



Editorial

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Dear Readers,

Welcome to the new issue of *Xjenza Online*, in which we have gone from strength to strength!

This year marks the third issue of Xjenza Online, the official journal of the Malta Chamber of Scientists and its Physiological Society (MPS). The first year has been a year of transition. No longer in its infancy, Xjenza Online has taken on an important role in the Maltese scientific community. The journal has generated enormous interest amongst residents, faculty and alumni in contributing to the Journal. We have created a rigorous peer-review process of which the Journal can only be proud of. From the outset, the goal of this first year was to maintain our position, yet expand the scope, visibility and credibility in the scientific community. The first aim of this mission was commitment to a centralized, all-electronic submission, international review and publishing platform. This has not been achieved without growing pains, but has brought us one step closer to the standards set by other peer-reviewed publications. We are already hard at work on building a better, leaner platform for the years to come. Our second goal, the most ambitious one, was to achieve bibliographic database listing for our scientific articles. Scopus, Google Scholar, Medline and Web of Science are the most used by researchers. This is the *sine qua non* of legitimacy for a scientific journal. Thanks to the hard work of the editorial team, we are now ready to submit our application to the Scopus committee. The next steps will then be PubMed and Web of Science. The bibliographic database listing will greatly improve our appeal for authors and will undoubtedly increase the quality and quantity of submissions in the future.

Finally, we want to expand the reach of the Journal.

Two print copies of the previous issue have been donated to the Director Library Services, Mr. Kevin J. Ellul of our library. Now Xjenza Online is listed in the UoM catalogue and a print copy available at the Melitensia Department and at the Health Sciences Library. Furthermore, Xjenza's previous website that was linked to the Library's on-line catalogue has been replaced by the new Xjenza website. The journal can be searched through HyDi by typing Xjenza and narrowing down the "All Items" option to journals and "anywhere in the record" in the title. After summer, the national repository will be active for all the periodicals printed in Malta and Xjenza Online will be included. A copy of the previous issue has been sent to Malta Council of Science and Technology (MCST) Chairman Dr Jeffrey Pullicino Orlando and to all the Head of Departments of the University of Malta. Notably, this issue was sent to COST's 35 European Member Countries' members that participated in the COST meeting held in Malta last October, who also sponsored the issue printing. Beyond highlighting the accomplishments of the local researchers, this will serve as a springboard for the journal to receive contributions from a wider base and from different countries in the future, putting us on a par with other highly recognized institutional journals.

This issue of Xjenza Online again offers a wide range of high-quality articles from national and international researchers. Dr Portelli, a Maltese researcher who works in Belgium at Vrije and Ghent University, emphasizes the important new role of Ghrelin in epilepsy and in drug discovery in her review. This article is an updated summary of her talk given at the 3rd Neuroscience Day @ the University of Malta at the end of November 2012.

The second contribution is from Professor Holger Mitterer, a German researcher who moved recently

to Malta University, on psycholinguistics and phonetics. Mitterer showed how phonetic alignment in conversation is a more complex process than most current theories seem to suggest. Strikingly, failure to align may not impede mutual understanding.

The next article by Dr Fenech and Dr Grech addresses the important subject of pharmacogenetic-guided, patient targeted therapy that has now become the developing fulcrum of personalized medicine, as it provides the best means to optimize benefit/risk ratio in pharmacological management.

Optimism bias is a well-established psychological phenomenon that has implications from mental health to economic theory. Dr Bajada reviews this interesting field of new research starting from cognitive neuroscience and neuroimaging data on the neural basis of the optimism bias. He provides a psychological and neuroscientific grounding for the optimism bias in the treatment of depression.

Dr Gilananzé's research note is on the use of silk and acellular dermal matrices grafts as viable alternatives to autologous skin transplantation. The silk matrix seemed to be a good candidate for the development of skin structures, although studies have outlined the fact that raw silkworm silk can be immunogenic.

I would like to draw your attention to the next article by Professor Gary Hunter and colleagues that focuses on X-ray crystallography. Hunter and co-workers highlight the methodologies used in protein expression, purification and the determination of the three-dimensional protein structures by X-ray crystallography. The front cover image of this issue is the three-dimensional structure of SOD-2, one of two MnSODs proteins from *Caenorhabditis elegans* isolated in Therese and Gary Hunter's laboratory in Malta.

Jonathan Henwood describes in his article the less common variant of *Chara vulgaris* the *C. vulgaris* var. *papillata* that has been recorded for the first time locally in mats of *Chara vulgaris* examined from il-Qattara pool and Qawra (Dwejra, Gozo).

From the researchers who participated in the second annual Science in the House at the Grand Master's Palace in Valletta on 26 September 2013, Nigel Borg and co-authors contributed to this issue with a research article on Akt, a Serine/Threonine protein kinase, which mediates growth factor-associated cell survival. Constitutive activation of Akt (phos-

phorylated Akt, P-Akt) has been observed in several human cancers, including breast cancer and may be associated with poor prognosis and chemotherapy as well as radiotherapy resistance. Borg et al. showed that a subset of Triple Negative Breast Cancer Patients in Malta, consisting of 26% of cases, have a moderate to high activation of Akt. This subset would be eligible for therapies targeting the PI3K/Akt pathway. This would be of great importance due to a current lack of effective therapies against triple negative breast cancer cases. Alexandra Fiott and colleagues explore the possibility that absolute HbA1C improves the genotype-phenotype association in Type 2 Diabetes. In vitro glycation showed that Hb BetaValletta, found in 1.8% of Maltese adults, does not influence glycation and thus the HbA is not influenced by this variant in heterozygotes/homozygotes. Finally, Grech and Borg give an exhaustive description of the control of globin gene expression by Kruppel-like factors, a family of DNAbinding transcriptional regulators that are involved in a wide range of biological processes.



Figure 1: The E-i-C of *Xjenza Online* Prof. Giuseppe Di Giovanni donating a copy of the Journal (Vol.1 issue 2) to the Director Library Services, Mr. Kevin J. Ellul. On the left Mrs Joanna Felice, Deputy Director Library Services on the right Dr Duca Edward, secretary of the Malta Chamber of Scientists

The next article is on seismology. Agius and colleagues investigated the data availability and quality of the currently only seismic station on Malta since its installation in 1995, and established spectral patterns in the seismic data. The results are important for the future deployment of permanent seismic stations on the Maltese islands, and for the analysis of local seismic hazard and ground motion studies

The final standard article in the current issue is a review of the factors influencing the male to female ratio at birth. Males usually predominate and while

stress decreases the ratio, wellbeing and good health tends to increase it. This paper reviews the multitudes of factors that have been implicated as acting this ratio, from historical times to date.

Lastly, three pieces of News by David Magri on Science in the House 2013, 1st Lecturer's Mini-Symposium held on January 30th, 2014 and COST Action Chemistry Conference on Supramolecular Chemistry in Water highlight important happenings in our scientific community.

I would like to finish by thanking the authors

and reviewers.

None of this would have been possible without the support of our editors and members of the journal board.

We hope that this second volume issue reminds us all of what makes the Malta Chamber of Scientists so special: great science, great friendship and commitment to excellence that never wavers.

Giuseppe Di Giovanni
Editor-in-Chief