

## Heterocycles and Health : Some Research Reflections

PROF. JOHN BREMNER  
Honorary Professorial Fellow  
School of Chemistry, University of Wollongong  
jbremner@uow.edu.au

The use of small molecules in the treatment of various diseases has had a major beneficial impact on human health. A large number of these small molecule drugs are heterocyclic derivatives, which are compounds containing ring systems where at least one ring atom is not carbon. Many problems and challenges still exist and the scope for innovative solutions is vast. One area of growing concern is that of resistance of bacterial pathogenic organisms, for example *Staphylococcus aureus*, to current antibiotics and this emergence of resistance poses a serious challenge to health. A multi-disciplinary approach, coupled with 'outside the square' thinking, to tackling such problems is essential. Medicinal and organic chemistry are key disciplinary components of this approach, and some research reflections around this will be presented.

