

PLENARIES

1.1 The environmental impact of pharmaceuticals: current situation and possible solutions



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Full Professor of Pharmacy & Pharmaceutical Technology at the University of the Basque Country in Vitoria in Spain. Researcher at the University Institute for Regenerative Medicine and Oral Implantology - UIRMI and scientist at Networking Biomedical Research Center on Bioengineering, Biomaterials and Nanomedicine, CIBER-BBN.

One of the pharmacist (as scientists) with more international articles in Spain by the age of 46, with 362 international papers, 70 national articles, an H-index of 82 and over 23.900 citations. In the recent "Top Scientific Rankings" classification prepared by Stanford University, Gorka heads He is a relevant science communicator during the pandemic in twitter:

@gorka_orive (more than 112,000 followers). Dr. Orive is scientific advisor of different Pharma companies and has founded his own company Geroa Diagnostics ([link](#)) about Alzheimer's diagnosis by salivary biomarkers.



Unax Lertxundi
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Unax is a hospital pharmacy specialist working as the Chief Pharmacist in the Araba Mental Health Network, Osakidetza, the public Basque Health System. He also belongs to the Bioaraba Health Research Institute and holds a Board Certification in Psychiatric Pharmacy. His research focuses on sustainable pharmacy and the safe use of medicines, especially in addressing drug pollution issues from a healthcare perspective. He is one of the promoters of the Basque Sustainable Pharmacy initiative, and one of the organizers of the postgraduate about Pharmaceuticals in the environment of the University of the Basque Country.

ABSTRACT

Pharmaceuticals are essential for the prevention and treatment of multiple diseases. However, in recent years it has been known that they can be considered as emerging contaminants. Their presence in the environment give rise to disastrous consequences, such as the virtual disappearance of certain vulture species caused by the anti-inflammatory diclofenac, the potential appearance of multi-resistant bacteria due to the presence of antibiotics, or the collapse of entire fish populations due to estrogen-induced feminization. Pharmaceutical pollution is a complex problem, which encompasses multiple agents with often conflicting interests, difficult to approach and solve. The present conference aims to describe the problem and the most relevant evidence that demonstrates the presence and impact of drugs in the environment, as well as the potential solutions that can be proposed to reduce this problem that directly affects the achievement of the objectives of sustainable development.

1.2 The new concept of “Pharmacy of services” and the Master degree reform



Gianni Sagratini
*University of Camerino
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He is full professor of Food Chemistry at School of Pharmacy of University of Camerino. The activity research of Prof. Sagratini is documented by 180 publications in international scientific journals present in the database with ISI impact factor (H index 35), by 196 communications in national conferences, international and workshops, by 7 chapters of a books. In addition, Prof. Sagratini is the inventor of 4 patents. His research focuses on: a) Development of new analytical methods for the analysis of bioactive molecules in foods by extraction techniques such as SPE, SPME, LLE, and instrumental techniques such as LC-DAD-MS, LC-MS-MS, GC-MS, b) Characterization of substances with nutraceutical activity in food and plants by using the analytical techniques mentioned above, c) Study of new systems of packaging for the storage of food. Prof. Sagratini is the coordinator of the Bachelor degree in Gastronomic Sciences and is the Director of School of Pharmacy at University of Camerino.

ABSTRACT

The recent pandemy related to COVID-19 has unequivocally highlighted the important role of pharmacies as territorial reference points for the citizen. It is evident that the trend is increasingly that to recognize the role pharmacies playing in promoting health services by guaranteeing the access to traditional healthcare facilities. The role of the pharmacy has undergone a deep transition from the traditional role of mere distributor of medicines to the role of distributor of services connected with healthcare; nowadays the citizen goes to pharmacy not only for buying medicines but also for performing diagnostic tests such as glucose, cholesterol and blood pressure measurement, or vaccines, for buying food supplement, dietetic food, nutraceuticals, cosmetics and for having advices about it. Considering the actual priorities and needs of our society, it is crucial for the Universities to prepare modern and professional young pharmacists, that will be able to lead the new roles of pharmacies in the territories. The Italian Ministerial Decree 1147 of the last 10 october 2022 designed the new Master degrees in Pharmacy and Industrial Pharmacy, that the Universities have to apply for remodeling the cultural preparation and formation of the future pharmacists.

2.1 Sustainability in Public Health Pharmacy Practice: Therapeutic Optimization and Integration Program



Amparo Esteban Reboll es especialista en Medicina Familiar y Comunitaria y ha trabajado en el ámbito de Atención Primaria desde 1985, como médica de familia, coordinadora de centro de salud, y directora médica de Atención Primaria del Departamento de salud Valencia-Hospital General.

Tras su paso por la Escuela Valenciana de Estudios de la Salud (EVES), en la actualidad ocupa el puesto de subdirectora general de Optimización e Integración en la Dirección General de Farmacia y Productos Sanitarios de la Conselleria de Sanitat Universal i Salut Pública.

