



**Special Event for the
11th IBRO WORLD CONGRESS OF NEUROSCIENCE**

EVENT TITLE:

"The gender gap in science is not only unfair, it is economically unwise"

***Special Event organized by the Women in Neuroscience Committee
Spanish Society of Neurosciences***

Granada, September 12th, 2023

12:10-13:10. Room ALBENIZ+MACHUCA

EVENT PROGRAM:

ORGANIZERS:

- 1. Dr. Teresa Giraldez**, SPAIN. Universidad de La Laguna. Chair of the Women in Neuroscience Committee of the Spanish Neuroscience Society. giraldez@ull.edu.es
- 2.- Dr. Diego Clemente**, SPAIN. Hospital Nacional de Paraplégicos. Member of the Women in Neuroscience Committee of the Spanish Neuroscience Society. dclemente@sescam.jccm.es

PARTICIPANTS:

The activity will consist of a public debate (round table) between relevant actors in the field of health and research in neurosciences:

- 1. Dr. Elisa Díez-Martínez**, SPAIN. Public Affairs and Policy Head Merck in Spain. elisa.diaz-martinez@merckgroup.com
- 2.- Dr Michelle Mclsaac**, SWITZERLAND. Economist, Health Workforce Department, World Health Organization. mmcisaac@who.int
- 3. Dr. Tracy Bale**, USA. IBRO President. TRACY.BALE@CUANSCHUTZ.EDU
- 4. Dr. Emmeline Edwards**, USA. President of World Women in Neuroscience. emmeline.edwards@nih.gov

FINAL AGENDA

"The gender gap in science is not only unfair, it is economically unwise"

1. Welcome and presentation of the event
Teresa Giraldez, WiNS-SENC (5 minutes).
 2. Presentation of the CloSinGap Cluster report "Opportunity costs of the gender gap in health"
Elisa Díez Martínez, MERCK-Closingap
(15 minutes).
 3. Women, gender and health; perspective by *the Gender and Health Unit or the World Health Organization*
Dr Michelle McIsaac
(15 minutes).
 4. Remarks from IBRO
Prof. Dr. Tracy Bale (5 minutes).
 5. The perspective of World Women in Neuroscience
Emmeline Edwards (5 minutes).
- 5.- Concluding remarks and questions from the audience (15 min).

SUMMARY OF THE ACTIVITY:

A current trend of thought seems to support that the gap between the number of men and women in science is closing. It is commonly argued that the number of women achieving university degrees has been growing continuously over the last 30 years and, in some cases, amply exceeds the number of men. However, this fact is not reflected on the actual proportion of women at higher responsibility/prestige scientific positions. Moreover, it is indisputable that the discrimination suffered by women scientists is still present, although in many cases it has become more subtle and difficult to perceive.

Neuroscience is not an exception. Many factors contribute to the lack of women in senior research positions that go beyond the effect of maternity and care of dependents, including lower visibility and exposure at scientific meetings, difficulty in accessing decision-making positions, etc. Recent studies, such as the one we propose to present at IBRO, show beyond doubt that keeping women out of the highest positions in the scientific career has a significant effect on national and international economy.

The importance to integrate the gender dimension in research, innovation, teaching and management has been highlighted by funding agencies and stakeholders as an added value in terms of excellence, creativity, and business opportunities. In the last 40 years, paradigms in health research have shifted from studying mechanisms and treatments in predominantly male participants to investigating complex systems in heterogeneous populations. Concurrently, research funding agencies have questioned the overreliance on male patients, animals, and cells; the lack of transparency and reproducibility of studies; inattention to sex effects; and inconsistent

reporting of sex-specific findings, all of which have compromised the rigor, reproducibility, and generalizability of basic science and clinical studies. In fact, for the European Union *“integrating the gender dimension in research and innovation is an added value in terms of excellence, creativity, and business opportunities. It helps researchers question gender norms and stereotypes, to rethink standards and reference models. It leads to an in-depth understanding of both genders’ needs, behaviors and attitudes. It enhances the societal relevance of the knowledge, technologies and innovations produced. It also contributes to the production of goods and services better suited to potential markets.”*

Interaction with the CloSinGap Cluster

CloSinGap is a cluster of twelve of the most important companies in Spain (<https://closinggap.com/>) whose mission is to promote measures and actions from the private and public spheres in favor of equal opportunities between women and men, thus contributing to equity and economic development and growth in line with the UN Sustainable Development Goals (SDGs). They aim to promote social transformation from the business sphere in the field of economy and women acting as a reference cluster in close collaboration between the public and private sectors.

One of the most interesting actions from CloSinGap is the analysis of the economic impact of gender gaps in areas such as health, work-life balance, pensions, leisure, mobility, tourism, employment, consumption, the digital environment, the rural environment, disability and public visibility. Their 14 monographic reports quantify the cost of gender gap existence and society of not tapping the full economic potential of female talent.

One of participating companies in CloSinGap is the multinational pharmaceutical company **Merck**, with experience of more than 350 years in science and technology. Merck is involved in the analysis and quantification of the consequences of Gender Gap in Health assistance. Their last report “Opportunity costs of the gender gap in health” offers a quantitative analysis of:

- i) the existence of the gender gap in health.
- ii) the causes of the existing inequity, including “unconscious gender bias in health”.
- iii) the calculation of the opportunity cost in economic terms generated by the gender gap in health on the economy and the well-being of individuals and society as a whole.

The full report is accessible at: <https://closinggap.com/actividad/brecha-salud/>

This unconscious gender bias in health partly arises from the previous existence of a gender bias in science. The study of a large number of diseases, including brain disorders, has historically and systematically been restricted to males, leading to conclusions that are erroneously globalized to females. A clear example is the consistent inaccuracy in the diagnosis of cerebrovascular accidents: a higher number of males are diagnosed, yet this disease is significantly more prevalent in females. This discrepancy derives from a biased design of diagnostic procedures applied to men and women exhibiting the same symptoms. Undoubtedly, this may be related to the fact that scientific evidence used to generate these diagnostic is influenced by the existing gender bias in animal models for brain disorders.