopov, ki bi omogočili odkrivanje napredovanja bolezni, zmanjšali tveganje za padce ter bolnikom podaljšali samostojnost in kakovost življenja.

Njeno raziskovalno delo združuje nevroznanost, kineziologijo in napredno tehnologijo ter spada med projekte, ki imajo jasne in merljive koristi za družbo. Kot so poudarili na ZRS Koper, gre za izjemen primer raziskovanja, ki

povezuje znanost z realnimi potrebami ljudi in hkrati ruši meje tradicionalnih raziskovalnih metod.

Program L'Oréal-Unesco Za ženske v znanosti tako s svojo podporo Manci Peskar ne spodbuja samo znanstvene odličnosti, temveč tudi pomembno prispeva k prepoznavanju vloge žensk pri oblikovanju prihodnosti znanosti in družbe.

Award ceremony of the Slovenian National Programme L'Oréal-UNESCO 'For Women in Science' 2025. From left to right: Tajda Klobučar, Manca Peskar, Sara Orehek.

Podelitev nagrad slovenskega nacionalnega programa L'Oréal-Unesco Za ženske v znanosti 2025. Od leve proti desni: Tajda Klobučar, Manca Peskar, Sara Orehek.