Amparo Esteban Reboll

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ABSTRACT

In 2008, in the face the upward trend in health spending in most OECD (Organization for Economic Co-operation and Development) economies, researchers from the Institute for Health Improvement (IHI) developed what is known as the triple aim model in health, focused on a triple objective for the healthcare environment.

At the national level, some measures have been established in the pricing policy of the National Health System with the aim of managing the incorporation of new medicines more efficiently. These measures are called Shared Risk Agreements, and they can be financial SRA (based on discounts or spending caps on specific products or indications, or agreements based on clinical results (Payment for Results Schemes). These agreements apply to medical order products that are dispensed in hospitals.

Regarding the Valencian public health system, we have been forced to address changes in the structures and processes that govern corporate strategies for the rational use of medicines and health products. All of this is to ensure the development and compliance with the provisions of the Real Decreto Legislativo 1/2015, which aim to provide the greatest benefit to both patients and society as a whole.

The core principles on which the strategy of the General Directorate of Pharmacy and Health Products is based are the same as those of the triple aim:

- Pharmaceutical policy oriented towards patients and citizens.
- Optimization, which includes efficiency, sustainability, safety and results orientation.
- Coordination of the pharmaceutical structures of the public health system.

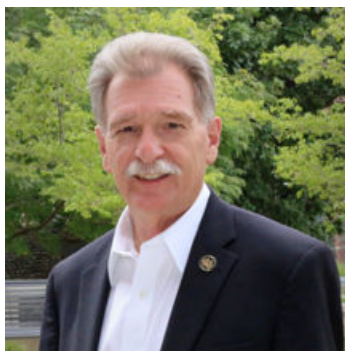
2.1 Sustainability in Public Health Pharmacy Practice: Therapeutic Optimization and Integration Program

Transversal to all strategic lines, our community strategy, the development of which is defined in the Therapeutic Optimization and Integration Program of the Valencian Community (POeIt), published in October 2021.

All these principles that govern the Program are guaranteed through the following actions:

- a) Shared responsibility at all levels, managers and care providers, and by all professionals.
- b) Establishing a collaborative network to increase process efficiency, reduce resources consumption, and promote greater equity.
- c) The representation of the departmental commissions in central commissions.
- d) Effective implementation of decisions.
- e) The knowledge and monitoring of the activity and results.
- f) Transparency and dissemination.

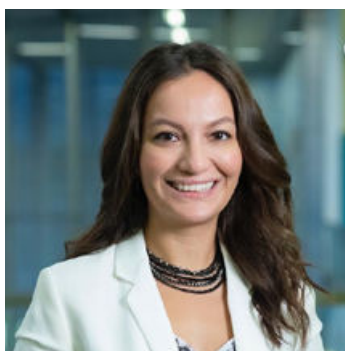
2.2 The environmental impact of pharmaceuticals: current situation and possible solutions



Biosketch
Ralph J. Altieri
PhD for EAFP

Ralph J. Altieri, PhD is Professor and Dean, University of Colorado Skaggs School of Pharmacy and Pharmaceutical Sciences that ranks in the top 10% in research and top 15% among all US pharmacy schools. His career in research and education spans over 40 years. He conducted NIH funded research programs for over 15 years primarily in the area of neural control of airway function prior to becoming associate dean for academic affairs. As associate dean, he was responsible for leading conversion of the BSPHarm program to the PharmD degree program. He had administrative oversight of an innovative ACPE accredited online post-BS PharmD program for US and Canadian practicing pharmacists that is now in its 25th year. Subsequently, that program was expanded to the rest of the world and is the only US accredited international online post-BS PharmD program. As Dean, he has garnered over \$30M USD in grants to support research programs in the school and increased school endowments 10-fold.

He is a member of the International Pharmaceutical Federation (FIP) and initiated international efforts in his school that have led to partnerships with pharmacy schools worldwide including development of a PharmD program in Cairo, Egypt, an ambulatory care program in Qatar and with the campus' Center for Global Health clinic in Guatemala. He holds leadership roles in FIP as Chairperson of FIP Education, member of FIP ExCo, Bureau, and Congress Programme Development Committee, continuing Director of the FIP UNESCO UNITWIN global program, and formerly as President and Immediate Past President of the Academic Pharmacy Section (AcPS), and AIM Advisory Committee. He conducts outreach efforts on behalf of FIPed to pharmacy organizations worldwide in the United States, Asia, Europe, Latin America and Africa, including AACP, AASP, EAFP, IACP, IPSF and UNITWIN Program. In 2016, he was awarded FIP Fellow.



Dr Ozge Ozer
*Education and
Professional Development
Manager, International
Pharmaceutical
Federation (FIP), Turkey*

Dr Ozge Ozer is a highly accomplished pharmacist and academic professional with a strong background in pharmacy and pharmaceutical sciences. With a PhD in Social and Administrative Pharmacy, Dr Ozge brings a wealth of expertise to her role as the Education and Professional Development Manager at the International Pharmaceutical Federation (FIP).

Passionate about global health, Dr Ozge actively contributes to initiatives that promote equitable access to quality healthcare worldwide. Through her work at FIP, she leads transformative academic and professional projects aimed at advancing pharmacy and pharmaceutical education, fostering leadership development, and addressing pressing global health challenges.

