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#### Supporting Information II

Enantioselective Synthesis of D-a-Amino Amides from Aliphatic Aldehydes

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#### SI-II-X

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### *Johnston, et al.* **Figure 1.** <sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>) of **S1.**





### *Johnston, et al.* **Figure 2.** <sup>13</sup>C NMR (100 MHz, CDCl<sub>3</sub>) of **S1.**





### *Johnston, et al.* **Figure 3.** <sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>) of **S2**.





*Johnston, et al.* **Figure 4.** <sup>13</sup>C NMR (100 MHz, CDCl<sub>3</sub>) of **S2**.





### *Johnston, et al.* **Figure 5.** <sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>) of **S3.**









### *Johnston, et al.* **Figure 7.** <sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>) of **S4.**









### *Johnston, et al.* **Figure 9.** <sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>) of **S5.**





### *Johnston, et al.* **Figure 10.** <sup>13</sup>C NMR (100 MHz, CDCl<sub>3</sub>) of **S5.**





### *Johnston, et al.* **Figure 11.** <sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>) of **S6.**





*Johnston, et al.* **Figure 12.** <sup>13</sup>C NMR (100 MHz, CDCl<sub>3</sub>) of **S6**.





### *Johnston, et al.* **Figure 13.** <sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>) of **S7.**





# *Johnston, et al.* **Figure 14.** <sup>13</sup>C NMR (100 MHz, CDCl<sub>3</sub>) of **S7.**





# *Johnston, et al.* **Figure 15**. <sup>1</sup>H NMR (600 MHz, CDCl<sub>3</sub>) of **4**.





# *Johnston, et al.* **Figure 16**. <sup>13</sup>C NMR (150 MHz, CDCl<sub>3</sub>) of **4**.





### *Johnston, et al.* **Figure 17.** <sup>1</sup>H NMR (600 MHz, CDCl<sub>3</sub>) of **7**





### *Johnston, et al.* **Figure 18.** <sup>13</sup>C NMR (150 MHz, CDCl<sub>3</sub>) of **7**





# *Johnston, et al.* **Figure 19.** <sup>1</sup>H NMR (600 MHz, CDCl<sub>3</sub>) of **8.**





### *Johnston, et al.* **Figure 20.** <sup>13</sup>C NMR (150 MHz, CDCl<sub>3</sub>) of **8**





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# *Johnston, et al.* **Figure 21.** <sup>1</sup>H NMR (600 MHz, CDCl<sub>3</sub>) of **9.**





### *Johnston, et al.* **Figure 22.** <sup>13</sup>C NMR (150 MHz, CDCl<sub>3</sub>) of **9.**





*Johnston, et al.* **Figure 23**. <sup>1</sup>H NMR (600 MHz, CDCl<sub>3</sub>) of **10**.





# *Johnston, et al.* **Figure 24.** <sup>13</sup>C NMR (150 MHz, CDCl<sub>3</sub>) of **10**.

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*Johnston, et al.* **Figure 25**. <sup>1</sup>H NMR (600 MHz, CDCl<sub>3</sub>) of **11**.





*Johnston, et al.* **Figure 26**. <sup>13</sup>C NMR (150 MHz, CDCl<sub>3</sub>) of **11**.





*Johnston, et al.* **Figure 27.** <sup>1</sup>H NMR (600 MHz, CDCl<sub>3</sub>) of **12.** 





# *Johnston, et al.* **Figure 28.** <sup>13</sup>C NMR (150 MHz, CDCl<sub>3</sub>) of **12.**





*Johnston, et al.* **Figure 29.** <sup>1</sup>H NMR (600 MHz, CDCl<sub>3</sub>) of **13.** 





*Johnston, et al.* **Figure 30**. <sup>13</sup>C NMR (150 MHz, CDCl<sub>3</sub>) of **13**.





*Johnston, et al.* **Figure 31.** <sup>1</sup>H NMR (600 MHz, CDCl<sub>3</sub>) of **14.** 





*Johnston, et al.* **Figure 32**. <sup>13</sup>C NMR (150 MHz, CDCl<sub>3</sub>) of **14**.





