

# SYNTHESIS, LABELLING AND PRELIMINARY BIOEVALUATION OF <sup>99m</sup>Tc-UREA AS A POTENTIAL KIDNEYS IMAGING AGENT

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**W**e present the development and characterization of a [<sup>99m</sup>Tc] tricarbonyl urea. Labelling with high yield and radiochemical purity was achieved through the formation of a [<sup>99m</sup>Tc] tricarbonyl urea radiotracer. The radiolabeled compound was stable and exhibited plasma protein binding (approximately 40%). The logarithm of the partition coefficient (log p) value of [<sup>99m</sup>Tc] tricarbonyl urea was  $-2.55 \pm 0.17$  (hydrophilic). Bio-distribution studies in normal mice confirmed the suitability of [<sup>99m</sup>Tc] tricarbonyl urea as a novel tracer to image kidneys. [<sup>99m</sup>Tc] tricarbonyl urea could be considered a new selective radiotracer for kidneys imaging.

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