This issue contains an interesting article entitled: ‘In Silico-based Study of Cytochrome P450 and Multidrug Resistance Protein 1 from Docking Perspective to Understand Kidney Failure’ by Vasudha Satalkar et al about novel ways of finding nephrotoxic potential of drugs by Bioinformatics Data Analysis. About 75% of metabolism of drugs is carried out by cytochrome P450 enzymes which are membrane-associated proteins located in mitochondria and endoplasmic reticulum of human cells. If the active sites of these enzyme molecules are blocked by a drug, the metabolism of that drug will be slowed resulting in increase in its concentration in blood to toxic levels. With their ‘In Silico’ studies, the authors found that known nephrotoxic drugs have higher binding scores and therefore block the active sites on cytochrome P450 molecules more effectively. Higher the binding scores, greater is their nephrotoxicity potential. This is an interesting field of study of safety of drugs. It is possible that in near future, fewer clinical trials of newly introduced potentially nephrotoxic drugs may be required to establish their safety. Presently, pharmacogenetics is being routinely used in some advanced cancer treatment centers to predict efficacy and toxicity of chemotherapeutic drugs at individual level, thereby helping in tailoring most effective and least toxic drug regimen for a particular patient.

Of course, in addition to this original article, there is usual mix of papers from various disciplines of health sciences which, we are sure, will interest all our esteemed readers.

Editors-in-Chief
Shibban K Kaul MS MCh FIACS
Pro-Vice Chancellor

Chander P Puri PhD FNASc FAMS
Pro-Vice Chancellor (Research)