



Academia Europaea Barcelona Knowledge Hub

Activities 2024

OVERVIEW

Since 2023, the AE-BKH has been hosted by the Catalan Foundation for Research and Innovation (FCRI), based in Barcelona and directed by Dr. Jordi Mas until 12th of January 2024, provides the AE-BKH with the necessary institutional framework to carry out its activities.

The staff is made up of an academic director, Professor Jaume Bertranpetit and a Hub Manager, Maite Sánchez. AE-BKH has as partners the Barcelona City Council and the Government of Catalonia (Ministry of Research and Universities).

There is a Steering Committee with the following members: Andreu Mas-Colell, Ramon Gomis, Genoveva Martí, Alex Fidora and Marcel Swart. They met on July 10 to take stock of the first six months of 2024.

Also, in 2023, a new Advisory Board was formed: Eva Kondorosi, Björn Wittrock, Don Dingwell and three members of the Steering Committee: Andreu Mas-Colell, Ramon Gomis and Genoveva Martí. This Council met on January 18 and on the 17th of December 2024.

SCIENTIFIC DIALOGUES

The AE-BKH has successfully carried out its activities, combining the use of virtual tools with face-toface in a 'hybrid' format. The events have been of interest to the members of AE, to the scientific community and to the general public:

- Scientific dialogues developed at two levels:
- A series of high-level scientific discussions in English that explore the limits of knowledge and cross disciplinary boundaries entitled *Frontiers of Science and Technology in Society* (abbreviated as *Frontiers*).
- 2- Agora, a series of dialogues to promote social commitment and the inclusion of citizen participation in scientific discussion, especially within the Barcelona area. These sessions are conducted in Catalan and/or Spanish and deal with scientific topics closer to the interests of citizens, at a level of discussion appropriate for the public.



SCIENTIFIC DIALOGUES

AGORA February 21, 2024: The challenges of human reproduction



Summary:

Human reproduction poses a series of challenges with many personal and social implications. From a biological point of view, there are cases of infertility that can make conception difficult, whether due to genetic, health or environmental factors. In addition, there is the complexity of pregnancy itself, which involves physical, emotional and social changes in a woman's life. Other challenges include advances in reproductive technology, which raise ethical and moral questions around genetic manipulation and embryo selection. Human reproduction faces a wide variety of challenges that span both biological and social, ethical and technological aspects.



Link to watch the session: <u>https://youtu.be/caEAdA5kMkE</u> FRONTIERS March 20, 2024: Research in Arts: From STEM to STEAM



Research in Arts: From STEM to STEAM

20th of March de 18 h a 19.30 h Reial Acadèmia de Ciències i Arts de Barcelona - La Rambla, 115



communicate ideas through a visualization process. These are some of the concests they have in common creativity, exploration and discovery, expression and communication, excerimentation. But there are impartant differences between scientific and ortistic activity, like the targets they focus to, the objectivity visualizativity werk, the methodology or the way results are evaluated. What needs to be emphasized is the value of artistic practice as a form of knowledge that should be incorporated into science and technology practices, from STEM (science. Lechnology, Engineering and Mathematice) to 5 LAM (with Art).

If you are unable to attend in person, the event w^\prime , be broadcast online δ -scenning the QR below.



a K Zoom Forfurther information gebarcelona@fundeciorecerca.ca



Summary:

Both artistic and scientific activity try to explain the world, seek new knowledge, give vent to curiosity and creative thinking, use experimentation and express and communicate ideas through a visualization process. These are some of the concepts they have in common: creativity, exploration and discovery, expression and communication, experimentation. But there are important differences between scientific and artistic activity, like the targets they focus to, the objectivity vs. subjectivity view, the methodology or the way results are evaluated. What needs to be emphasized is the value of artistic practice as a form of knowledge that should be incorporated into science and technology practices, from STEM (Science, Technology, Engineering and Mathematics) to STEAM (with Art).