With extensive experience and knowledge in pharmaceutical policies, communications, and media relations, Dr Ozge leverages her expertise to shape strategic partnerships and collaborations that promote excellence in pharmacy and contribute to improving health outcomes on a global scale.

For inquiries or collaboration opportunities in the field of global health and pharmacy and pharmaceutical education, please feel free to reach out to Dr Ozge Ozer at ozge@fip.org.

2.2 FIPEd Trend analysis of ensuring sustainable pharmacy and pharmaceutical education

ABSTRACT

FIP Education (FIPEd) is an integral component of the International Pharmaceutical Federation (FIP). FIPEd is composed of the Academic Pharmacy Section (AcPS), the Academic Institutional Membership (AIM), the FIP UNESCO UNITWIN Programme and the Workforce Development Hub (WDH) currently transforming into the FIP Hub. Other contributors to FIPEd include the Professional Secretary of the Board of Pharmaceutical Practice (BPP) and the Scientific Secretary of the Board of Pharmaceutical Sciences (BPS) and observers from ECPG and IPSF. FIPEd units have been very busy the past three years during the pandemic producing numerous reports, guidance, toolkits and digital programmes. Each year, BPP conducts a trends analysis in pharmacy practice from its various sections and in pharmacy education from the AcPS which also is a member of BPP. We selected the BPP-AcPS 2022 trends report as the foundation of this presentation as it addresses contemporary issues within pharmacy education that are supported by FIPEd resources. Four trend areas were selected: (i) international movement to online education and global virtual pharmaceutical education extended to include digital health in pharmacy education; (ii) expansion of the number of pharmaceutical education institutions globally extended to include student enrolment issues; (iii) increased importance of pharmaceutical support personnel; and (iv) movement towards integration of science and practice in pharmaceutical education. For each of these selected trends, resources from FIP that support them are provided and discussed along with upcoming resources underway at FIP and the 2023 FIP World Congress in Brisbane. All of these resources are geared towards supporting needs-based education that underpins sustainability of pharmacy education which provides for a competent and sustainable pharmacy workforce.

3.1 Pharmacy education: Reflecting students' needs in the near future



Catarina Silva is a recent pharmaceutical graduate from Lisbon, Portugal. She is the current Vice President of European Affairs of the European Pharmaceutical Students' Association (EPSA), fighting for pharmaceutical students' rights and needs, whilst carrying their voice on professional matters. As part of her duties she is also an intern for the Pharmaceutical Group of the European Union (PGEU). Catarina has held several positions in Students' Associations throughout her studies. In the Students' Association of the Faculty of Pharmacy of the University of Lisbon, she served as Head of the Scientific Innovation Department and as the Chairperson of the Annual Congress. She has also been involved in a Research Project on "Patient experience data in medicines' assessment for regulatory purposes", one of the fundamental objectives from the strategic reflection document "EMA Regulatory Science to 2025".

Catarina Silva
*European Pharmaceutical
Students' Association
(EPSA)*

ABSTRACT

Under the scope of Sustainability in Pharmacy Education, EPSA will present their vision on best practices for teaching methodologies and the contribution of students to the decision making process of establishing the best pharmaceutical curricula, preparing them to be Europe's future healthcare workforce. Through the presentation "Pharmacy education: reflecting students' needs in the near future", EPSA will also point out some of the key aspects that European pharmaceutical students feel should be integrated during the pharmacy degree, namely on topics such as digital health, soft-skills and vaccination.

3.2 Aligning the Faculty of Pharmacy of the University of Valencia with sustainable development goals



Javier Pereda is an Associate Professor in the Department of Physiology at the University of Valencia. In his research group, "Molecular Therapies," he studies the role of fibroblasts in pulmonary pathology, particularly in fibrosis and lung cancer. For several years now, he has held the position of Vice Dean of Innovation, Communication, and Culture at the Faculty of Pharmacy. He is the president of the Sustainable Development Goals (SDG) Commission at the Faculty of Pharmacy, and thus, he is responsible for implementing sustainability in all aspects of university life at the institution.

Dr. Javier Pereda

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ABSTRACT

According to sociological, environmental, and anthropological studies, the world is dangerously approaching an unsustainable situation that could be irreversible. To address this, the United Nations has proposed 17 Sustainable Development Goals to be achieved by 2030. As part of this effort, universities, and specifically faculties, have a significant responsibility. Our center, through the Faculties for SDGs project, has made significant organizational efforts to align with the 2030 Agenda, focusing on key areas such as management, research, and most importantly, teaching. After a diagnostic and training phase on SDGs, we have developed a strategy for implementing these goals in our courses. The newly-formed SDG committee has facilitated the necessary teaching changes through innovative educational methods. The Center's innovation plan (PIC) and the teaching innovation projects (PID) requested by our Faculty have played a crucial role in this process. Numerous courses have incorporated SDGs into their teaching through these projects, which is reflected in most of the teaching guides. These new strategies complement and strengthen the excellent work done by our Faculty in previous projects, which were fully aligned with the SDGs.