### *Johnston, et al.* **Figure 33.** <sup>1</sup>H NMR (600 MHz, CDCl<sub>3</sub>) of **15.**




# *Johnston, et al.* **Figure 34**. <sup>13</sup>C NMR (150 MHz, CDCl<sub>3</sub>) of **15**.

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*Johnston, et al.* **Figure 35.** <sup>1</sup>H NMR (600 MHz, CDCl<sub>3</sub>) of **16.** 





### *Johnston, et al.* **Figure 36.** <sup>13</sup>C NMR (150 MHz, CDCl<sub>3</sub>) of **16.**



*Johnston, et al.* **Figure 37.** <sup>1</sup>H NMR (600 MHz, CDCl<sub>3</sub>) of **17.** 





# *Johnston, et al.* **Figure 38.** <sup>13</sup>C NMR (150 MHz, CDCl<sub>3</sub>) of **17.**





*Johnston, et al.* **Figure 39.** <sup>1</sup>H NMR (600 MHz, CDCl<sub>3</sub>) of **18.** 





*Johnston, et al.* **Figure 40**. <sup>13</sup>C NMR (150 MHz, CDCl<sub>3</sub>) of **18**.





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### *Johnston, et al.* **Figure 41.** <sup>1</sup>H NMR (600 MHz, CDCl<sub>3</sub>) of **19.**





# *Johnston, et al.* **Figure 42.** <sup>13</sup>C NMR (150 MHz, CDCl<sub>3</sub>) of **19.**

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*Johnston, et al.* **Figure 43.** <sup>1</sup>H NMR (600 MHz, CDCl<sub>3</sub>) of **20.** 





*Johnston, et al.* **Figure 44**. <sup>13</sup>C NMR (150 MHz, CDCl<sub>3</sub>) of **20**.





*Johnston, et al.* **Figure 45.** <sup>1</sup>H NMR (600 MHz, CDCl<sub>3</sub>) of **21.** 

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### *Johnston, et al.* **Figure 46.** <sup>13</sup>C NMR (150 MHz, CDCl<sub>3</sub>) of **21.**





#### *Johnston, et al.* **Figure 47.** <sup>1</sup>H NMR (600 MHz, CDCl<sub>3</sub>) of **22.**





### *Johnston, et al.* **Figure 48.** <sup>13</sup>C NMR (150 MHz, CDCl<sub>3</sub>) of **22.**





*Johnston, et al.* **Figure 49.** <sup>1</sup>H NMR (600 MHz, CDCl<sub>3</sub>) of **23.** 





### *Johnston, et al.* **Figure 50.** <sup>13</sup>C NMR (150 MHz, CDCl<sub>3</sub>) of **23.**





### *Johnston, et al.* **Figure 51.** <sup>1</sup>H NMR (600 MHz, CDCl<sub>3</sub>) of **24.**





#### *Johnston, et al.* **Figure 52.** <sup>13</sup>C NMR (150 MHz, CDCl<sub>3</sub>) of **24.**

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#### *Johnston, et al.* **Figure 53.** <sup>1</sup>H NMR (600 MHz, CDCl<sub>3</sub>) of **25**





#### *Johnston, et al.* **Figure 54.** <sup>13</sup>C NMR (150 MHz, CDCl<sub>3</sub>) of **25**





#### *Johnston, et al.* **Figure 55.** <sup>1</sup>H NMR (600 MHz, CDCl<sub>3</sub>) of **26.**





### *Johnston, et al.* **Figure 56.** <sup>13</sup>C NMR (150 MHz, CDCl<sub>3</sub>) of **26.**





### *Johnston, et al.* **Figure 57.** <sup>1</sup>H NMR (600 MHz, CDCl<sub>3</sub>) of **27.**





### *Johnston, et al.* **Figure 58.** <sup>13</sup>C NMR (150 MHz, CDCl<sub>3</sub>) of **27.**





*Johnston, et al.* **Figure 59.** <sup>1</sup>H NMR (600 MHz, CDCl<sub>3</sub>) of **28.** 

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#### *Johnston, et al.* **Figure 60.** <sup>13</sup>C NMR (150 MHz, CDCl<sub>3</sub>) of **28.**

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### *Johnston, et al.* **Figure 61.** <sup>1</sup>H NMR (600 MHz, CDCl<sub>3</sub>) of **29.**





*Johnston, et al.* **Figure 62.** <sup>13</sup>C NMR (150 MHz, CDCl<sub>3</sub>) of **29.** 





*Johnston, et al.* **Figure 63.** <sup>1</sup>H NMR (600 MHz, CDCl<sub>3</sub>) of **30.** 





# *Johnston, et al.* **Figure 64.** <sup>13</sup>C NMR (150 MHz, CDCl<sub>3</sub>) of **30.**





#### *Johnston, et al.* **Figure 65.** <sup>1</sup>H NMR (600 MHz, CDCl<sub>3</sub>) of **31.**

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### *Johnston, et al.* **Figure 66.** <sup>13</sup>C NMR (150 MHz, CDCl<sub>3</sub>) of **31.**