Link to watch the session: https://youtu.be/slcvRY3PsQI

IV Àgora



Diàlegs sexual y de género: Cientifics naturaleza y cultura ademia es i Arts de B elona eledge Hub RĂCĂR Departurent de Parares fori attente Esa Díaz-León Canala D Diversidad afectiva. orientaciones sexuales, identidades de género y expresiones emocionales que existen en las personas. Este término abarca la idea de que las personas sexual y de género: naturaleza y cultura experimentan el amor, la atracción y la identidad de género de maneras diversas, y na se limita a una única forma de sentir o vivir estas experienc Reconoce la existencia y legitimidad de identidades y orientaciones diferentes a las tradicionalmente consideradas como normativas en una sociedad, dèmia de Ciències i Arts de promoviendo la aceptación, el respeto y la igualdad de derechos para todas las personas, independientemente de su orientación sexual o identidad de género. Per a més informació: Ofundaciorecerca.cat

AGORA April 17, 2024: Affective, sexual and gender diversity: nature and culture

Diversidad afectiva

Summary:

Affective, sexual and gender diversity refers to the wide variety of affective-sexual realities, gender identities and emotional expressions that exist. This term encompasses the idea that experiences of love, attraction, and gender identity are diverse, and not limited to a single way of feeling or living. It recognizes the existence and legitimacy of identities and orientations different from those traditionally considered normative in a society, promoting acceptance, respect and equal rights for all people, regardless of their affective-sexual orientation or gender identity. To what extent does it respond to biological and genetic bases or is its basis totally psychological and social?

Link to watch the session: https://youtu.be/HWELPBjvX3E



FRONTIERS 15 May 2024: Climate change, migration and emergent diseases



Climate change, migration and emergent diseases

listh of Moy from 18 h to 1930 h Reial Acadèmia de Ciències i Arts de Barcelona - La Ramble, lis



batterns that the emergence of allevases. At the deministration conditions autoto climate shifts impact disease dynamics, expanding the range of vectors and fostering the soread of inflections. Concurrently, climate-included events like extreme weather drive human displacement and migration, amp ifying the risk of disease transmission in crowded settlements. These intertwined factors create a complex nexus where environmental changes, human mobility, and disease emergence are interconnected. Addressing this requires comprehensive strategies that combine environmental conservation, public health initiatives, and global cooperation to manage migration and mitigate the health risks exceepaded by climate change.

If you are unable to attend in person, the event will be broadcast online by scanning the OR below.

> For further information Contendaciorecerca.cat







Summary:

Climate change poses a multifaceted challenge, intertwining with migration patterns and the emergence of diseases. Altered environmental conditions due to climate shifts impact disease dynamics, expanding the range of vectors and fostering the spread of infections. Concurrently, climate-induced events like extreme weather drive human displacement and migration, amplifying the risk of disease transmission in crowded settlements. These intertwined factors create a complex nexus where environmental changes, human mobility, and disease emergence are interconnected. Addressing this requires comprehensive strategies that combine environmental conservation, public health initiatives, and global cooperation to manage migration and mitigate the health risks exacerbated by climate change.

Link to watch the session: https://youtu.be/EgGufrd8sIY



AGORA June 5, 2024: Cooking & Science





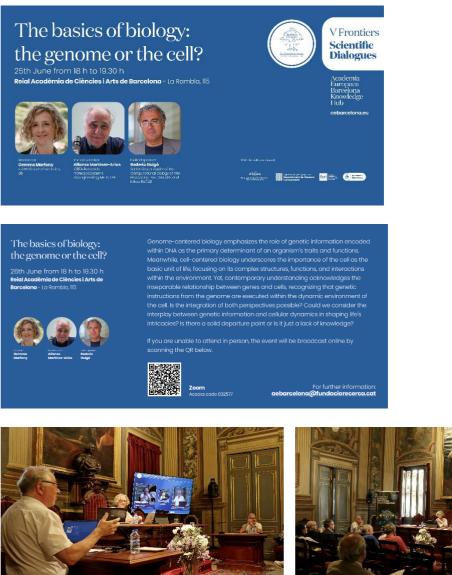
Summary:

Cooking and science converge in a fascinating field where flavours, textures and chemical processes are combined. The kitchen is an experimental laboratory where reactions and transformations occur in food. Science provides knowledge about the physics, chemistry and biology involved in food preparation. Modern chefs are inspired by science to better understand culinary processes and innovate, using techniques to create dishes that combine art and science. This fusion of cooking and science not only boosts culinary creativity, but also provides opportunities to better understand food, nutrition, and health in a more accurate and informed way.

Link to watch the session: <u>https://youtu.be/-e9Fp7qHxaY</u>



FRONTIERS June 25, 2024: The basics of biology: the cell or the genome?



B.

Summary:

Genome-centered biology emphasizes the role of genetic information encoded within DNA as the primary determinant of an organism's traits and functions. Meanwhile, cell-centered biology underscores the importance of the cell as the basic unit of life, focusing on its complex structures, functions, and interactions within the environment. Yet, contemporary understanding acknowledges the inseparable relationship between genes and cells, recognizing that genetic instructions from the genome are executed within the dynamic environment of the cell. Is the integration of both perspectives possible? Could we consider the interplay between genetic information and cellular dynamics in shaping life's intricacies? Is there a solid departure point or is it just a lack of knowledge?

