

Novel $^{99\text{m}}\text{Tc(III)}$ Complexes [$^{99\text{m}}\text{TcCl(CDO)(CDOH)}_2\text{B-R}$] ($\text{CDOH}_2 =$ **Cyclohexanedione Dioxime) Useful as Radiotracers for Heart Imaging**

Min Liu^{1,2}, Wei Fang,³ and Shuang Liu^{2*}

¹Department of Radiation Medicine and Protection, Medical College, Soochow University

²School of Health Sciences, Purdue University, IN 47907, USA

³Department of Nuclear Medicine, Fuwai Hospital, the National Center for Cardiovascular Diseases, Chinese Academy of Medical Sciences and Peking Union Medical College, Beijing, China.

RUNNING TITLE: Novel $^{99\text{m}}\text{Tc(III)}$ Complexes as Heart Imaging Agents

*Correspondence should be addressed to:

Dr. Shuang Liu, School of Health Sciences, Purdue University, 550 Stadium Mall Drive, West Lafayette, IN 47907, Phone: 765-494-0236, Fax 765-496-1377, Email: liu100@purdue.edu;

or

Dr. Wei Fang, Department of Nuclear Medicine, Fuwai Hospital, the National Center for Cardiovascular Diseases, Chinese Academy of Medical Sciences and Peking Union Medical College, Beijing, China.
Email: nuclearfw@126.com.

List of Contents

Figure SI1. Radio-HPLC chromatograms.

Figure SI2. SPECT images of the SD rats administered with ^{99m}Tc -5Fboroxime.

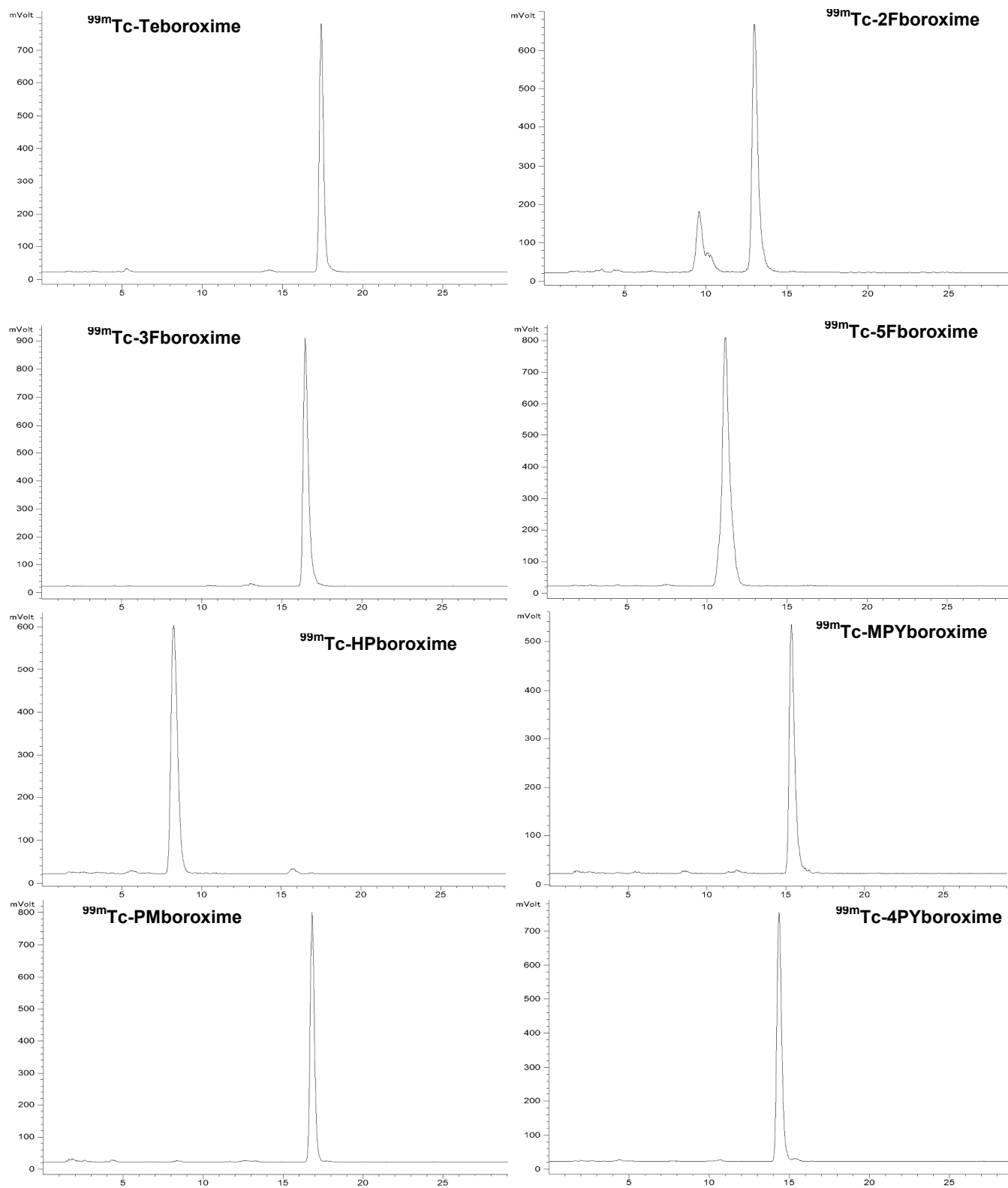


Figure SI1. Radio-HPLC chromatograms of new $^{99\text{m}}\text{Tc(III)}$ radiotracers [$^{99\text{m}}\text{TcCl}(\text{CDO})(\text{CDOH})_2\text{B-R}$] ($\text{R} = 2\text{F}, 3\text{F}, 5\text{F}, \text{HP}, \text{MPY}, \text{PM}$ and 4PY). $^{99\text{m}}\text{Tc}$ -Teboroxime is used only for comparison purpose.