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#### *Johnston, et al.* **Figure 67.** <sup>1</sup>H NMR (600 MHz, CDCl<sub>3</sub>) of **32.**





### *Johnston, et al.* **Figure 68.** <sup>13</sup>C NMR (150 MHz, CDCl<sub>3</sub>) of **32.**

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### *Johnston, et al.* **Figure 69.** <sup>1</sup>H NMR (600 MHz, CDCl<sub>3</sub>) of **33.**


#### *Johnston, et al.* **Figure 70.** <sup>13</sup>C NMR (150 MHz, CDCl<sub>3</sub>) of **33.**





#### *Johnston, et al.* **Figure 71.** <sup>1</sup>H NMR (600 MHz, CDCl<sub>3</sub>) of **34**



#### *Johnston, et al.* **Figure 72.** <sup>13</sup>C NMR (150 MHz, CDCl<sub>3</sub>) of **34**





*Johnston, et al.* **Figure 73.** <sup>1</sup>H NMR (600 MHz, CDCl<sub>3</sub>) of **35.** 





#### *Johnston, et al.* **Figure 74.** <sup>13</sup>C NMR (150 MHz, CDCl<sub>3</sub>) of **35.**





#### *Johnston, et al.* **Figure 75.** <sup>1</sup>H NMR (600 MHz, CDCl<sub>3</sub>) of **36.**





# *Johnston, et al.* **Figure 76.** <sup>13</sup>C NMR (150 MHz, CDCl<sub>3</sub>) of **36.**





#### *Johnston, et al.* **Figure 77.** <sup>1</sup>H NMR (600 MHz, CDCl<sub>3</sub>) of **37.**





# *Johnston, et al.* **Figure 78.** <sup>13</sup>C NMR (150 MHz, CDCl<sub>3</sub>) of **37.**





# *Johnston, et al.* **Figure 79.** <sup>1</sup>H NMR (600 MHz, CDCl<sub>3</sub>) of **44.**



# *Johnston, et al.* **Figure 80.** <sup>13</sup>C NMR (150 MHz, CDCl<sub>3</sub>) of **44.**



*Johnston, et al.* **Figure 81.** <sup>1</sup>H NMR (600 MHz, CDCl<sub>3</sub>) of **46.** 



# *Johnston, et al.* **Figure 82**. <sup>13</sup>C NMR (150 MHz, CDCl<sub>3</sub>) of **46**.



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Signal 1: DAD1 C, Sig=210,8 Ref=360,100

Peak #	RT [min]	Width [min]	Area	Area %
1	16.000	0.713	8378.103	43.04
3	20.256	0.805	10667.901	54.80
4	22.760	0.732	232.792	1.20



Signal 1: DAD1 C, Sig=210,8 Ref=360,100

Peak #	RT [min]	Width [min]	Area	Area %
1	17.959	0.814	6502.464	24.39
2	19.994	0.841	6582.387	24.69
3	22.462	0.868	6996.328	26.24
4	25.037	0.980	6584.132	24.69

## *Johnston, et al.* **Figure 84.** HPLC trace of **7.**



![](_page_86_Figure_3.jpeg)

Peak #	RT [min]	Width [min]	Area	Area %
1	20.419	0.776	12605.589	52.26
2	21.707	0.779	10006.817	41.49
3	34.691	0.151	976.129	4.05
4	35.010	0.496	532.862	2.21

![](_page_86_Figure_5.jpeg)

Peak # 	RT [min]	Width [min]	Area	Area %
1 2	20.727 22.039	0.705 0.708	5527.214 5041.059	26.05 23.76
3	34.574	0.119	5125.187	24.15
4	35.821	1.204	5525.594	26.04

![](_page_86_Figure_8.jpeg)

![](_page_87_Figure_2.jpeg)

#### Signal 1: DAD1 C, Sig=210,8 Ref=360,100

Peak #	RT [min]	Width [min]	Area	Area %
1	7.615	0.312	7331.742	44.10 53.26
3	9.270	0.319	252.585	1.52
	11.150	0.372	100.220	1.12

![](_page_87_Figure_5.jpeg)

Peak #	RT [min]	Width [min]	Area	Area %
1	7.418	0.302	4589.519	23.19
2	8.050	0.298	5253.340	26.54
3	9.015	0.339	4748.808	23.99
4	10.840	0.458	5203.492	26.29

![](_page_87_Figure_8.jpeg)

## *Johnston, et al.* **Figure 86.** HPLC trace of **9.**

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![](_page_88_Figure_2.jpeg)