Link to watch the session: <u>https://youtu.be/0DfARERz9sY</u>



FRONTIERS September 25, 2024: Ecological collapse: the crisis due to the human footprint on environment





Summary:

In recent decades, the rate at which human activities impact the environment has increased dramatically. As a result, climate change threatens many plant and animal species with displacement or extinction, alters and destroys ecosystems, triggers more extreme weather events, reduces agricultural productivity, and makes large areas of the globe uninhabitable. Unless humans drastically change their behaviour soon, environmental degradation will reach a point of no return, with catastrophic consequences. While individual nations may overhaul environmental practices, raise taxes on emissions, and develop eco-friendly technologies within their borders, their efforts will not be enough without the participation of the international community. Furthermore, since climate change mitigation takes time to yield results, it is difficult for some countries to willingly sacrifice short-term economic growth and prioritize long-term green policies.

Link to watch the session: <u>https://youtu.be/htmab7C8mY0</u>



AGORA October 9, 2024: Overmedication



Summary:

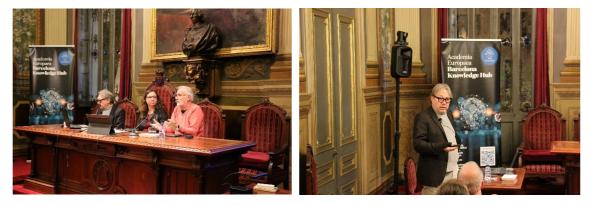
Overmedication in medicine is a worrying phenomenon that challenges the balance between effective treatment and the risk of side effects. In a world where overprescribing is common, the true value of medicine is overshadowed. Instead of resorting to quick fixes and miracle pills, we should focus on addressing the underlying causes of diseases and promoting healthy living conditions. This approach not only reduces drug dependency but also reaffirms healthcare professionals' commitment to the holistic well-being of their patients. Ultimately, the true value in medicine lies in the empowerment of the individual to take control of their health and in the ability of doctors to guide them towards a healthier and more balanced life.

Link to watch the session: <u>https://youtu.be/clpbCS6Q0pk</u>



FRONTIERS November 13, 2024: Technological disruption: social challenges of the Artificial Intelligence revolution





Summary:

The simultaneous rise of both information technology and biotechnology threatens to transform the economy, particularly the labour market, as well as social and political powers, and even the biological makeup of humans. The future development of artificial intelligence (AI) will pose challenges that are currently difficult to imagine. As with climate change, policies restricting certain technological advancements in one country, such as the United States, do not prevent another, such as China, from pursuing them; soon thereafter, the international community begins developing the same technologies to avoid being left behind in a competitive world. Additionally, the wide range of opinions on the ethical implications of technological advancements in AI and bioengineering could lead to the adoption of different guidelines by different countries. To prevent a potentially dangerous snowball effect, nations need to agree internationally on ethical guidelines for technological advancements and innovations.

Link to watch the session: https://youtu.be/1jTxj2pLZ7Q



AGORA December 4, 2024: Experimentation on animals





Summary:

Animal experimentation is a controversial topic that raises several pros and cons. On the one hand, most scientists argue that it is essential for scientific and medical progress. Using animals in experiments allows researchers to study complex biological processes, test new therapies, and evaluate the safety of pharmaceutical products before testing them in humans. This can lead to the development of more effective and safer medical treatments, saving lives and improving public health. On the other hand, detractors of animal experimentation highlight the ethical and animal welfare aspects involved. So, while animal experimentation can provide significant scientific benefits, it also raises ethical and welfare concerns that need to be taken into account.

Link to watch the session: <u>https://youtu.be/clpbCS6Q0pk</u>

Work sessions with the other hubs:

- 1. 13th March: Proposal to organise an activity between all the hubs.
- 2. 11th June: The logo of the entire Academia Europaea is changed.
- 3. 26th November: Hubs session on Building Bridges meeting.

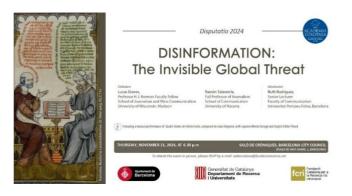


Disputatio de Barcelona 2024: "Disinformation" (November 2024)

AE-BKH organized the Disputatio de Barcelona 2024 under the slogan *Disinformation: The Invisible Global Threat.*

Lucas Graves, from the University of Michigan and Ramón Salaverría, from the University of Navarra, were the invited speakers while Ruth Rodriguez from the Department of Communication at Pompeu Fabra University was the moderator.

