SCOPE FOR FURTHER STUDY
The results of the current studies reveal the important roles of increased reactive oxygen species, reactive nitrogen species, neutrophil infiltration and mitochondrial damage in MTX – induced damage of rat small intestine. Further studies are required to check the specific proteins that are nitrated and the consequences of nitration after methotrexate therapy.

Since MTX causes mitochondrial damage, studies have to be done to check if any mitochondrial enzymes or proteins are altered or modified.

Melatonin used in the studies has been shown to protect against MTX – induced small intestinal damage in a rat model. Thus, melatonin shows potential to be used in this capacity in humans. The possible benefits of melatonin need to be explored further. Melatonin is produced endogenously and is also readily available as supplement. Its clinical utility will need to be assessed in patients to ascertain whether they can be recommended for use in patients who need to take methotrexate therapy on a long – term basis.