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Editorial
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Editorial

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It is my greatest pleasure once again to welcome all to the second issue of this third volume of *Bioinspired, Biomimetic and Nanobiomaterials* (*BBN*). It is also my honour to introduce myself as the new Editor-in-Chief following the sudden passing away of Dr Kajal Mallick – the founding editor of *BBN*. Dr Mallick's work stands for excellence, and he made *BBN* to what it is today: a major publication resource, internationally recognised, in the emerging strongly interdisciplinary field of bioinspired materials research. The richness of contributions from various research areas is unprecedented. Dr Mallick was a wonderful colleague always with a positive and friendly attitude, and he is sorely missed by the entire journal team. I sincerely hope that I can continue the editorial work and standards as laid down by the late Dr Mallick.

I also want to introduce our two new Associate Editors Dr Kate McGrath (School of Chemical and Physical Sciences, Victoria University of Wellington, New Zealand) and Dr Po-Yu Chen (Department of Materials Science and Engineering, National Tsing Hua University, Taiwan) who kindly agreed to take up this position. Together with our continuously growing international editorial board, I am confident that *BBN* will further develop into one of the leading publication sources for the scientific community dealing with bioinspiration and biomaterials.

On behalf of the board members, I would like to thank all readers and contributors for their constructive feedback and suggestions to improve our journal. On this note, I want to move over to the current content of this second issue of the third volume. As before, we are happy to announce contributions from all areas of biological and biomaterials research such as a study on mineralised tissue, calcium phosphate and biopolymer composites, a contribution on methodology, the use of marine-derived scaffolds and a statistical model to evaluate taxa richness.

The study of biominerals and hard tissues is still a matter of intense research, and many open questions remain to be solved. The first contribution from Po-Yu Chen *et al.*[1] reports on the microstructural features of the mineral constituents in selected bony tissues including bovine femur, armadillo and turtle osteoderms. They used high-resolution imaging to study the composite and the mineral moiety after removing the proteinaceous content. They could nicely demonstrate that organised porous structures at varying hierarchical levels were well preserved after complete removal of the biopolymer fraction. Thus, deproteinsation might serve as a tool for investigating the hierarchical structure of mineralised tissue. They also report on a unique microstructure for the armadillo osteoderm. Their findings might inspire novel design of bioinspired composites.

The reproducible and homogenous fabrication of biomaterial composites is of strong interest in biomedical engineering. In their work, Duygu Ege *et al.*[2] described the use of a twin-screw extruder for compounding α-tricalcium phosphates (α-TCP) and hydroxylapatite (HA) powder with commercially available poly(lactic-co-glycolic) acid (PLGA). They designed degradation studies, which confirmed that pure PLGA exhibited the fastest degradation rate followed by HA/PLGA and α-TCP/PLGA. This is a further step towards the design of degradable biomaterials.

The application of wound dressings on living tissue using a portable electrohydrodynamic (EHD) device is a key step towards a customised patient care. Wai K. Lau *et al.*[3] reported wound dressing-forming capabilities by controlled deposition of micrometre-sized poly(D,L-lactide-co-glycolide) acid fibres generated by EHD. The device was tested on different types of simulated wound morphologies and additionally on living tissue. Using opaque EHD, waterproof wound dressing on human skin was prepared within a few minutes with excellent adherence characteristics.

Cosme Rodríguez-Valencia *et al.*[4] applied a biomimetic approach to cover marine-derived carbon scaffolds with a thin calcium phosphate layer. The biomimetic coating on the natural scaffold pattern was characterised, and the biological response with respect to pre-osteoblasts (MC3T3-E1) was investigated. The authors could nicely show that the coating assembly in their approach was non-cytotoxic. They also exhibited an adequate morphology and spreading of cell culture after 7 d. Proliferating cells were aligned, promoted by the patterning of the scaffold. This is an illustrative example of applying natural structures for controlling cell growth.

Finally, the work of Xin Li and Xinzhi Ni relates to basic biological studies.[5] They present a novel method to estimate taxa richness, which is based on Coleman's random placement hypothesis. The novel method was tested on six non-parametric methods for the estimation of taxa richness. The results of taxa richness estimation indicated that the novel method performed better than many other methods.

I hope that you all will enjoy the content of this issue as much as I did. I am looking forward to serve the bioinspired and biomaterials research community by continuously publishing your research articles, reviews and communications. We are grateful for any suggestions from all areas of the field, as this journal very much

relies on the support in promoting and advancing the topics covered by this journal. With all your help, we can actively develop and define this highly innovative field of science.

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