

## Supporting Information

### **Radiolabeled Phenethylguanidines: Novel Imaging Agents for Cardiac Sympathetic Neurons and Adrenergic Tumors**

David M. Raffel, Yong-Woon Jung, David L. Gildersleeve, Phillip S. Sherman, James J. Moskwa, Louis J. Tluczek, and Wei Chen

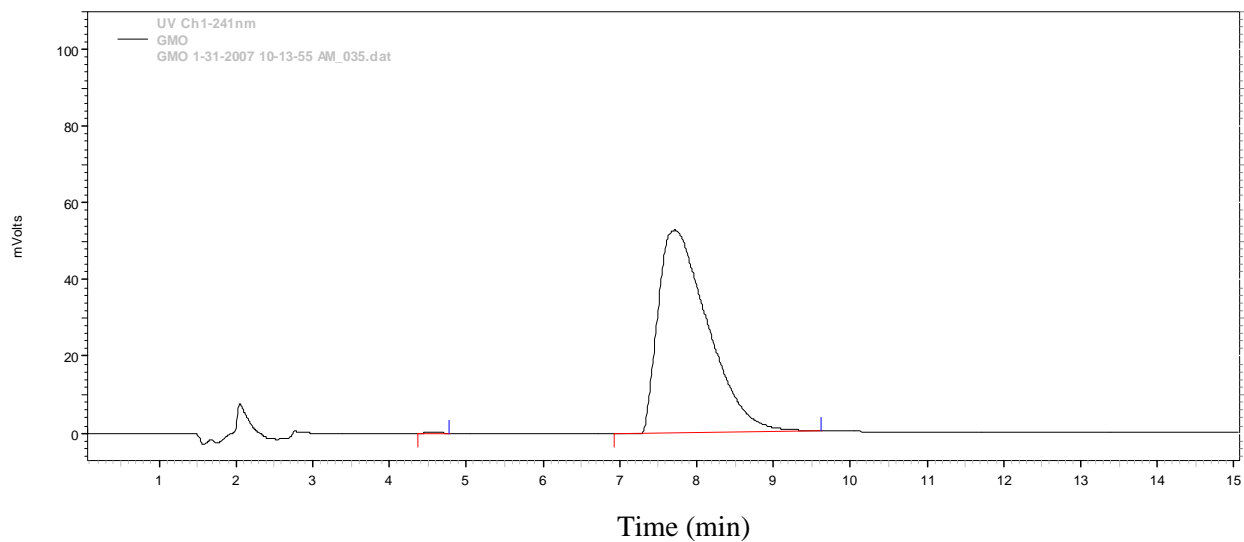
*Division of Nuclear Medicine, Department of Radiology, University of Michigan Medical School, Ann Arbor, Michigan 48109*

**Table 1.** Summary of chemical purity measurements determined by HPLC analysis.

Compound	Chemical purity
<b>1e</b>	99.8%
<b>1g</b>	99.6%
<b>1h</b>	98.9%
<b>1i</b>	100.0%
<b>1j</b>	99.6%
<b>1k</b>	95.2%

Values were determined on a Shimadzu model LC-10ADvp liquid chromatograph system.

Sample Name: (-)- $\beta$ -Guanyl-*meta*-octapamine (compound **1e**)  
Column: Phenomenex, Synergi 4  $\mu$  Hydro RP  
Dimension: 150 x 4.6 mm,  
Mobile Phase: EtOH / 0.1 M Ammonium Acetate = 3 / 97  
Flow Rate: 1.0 ml/min  
Detection: UV @ 241nm

