Review articles
Perspective on post-menopausal osteoporosis: establishing an interdisciplinary understanding of the sequence of events from the molecular level to whole bone fractures
L. M. McNamara

Lipid bilayer regulation of membrane protein function: gramicidin channels as molecular force probes
J. A. Lundbaek, S. A. Collinge Wood, H. I. Ingfohrson, R. Kapoor & O. S. Andersen

Research articles
Analysis of a complete DNA-protein affinity landscape
W. Rowe, M. Platt, D. C. Wedge, P. J. Day, D. R. Kell & J. Knowles

Virus assembly occurs following a pH- or Ca2+-triggered switch in the thermodynamic attraction between structural protein capsomeres

Systems-level cancer gene identification from protein interaction network topology applied to melanogenesis-related functional genomics data
T. Milenkovic, V. Memisic, A. K. Ganesan & N. Przulj

Invasion, persistence and control in epidemic models for plant pathogens: the effect of host demography
N. J. Cunniff & C. A. Gilligan

Effect of nanoparticulate bioactive glass particles on bioactivity and cytocompatibility of poly(3-hydroxybutyrate) composites

Low-frequency pulsed electromagnetic field exposure can alter neuroprocessing in humans

Use of computational fluid dynamics to study forces exerted on prey by aquatic suction feeders
T. Skorczewski, A. Cheer, S. Cheung & P. C. Wainwright

Aerodynamic effects of flexibility in flapping wings
L. Zhao, Q. Huang, X. Deng & S. P. Sane

Structural and mechanical design of tissue interfaces in the giant reed Arundo donax
M. Rüggeberg, I. Burgert & T. Speck

Quantum metabolism explains the allometric scaling of metabolic rates
L. Demetrius & J. A. Tuszynski

Inflow boundary profile prescription for numerical simulation of nasal airflow
D. J. Taylor, D. J. Doory & R. C. Schroter

Optimal and robust control of invasive alien species spreading in homogeneous landscapes
L. R. Carrasco, R. Baker, A. MacLeod, J. D. Knight & J. D. Mumford

Herd immunity acquired indirectly from interactions between the ecology of infectious diseases, demography and economics
M. H. Bonds & P. Rohare

Changes in reflectin protein phosphorylation are associated with dynamic iridescence in squid