Biodistribution in normal rats at 10 min (A) and 60 min (B), and in rats with simulated renal failure (C).

HPLC of $^{99m}$Tc(CO)$_3$(ASMA): labeling mixture (A), before injection (B) and in urine (C).

$^{99m}$Tc(CO)$_3$(ASMA) has pharmacokinetic properties in rats comparable to those of $^{131}$I-OIH and human studies are warranted for it further evaluation.

Development of Tc-99m Renal Tracers

Jeffrey Klenc, Ph.D.

Structural analysis of $^{99m}$Tc(CO)$_3$(ASMA) based on its Re analogs

Fig. 1. Synthesis of Re(CO)$_3$(ASMA) isomers

Fig. 2. H NMR spectra of Re(CO)$_3$(ASMA) before (top) and after (bottom) heating.

Fig. 3. X-ray crystal structure of Re(CO)$_3$(ASMA)

Re(CO)$_3$(ASMA) has been fully characterized based on NMR, X-ray and MS data to confirm the structure of our new renal tracer $^{99m}$Tc(CO)$_3$(ASMA).