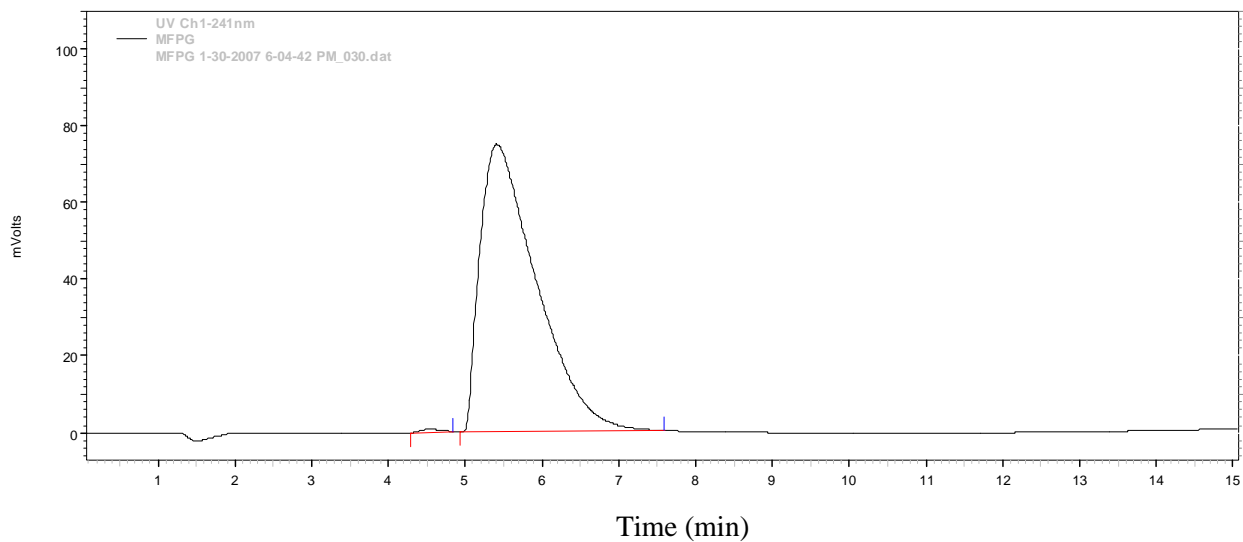


UV Ch1-241nm

Results

Retention Time	Area	Area Percent
4.49	1114	0.2
7.65	2376568	99.8
Totals	2377682	100.000

Sample Name: 3-Fluorophenethylguanidine sulfate (**1g**)  
Column: Phenomenex, Synergi 4  $\mu$  Hydro RP  
Dimension: 50 x 4.6 mm,  
Mobile Phase: EtOH / 0.1 M Ammonium Acetate = 20 / 80  
Flow Rate: 1.0 ml/min  
Detection: UV @ 241nm



UV Ch1-241nm

Results

Retention Time	Area	Area Percent
4.48	14549	0.4
5.35	3833597	99.6
Totals	3848146	100.0

Sample Name: 4-Fluorophenethylguanidine sulfate (**1h**)

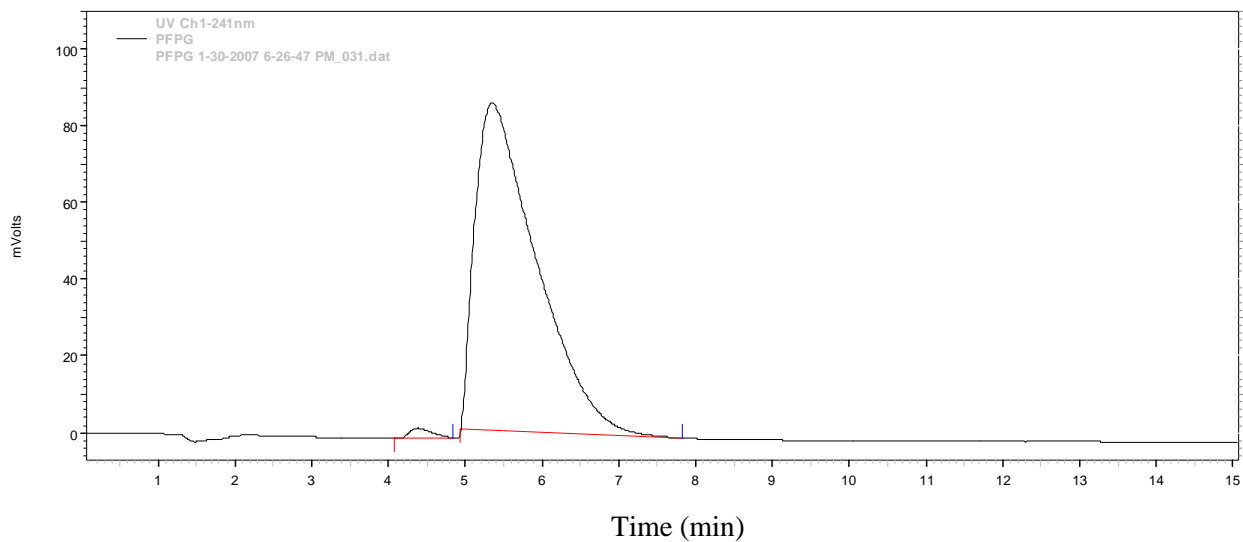
Column: Phenomenex, Synergi 4  $\mu$  Hydro RP

