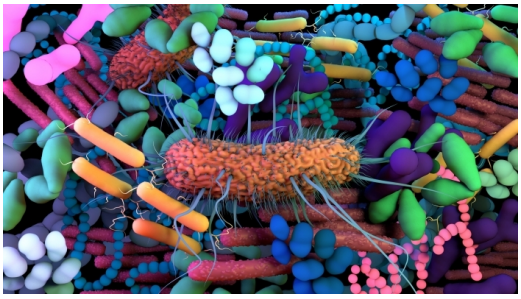
Breaking our links with antibiotic resistant bacteria



11.Jul - 12.Jul 2024

Cod. O13-24

Mod.:
Streaming Face-to-face

Edition
2024

Activity type
Summer course

Date
11.Jul - 12.Jul 2024

Location
PiE-UPV/EHU (Plentzia Marine Station)

Languages
Spanish English

Academic Validity
20 hours

Web
https://www.jrl-environmental-antibiotic-resistance.eus/

Organising Committee

Description

Human health is inextricably linked to the health of the planet we live on. For years, the scientific community has emphasised that environmental problems (e.g. air, water and soil pollution; noise pollution; contamination of our food; climate change; etc.) have an adverse negative impact on people's health, being, in fact, directly or indirectly responsible for millions of deaths per year globally, as well as for numerous diseases of major concern (e.g. cancer, asthma, allergies, growth disorders, hearing disorders, etc.). In this regard, the COVID-19 pandemic has starkly shown us that the progressive degradation to which we are subjecting our planet (to its biodiversity, the structure and functioning of its ecosystems, its energy balance, etc.) increases the risk of the emergence and spread of pandemics caused by infectious agents. In the case of the problem of the increase in infections caused by antibiotic-resistant bacteria, in addition to the solutions that may be provided by scientific-experimental disciplines, it is necessary to apply other disciplines such as economics, anthropology, philosophy, ethics, communication and education, among others.

This Summer Course will emphasize the links between the degradation of our planet, currently facing a global change of anthropogenic origin that is diminishing at an alarming rate our quality of life and well-being, and the health of the people who inhabit it, in order to amplify our level of environmental awareness and, above all, commitment to the protection of this Earth that welcomes us. The course also offers a vision of the problem and the search for solutions from different economic and governance strategies and will also focus on the power of communication aimed at provoking action in the face of the serious problem of antibiotic resistance.

Objectives

To communicate the magnitude of the problem of antibiotic resistance to the general public.

To provide students with training on the different aspects of the problem of antibiotic resistance in a way that is easy to understand.

To show the different lines of action and the solutions that can be generated from the different scientific disciplines.

To encourage students to act in order to collaborate in the solution of the problem of antibiotic resistance in their fields of action.

Program

11-07-2024

09:00 - 09:15 “Registro“Presentation by the Director of the activity

Itziar Alkorta Calvo | UPV/EHU - Profesora Departamento Bioquímica y Biología Molecular

---

09:15 - 10:00 “Vínculos entre los límites planetarios y la resistencia a los antibióticos – Links between the planetary boundaries and antibiotic resistance “

Carlos Ander Garbisu Crespo | Neiker - Director Científico

10:00 - 10:45 “Vínculos entre contaminantes emergentes químicos y la resistencia a los antibióticos – Links between chemical emerging contaminants and antibiotic resistance“

Néstor Etxebarria Loizate | UPV/EHU - Catedrático Departamento Química Analítica, PiE

10:45 - 11:30 “Vínculos entre la plastisfera y la resistencia a los antibióticos – Links between the plastisphere and antibiotic resistance “

Manu Soto López | UPV/EHU - Catedrático Departamento ZOOLOGIA Y BIOLOGIA CELULAR ANIMAL, PiE

11:30 - 12:00 Break

12:00 - 12:45 “Vínculos entre la economía y la resistencia a los antibióticos - Links between economy and antibiotic resistance “

Olof Lindahl | Uppsala University - Project coordinator Uppsala Antibiotic Center

---

12:45 - 13:30 “Vínculos entre la comunicación científica y la resistencia a los antibióticos – Links between science communication and antibiotic resistance “

Eva Garmendia | Uppsala University - Project coordinator Uppsala Antibiotic Center

---

12-07-2024

09:00 - 09:45 “Vinculos entre el cambio climático y la resistencia a los antibióticos – Links between climate change and antibiotic resistance “

María José Sanz Sánchez | BC3 Basque Centre for Climate Change - Directora del BC3

09:45 - 10:30 “Vínculos entre el entorno hospitalario y la resistencia a los antibióticos – Links between hospital settings and antibiotic resistance “