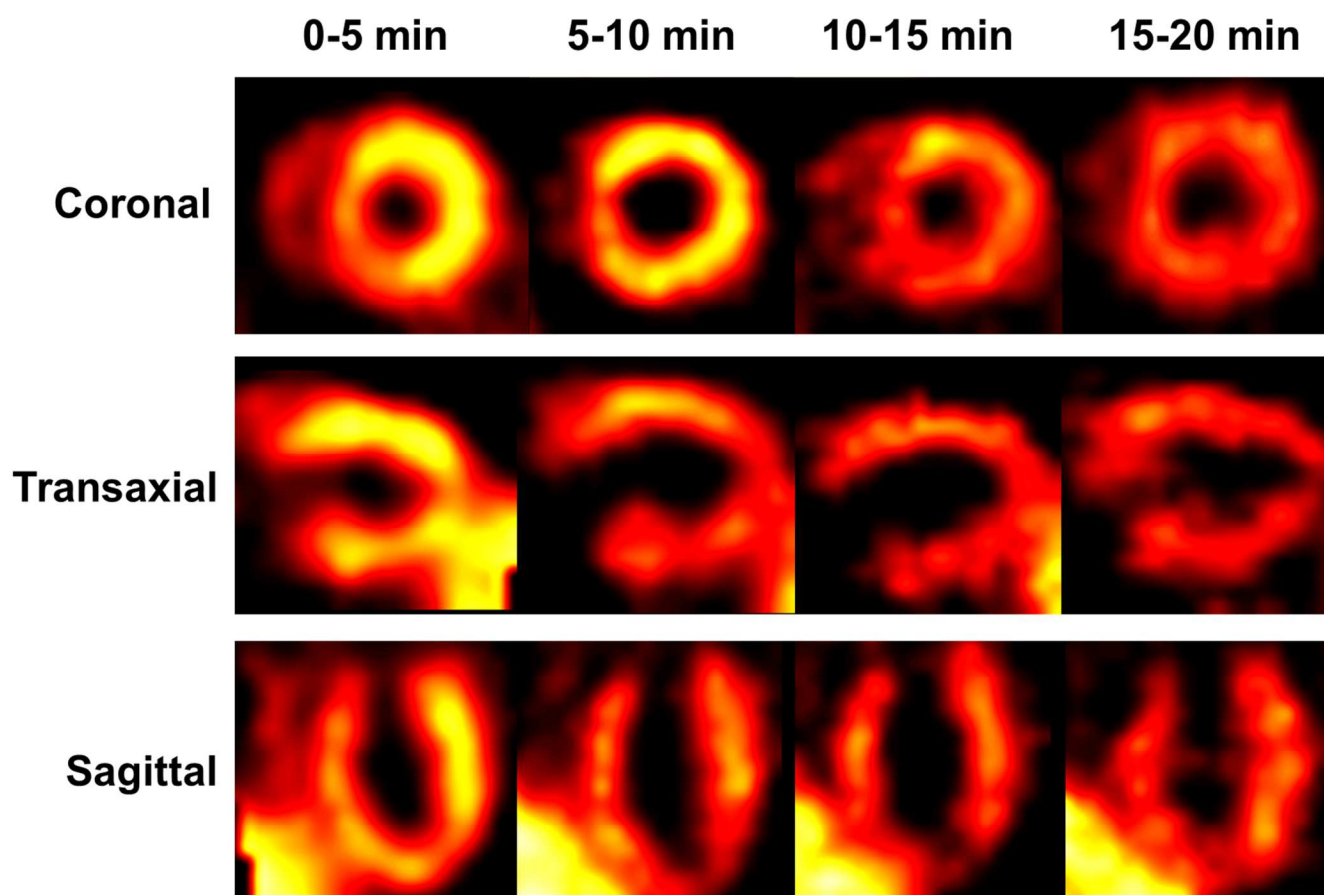


Figure SI2. Selected coronal, sagittal and transaxial views of SPECT images of the SD rats administered with ~150 MBq of ^{99m}Tc -5Fboroxime at 0 – 5, 5 – 10, 10 – 15 and 15 – 20 min p.i. High quality SPECT images were acquired using ^{99m}Tc -5Fboroxime in any of the 5-min window over the first 20 min. The interference from liver radioactivity in coronal images was not significant. In the sagittal and transaxial views, the liver radioactivity overlapped significantly with that in the heart at the bottom of right ventricle.