Dimension: 50 x 4.6 mm,

Mobile Phase: EtOH / 0.1 M Ammonium Acetate = 20 / 80

Flow Rate: 1.0 ml/min

Detection: UV @ 241nm

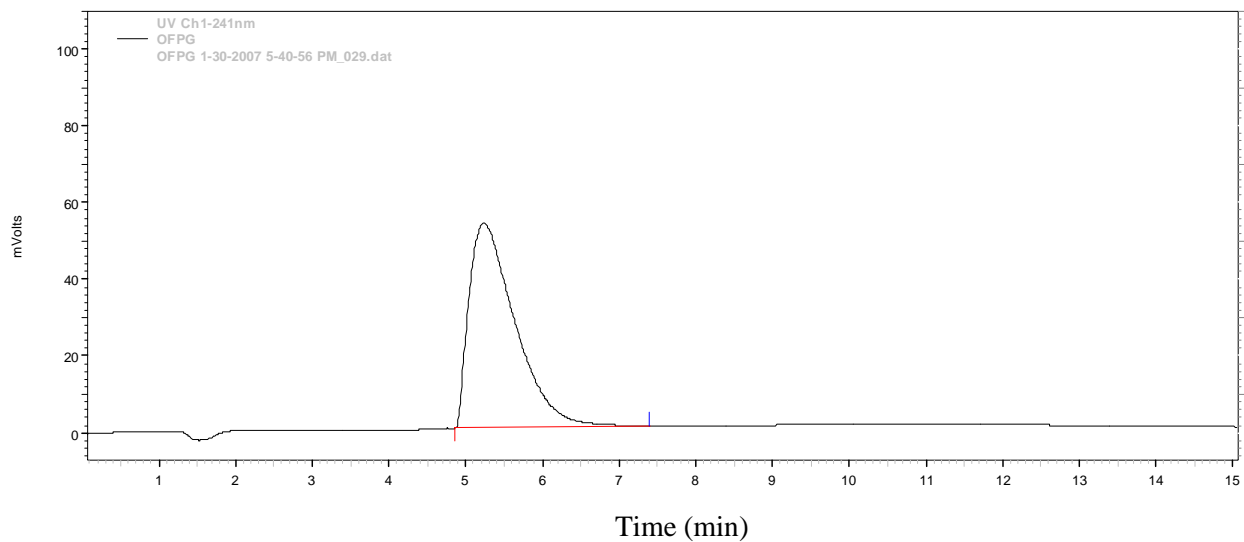


UV Ch1-241nm

Results

Retention Time	Area	Area Percent
4.32	52150	1.1
5.29	4773486	98.9
Totals	4825636	100.0

Sample Name: 2-Fluorophenethylguanidine sulfate (**1i**)  
Column: Phenomenex, Synergi 4  $\mu$  Hydro RP  
Dimension: 50 x 4.6 mm,  
Mobile Phase: EtOH / 0.1 M Ammonium Acetate = 20 / 80  
Flow Rate: 1.0 ml/min  
Detection: UV @ 241nm



UV Ch1-241nm  
Results

Retention Time	Area	Area Percent
5.18	2218008	100.0
Totals	2218008	100.0

Sample Name : 4-Fluoro-3-hydroxyphenethylguanidine sulfate (**1j**)