Lucía Gallego Andrés | UPV/EHU - Profesora Departamento:INMUNOLOGIA, MICROBIOLOGIA Y PARASITOLOGIA

10:30 - 11:15 “Vínculos bacterianos a través de la transferencia horizontal de genes – Bacterial links through horizontal gene transfer “

Itziar Alkorta Calvo | UPV/EHU - Profesora departamento Bioquímica y Biología Molecular

---

11:15 - 11:45 Break

11:45 - 12:30	“Vínculos entre gobernanza coevolutiva y la resistencia a los antibióticos - Links between coevolutionary governance and Antibiotic resistance “ **Peter Søgaard Jørgensen** | Uppsala University - Deputy Executive Director, Theme leader (Global Economic Dynamics and the Biosphere)
12:30 - 13:15	Round table: “Rompiendo los vínculos – Breaking the links“ **Lucía Gallego Andrés** | UPV/EHU - Profesora **Néstor Etxebarria Loizate** | UPV/EHU - Catedrático **Manu Soto López** | UPV/EHU - Subdirector PiE **Itziar Alkorta Calvo** | UPV/EHU - Profesora
13:15 - 13:30	Synthesis

Directed by

Itziar Alkorta Calvo

Universidad del País Vasco, Titular de Universidad

Itziar Alkorta, degree in Chemistry and Biochemistry PhD (UPV/EHU). She did a postdoctoral stay at the University of California, Berkeley. Currently, she is a lecturer in Biochemistry and Molecular Biology Dept, UPV/EHU. She directs a research group focused on understanding the molecular mechanism of bacterial conjugation to provide solutions to the problem of the spread of antibiotic resistance among bacteria. She has supervised numerous doctoral theses, master thesis and graduate works. Shee has written nearly 120 scientific and science dissemination articles, and she has led and participated in numerous research projects. She has been director of the Biofisika Institute (UPV/EHU, CSIC), Vice-Dean of the Faculty of Science and Technology and member of the Board Committee of the Spanish Society of Biochemistry and Molecular Biology. Since 2017 she is a member of AKADEME II. Currently, she is the coordinator of the Joint Research Laboratory on Environmental Antibiotic Resistance and the Director of the General Research Services (SGIker) of the UPV/EHU.

Teachers

Néstor Etxebarria Loizate

Nestor Etxebarria, Doctor CC Químicas (1993, UPV/EHU), Catedrático (2011, UPV/EHU) y actualmente director del Dpto Química Analítica. Pertenezco al grupo de investigación IBeA (www.ehu.eus/Ibea). También formo parte de la Estación Marina de Plentzia (PiE, www.ehu.eus/PIE). He investigado sobre química en disolución (Tesis Doctoral), implementación del análisis por activación neutrónica para el control de producción de materiales de referencia (postdoct en JRC-IRMM, Bélgica) y sobre análisis ambiental de contaminantes orgánicos y en ecotoxicología ambiental (actualidad). Soy coautor de más de 130 publicaciones científicas e investigador principal de 3 proyectos de la Agencia Nacional de Investigación. He dirigido 13 tesis doctorales y más de 25 tesis de máster. Soy coautor de cuatro libros de texto universitarios y fui coordinador del grado de Química (2008-2011) y actualmente pertenezco al comité académico del Erasmus Mundus Master in Marine Environment and Resource.

Lucía Gallego Andrés

Universidad del País Vasco UPV/EHU

Lucía Gallego, Graduated in Medicine and Surgery, Master in Recombinant DNA Technology, PhD in Medicine and Surgery. Prof. of Medical Microbiology, Faculty of Medicine & Nursing, University of the Basque Country UPV/EHU. Representative of the Faculty of Medicine & Nursing in the National Plan Against Antibiotic Resistance (PRAN) of the Spanish Agency of Medicines and Health Products (AEMPS). Head of the Acinetobacter baumannii Research Group working on the study of antibiotic resistance and its dissemination through mobile genetic elements among clinical isolates causing serious hospital-acquired infections that have become a worldwide threat as multidrug-resistant isolates have dramatically risen worldwide. Collaborations with international groups from Germany, Egypt, Bolivia and UK, Author of 53 international publications, 9 book chapters, 79 international congress. Participation in 54 research projects, 28 as PI. Supervisor of 12 PhD, 12 MSc, 16 undergraduates, 6 OWSD mentoring

Carlos Ander Garbisu Crespo

NEIKER, Director Científico

Dr. Garbisu is the Scientific Director at NEIKER, The Basque Institute of Agricultural Research and Development (Spain), where he leads the Soil Microbial Ecology Group (http://www.soilmicrobialecology.com). He obtained his PhD degree in Biology at King's College London (1992). Then, he carried out postdoctoral studies in the Department of Biochemistry and Molecular Biology of the University of the Basque Country (1992-1993, 1996-1997) and in the Department of Plant Biology of the University of California at Berkeley (1993-1996). He has published more than 135 international papers (h-index=42), participated in more than 70 research projects, and taught a great deal of courses at the university level. He has participated in many scientific committees and acted as project evaluator for many organizations.