The event took place on November 21 at 6:30 p.m. in the Hall of Chronicles of the Barcelona City Council.





Link to watch the session: https://www.youtube.com/watch?v=vxgoEHRL9-Q

Interwiew of Lucas Graves in La Contra La Vanguardia (02012025)



Lucas Graves, investiga el 'fact-checking' y los 'fakes' en medios digitales en la Universidad de Wisconsin."En EE.UU. unas pocas mentiras ganan los votos que deciden" ¿Edad? Ya sé en qué invertir los años que me quedan. Nací en Nueva York y crecí en Washington. Me doctoré en Columbia estudiando la digitalización de la prensa. Hoy la mentira sale barata y rentable en política... ser periodista también es desmentir. Participo en la Disputatio 2024 con la FCRI y la AE-BKH. (Foto: Mané Espinosa).



BARCELONA HYPATIA EUROPEAN SCIENCE PRIZE

The Barcelona Hypatia European Science Prize in its fourth edition recognised **Nuria Oliver** her research of excellence in the development of new methods and AI systems to promote a positive social impact, a trajectory of exceptional international influence that has resulted in more than 40 registered patents.

The award was presented on **4 March, 2024** at an event in the Saló de Cent of the Barcelona City Hall in which Nuria Oliver gave the lecture "Towards a Socially Sustainable Artificial Intelligence" in the company of Barcelona city officials, representatives from Barcelona's scientific community and Members of Academia Europaea (AE). To watch the event: <u>LINK</u>.



In August 2024, the **fifth edition** call was opened. 30,000 euros are awarded to a person who has developed a career of excellence, mainly in a European country, in the field of life sciences and health. The call had 10 candidates, and the jury meeting was held on October 17, 2024.

The winner of the prize is the geneticist and founder of the paleogenetics field of study **Svante Pääbo.**

Link to read the announcement: <u>https://www.barcelona.cat/infobarcelona/en/biologist-and-geneticist-svante-paabo-to-receive-the-5th-hypatia-prize_1459974.html</u>





Art and Science Day 2024

On September 18, 2024, the Art and Science 2024 conference was held. Anna Dumitriu, Alex May, Marta de Menezes and Javier Forment were invited among other artists and scientists. All four accepted the invitation. The event took place in the morning at the RACAB and in the afternoon at the Barcelona Gallery. Other guest speakers were: Lua Coderch, Paula Bruna, Joan Llort and Josep Perelló.







To watch the session: <u>https://youtu.be/cmMDNW435TM</u>

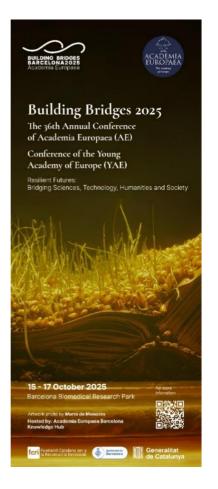


Building Bridges 2024 & 2025

The 35th Annual Conference of the Academia Europaea (AE) and the 14th of the Young Academy of Europe (YAE), took place in **Wroclaw on 27, 28 and 29 November 2024.** Both members of the Barcelona Hub attended the meeting in person.



The 36th Annual Conference of the Academia Europaea and the 15th of the Young Academy of Europe will take place in **Barcelona** and will be organised by our HUB on **October 14, 15, 16 and 17, 2025** at Barcelona Biomedical Research Park.



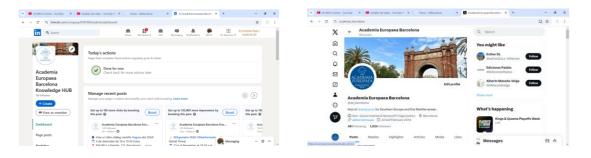




Web communication and social networks

AE-BKH continues to be active on social networks (Instagram, LinkedIn and twitter) and is adding content to its website:

https://aebarcelona.eu/en/



PARTNERS

Since the launch of the (AE-BKH) in 2013, the Government of Catalonia and the Barcelona City Council have acted as main sponsors and promoters of the AE-BKH, with the aim of consolidating Barcelona as a scientific and innovation hub in southern Europe and the Mediterranean region. Its continued support, together with the collaboration of the Catalan Foundation for Research and Innovation (FCRI), provides AE-BKH with the necessary stability to undertake new activities and plan for future growth and expansion.

Partners:



With the support of:



Catalana per a la Recerca i la



Ajuntament de Barcelona