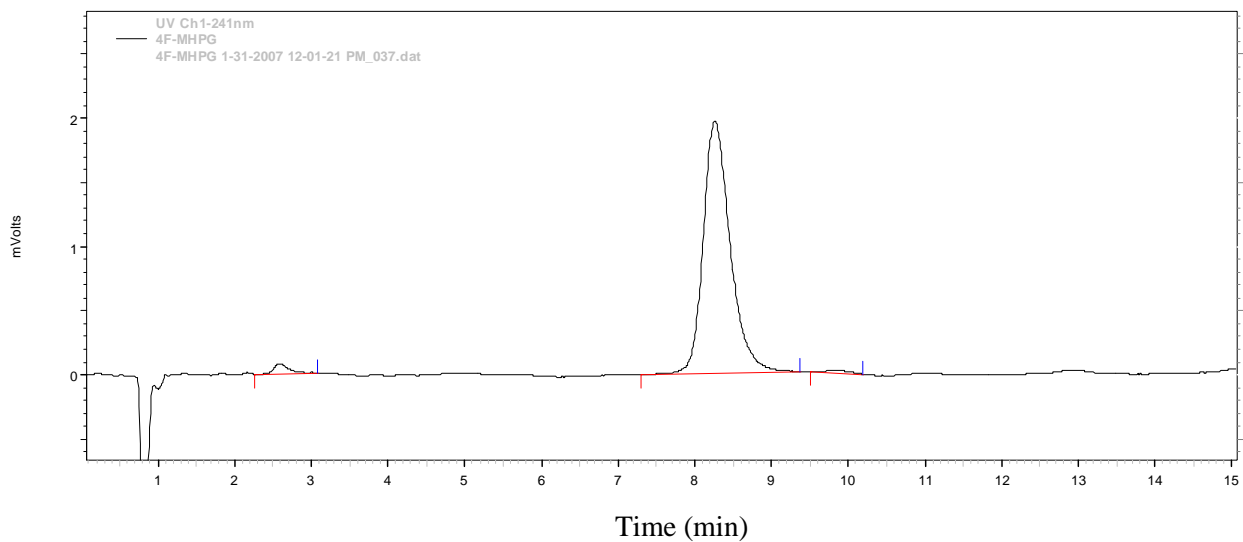
Column: Phenomenex, Synergi 4  $\mu$  Hydro RP

Dimension: 150 x 4.6 mm,

Mobile Phase: EtOH / 0.1 M Ammonium Acetate = 5 / 95

Flow Rate: 2.4 ml/min

Detection: UV @ 241nm

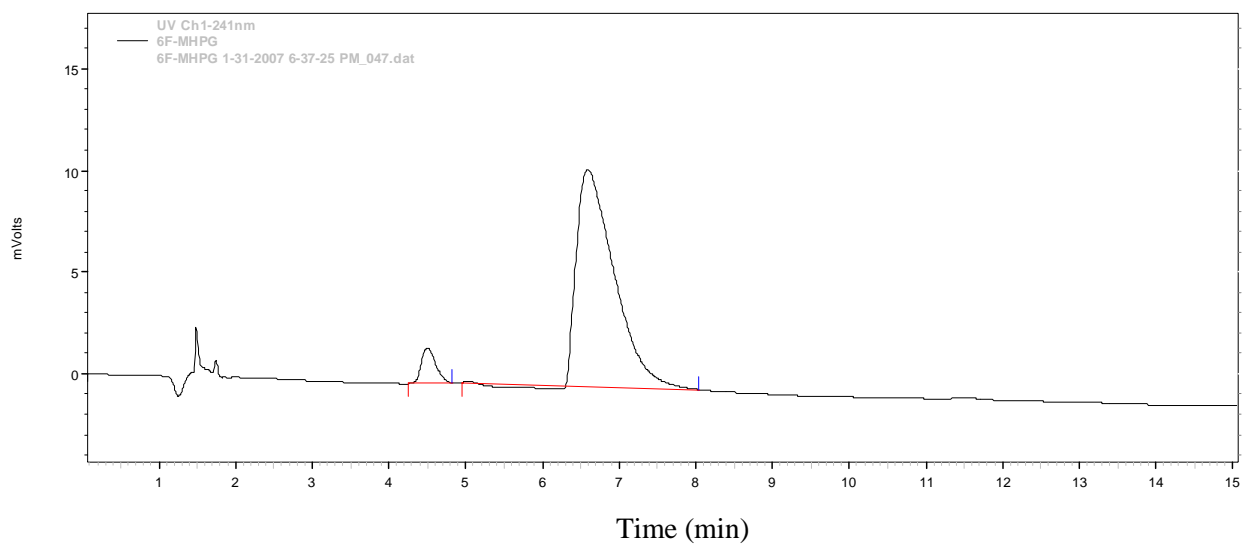


UV Ch1-241nm

Results

Retention Time	Area	Area Percent
2.45	133	0.4
8.20	33225	99.6
Totals	3848146	100.0

Sample Name: 6-Fluoro-3-hydroxyphenethylguanidine sulfate (**1k**)  
Column: Phenomenex, Synergi 4  $\mu$  Hydro-Rp  
Dimension: 150 x 4.6 mm,  
Mobile Phase: EtOH / 60nM Sodium Phosphate = 10 / 90  
Flow Rate: 1.3 ml/min  
Detection: UV @ 241nm



UV Ch1-241nm

Results

Retention Time	Area	Area Percent
4.44	19068	4.8
6.533	378199	95.2
Totals	400927	100.000