

Special Editorial

COST Special Issue

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In this special issue of *Xjenza Online*, presented are papers by scientists based in Malta, notably from the University of Malta, with collaborators from institutions in Europe that have participated in European Cooperation in Science and Technology (COST) actions. COST is Europe's longest-running intergovernmental framework for cooperation in science and technology. Founded in 1971, the mission of COST is to "enable breakthrough scientific developments leading to new concepts and products and thereby contribute to strengthen Europe's research and innovation capacities."

The COST Actions connect scientific researchers across disciplines from across Europe and the world. They provide networking opportunities for early career investigators; increase the impact of research on policy makers, regulatory bodies and national decision makers as well as the private sector. Through its inclusiveness, particularly the participation of women researchers, COST actions support integration of research communities.

This special issue of *Xjenza Online* showcases 9 articles. The first article, by Janet Mifsud, provides some history and background on COST. The paper highlights the increased participation of Malta in these actions, which has steadily grown from 47 researchers in 2011 to 149 in 2014. The other contributions are on topics associated with specific COST Actions.

Ulrich Baisch presents a paper on the Lanthanide and Actinide Chemistry in the European f-Element Network (EUFEN). As part of EUFEN (European f-Element Network), researchers are investigating crystal engineering of f-block elements. These elements are nowadays components in many advanced materials used in medical imaging, electronic superconductors, lasers, phosphors, LEDs, catalysis and energy storage.



David C. Magri, Guest editor, *Xjenza Online*
Associate Editor, Physics and Chemical Sciences

Pierre Schembri-Wismayer highlights CM1106 STEM-CHEM, which aims to bring expertise together on rational drug design and medicinal chemistry in order to understand the mechanism of action of drug resistance in stem cells. Furthermore, the action aims to develop new methods for identifying drug candidates that specifically target drug-resistant cancer cells.

Thérèse Bajada examines the accessibility of public transport and the Malta bus service for the elderly while Carl James Debono is involved in an action bringing together researchers from all areas of 3D technology

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Janet Mifsud, Guest editor, *Xjenza Online*

including 3D video broadcasting and streaming. Emmanuel Buttigieg has contributed an article from COST action IS1205 on how history and social psychology to seek ways past histories are understood by ordinary people. The action strives to advance knowledge on the role played by social representation of history from the point of view of ethnic and national groups and the role intergroup conflicts play within the European Union.

Daniel Sultana focused on an issue of a more local nature that of soil erosion in Malta. Quantitative models are used to analysis the capacity of soil erosion and recommendations are put forward to build and maintain control structures such as terraced field rubble walls while Flaminio Squazzoni is participating in the action PEERE, which aims at reviewing the various peer-review models. Representation is broad across discip-

lines with 31 countries represented. The aim is to increase the credibility of science by qualitative and quantitative analysis of different peer-review models.

The last two contributions are related to CMST COST Action CM1103 “Structure-based drug design for diagnosis and treatment of neurological diseases: dissecting and modulating complex function in the monoaminergic systems of the brain”. The first is a Meeting Report by Rona R. Ramsay and Philippe De Deurwaerdere on the third Annual Conference hosted by the University of Bordeaux, France on 8–10 October 2014. The last contribution are the conference proceedings of the “Interdisciplinary Chemical Approaches for Neuropathology CM1103/4th Neuroscience Day University of Malta” hosted in Valletta at the Old University in October 2013. Dr Rona Ramsay, the Chair of the Action from the University of St Andrews, UK, and Prof. Di Giovanni put together an exciting program that covered a full range of interests, promoted the exchange of expertise between the various areas of structural-based drug design, synthetic chemistry and neuropathology that can all contribute information to diagnosis and treatment methods. This conference brought together international experts and Maltese scientists, fostering collaborations and dissemination of the work done in Europe.

Let us end by thanking all the contributing authors and encouraging researchers who have yet to participate in a COST Action to sign up. You will have the opportunity to attend an annual conference and meet experts with interests related to yours. You might even have an adventure, or two, and experience some serendipity along the way, which is a key element in making a new discovery.

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