Eva Garmendia

Olof Lindahl

Dr. Olof Lindahl is an Associate Professor in International Business and works at the Department of Business Studies at Uppsala University. Lindahl is also a member of the management team at the Uppsala Antibiotic Center. His research interests concern: - Innovation in the antibiotic industry, particularly in relation to economic policy interventions in firms' new economic models to incentivize innovation in antibiotics. - Technology transfer - international diffusion of diagnostic tools for bacterial infections. - Policy interventions to tie incentives for antibiotic R&D to models ensuring the responsible use of new drugs. Presently, Lindahl is the leader of 'iDX: An Exploration of Regulatory, Corporate, Relational, and Technical Barriers to Supply and Global Use of Diagnostics in the Fight Against AMR' funded by the JPIAMR. This multidisciplinary consortium involves partners from Uppsala University, University of Cape Town, Karolinska Institute, Université Laval and the BEAM Alliance.

María José Sanz Sánchez

BC3, Basque Centre for Climate Change, Scientific Director

Prof. Sanz holds a Ph.D. in Biological Sciences from the Universidad de Valencia (1991) and has expertise in several scientific areas like Ecophysiology, Air pollution effects, lower and higher plants, Atmospheric dynamics and chemistry, Nitrogen and carbon cycles, Greenhouse Gasses and other related gases, Greenhouse gas inventories, LULUCF and REDD+. She has been strongly involved in the policy dimension of Climate Change, guiding political decisions carried out at centres such as the FAO (United Nations Food and Agriculture Organisation) or the UNFCCC (United Nations Framework Convention on Climate Change). She has an expertise on multilateral processes, regulatory frameworks, policy measures and instruments of Climate Change Policy, and led the implementation of different programmes with a multidisciplinary-based approach.

Peter Søgaard Jørgensen

Peter holds a PhD in ecology and evolutionary biology from 2014. His work studies the intersection of sustainable development and (re-)emerging infectious diseases with a special focus on antibiotic resistance. Since 2019, he leads the research group on global health at the Global Economic Dynamics and the Biosphere programme at the Royal Swedish Academy of Sciences and is theme leader of Anthropocene Dynamics at the sustainability science hub Stockholm Resilience Centre at Stockholm University and is affiliated with the Uppsala Antibiotic Centre at Uppsala University. He is currently the PI of an ERC starting grant INFLUX – Emerging pests and pathogens as a novel lens for unravelling social-ecological cascades (2022-2027) and has led two successful international consortia on the links between AMR and sustainable development. His work has been featured in Nature, Science, PNAS and the Lancet Infectious Diseases.

Manu Soto López

Manu Soto. Professor of Cell Biology (2011, UPV/EHU) and since 2012 Deputy Director of the Plentzia Marine Station (UPV/EHU). Researcher of the Consolidated Research Group on Cell Biology in Environmental Toxicology. European doctoral thesis (1995, UPV/EHU). Studies at University College of Wales, Univ of Innsbruck, Univ Azores and Univ of Wales. He has supervised 7 PhD theses (+3 in progress), master's thesis (18) and bachelor's thesis (7). Interest in the development and application of biomarkers against exposure to metals in aquatic and terrestrial organisms. More than 100 scientific publications and more than 200 contributions in national and international conferences. He has coordinated research projects financed by the Ministry of Education, Economy, Competitiveness, University of the Basque Country, Basque Government, and contracts with municipalities, local and state environmental agencies and private companies. Vice Dean of the Faculty of Science and Technology (2006-2012).

Registration fees

FACE-TO-FACE	UNTIL 31-05-2024	UNTIL 11-07-2024
joung fee	25,00 EUR	59,00 EUR
General	-	84,00 EUR
Reduced fee regular	-	71,00 EUR
Registration exemptions	-	59,00 EUR

LIVE ONLINE	UNTIL 31-05-2024	UNTIL 11-07-2024
joung fee	25,00 EUR	59,00 EUR
General	-	84,00 EUR
Reduced fee regular	-	71,00 EUR
Registration exemptions	-	59,00 EUR

Place

PiE-UPV/EHU (Plentzia Marine Station)

Areatza Pasealekua. 48620 Plentzia

Bizkaia