Signal 1: DAD1 C, Sig=210,8 Ref=360,100

Peak #	RT [min]	Width [min]	Area	Area %
1	11.402	0.242	3048.868	42.63
2	12.240	0.764	2804.731	39.22
3	17.199	0.676	606.170	8.48
4	23.545	1.626	691.953	9.68

![](_page_88_Figure_5.jpeg)

Peak #	RT [min]	Width [min]	Area	Area %
1	11.421	0.156	1431.929	29.05
2	12.423	0.693	1078.494	21.88
3	17.735	0.964	1040.948	21.12
4	24.788	1.510	1377.935	27.95

![](_page_88_Figure_8.jpeg)

![](_page_89_Figure_2.jpeg)

Signal 1: DAD1 C, Sig=210,8 Ref=360,100

1 6.074 0.269 2120.699 42.50 2 6.753 0.331 142.202 2.85 3 8.080 0.282 2569.699 51.50	Peak #	RT [min]	Width [min]	Area	Area %
4 11.595 0.474 157.058 3.1	1	6.074	0.269	2120.699	42.50
	2	6.753	0.331	142.202	2.85
	3	8.080	0.282	2569.699	51.50
	4	11.595	0.474	157.058	3.15

![](_page_89_Figure_5.jpeg)

Peak #	RT [min]	Width [min]	Area	Area %
1	5.843	0.205	1164.348	22.23
2	6.370	0.266	1151.221	21.98
3	7.601	0.247	1483.777	28.33
4	10.626	0.438	1437.213	27.45

![](_page_89_Figure_8.jpeg)

## *Johnston, et al.* **Figure 88.** HPLC trace of **11.**

![](_page_90_Figure_2.jpeg)

Signal 1: DAD1 D, Sig=230,16 Ref=360,100

Peak #	RT [min]	Width [min]	Area	Area %
1	8.341	0.225	14160.931	98.00
2	8.929	0.216	288.657	2.00

![](_page_90_Figure_5.jpeg)

Peak #	RT [min]	Width [min]	Area	Area	8
1	8.472	0.222	4244.789	49.	50
2	9.055	0.284	4330.040	50.	50

![](_page_90_Figure_9.jpeg)

## *Johnston, et al.* **Figure 89.** HPLC trace of **12.**

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![](_page_91_Figure_2.jpeg)

Peak #	RT [min]	Width [min]	Area	Area %
1	7.691	0.200	11584.120	93.36
2	8.551		824.098	6.64

Based on literature assay.<sup>1</sup>

<sup>&</sup>lt;sup>1</sup> Palomo, C.; Oiarbide, M.; Laso, A.; López, R. J. Am. Chem. Soc. 2005, 127, 17622

![](_page_92_Figure_2.jpeg)

Signal 1: DAD1 C, Sig=210,8 Ref=360,100

Peak #	RT [min]	Width [min]	Area	Area %
1	8.276	0.401	180.828	2.29
2	9.344	0.354	4068.313	51.42
3	10.250	0.208	166.412	2.10
4	10.990	0.297	3496.621	44.19

![](_page_92_Figure_5.jpeg)

Peak #	RT [min]	Width [min]	Area	Area %
1	7.521	0.309	2455.734	25.30
2	8.419	0.294	2563.828	26.41
3	9.312	0.131	2386.716	24.59
4	9.843	0.173	2300.407	23.70

## *Johnston, et al.* **Figure 91.** HPLC trace of recrystallized **13**.

ΝO<sub>2</sub>

Boc

C<sub>10</sub>H<sub>2</sub>

![](_page_93_Figure_2.jpeg)

Peak #	RT [min]	Width [min]	Area	Area %
1	7.867	0.222	11.722	0.20
2	9.042	0.382	2168.692	37.85
3	9.780	0.238	30.617	0.53
4	10.559	0.368	3518.577	61.41

![](_page_93_Figure_5.jpeg)

## *Johnston, et al.* **Figure 92.** HPLC trace of **14.**

![](_page_94_Figure_2.jpeg)

Signal 1: DAD1 C, Sig=210,8 Ref=360,100

Peak #	RT [min]	Width [min]	Area	Area	용
1	8.557	0.243	187.354	2.	11
2	9.292	0.271	8712.142	97.	89

![](_page_94_Figure_5.jpeg)

Peak #	RT [min]	Width [min]	Area	Area %
1	8.504	0.245	4223.312	49.88
2	9.241	0.251	4243.221	50.12

![](_page_94_Figure_8.jpeg)

## *Johnston, et al.* **Figure 93.** HPLC trace of **15.**

![](_page_95_Figure_2.jpeg)

![](_page_95_Figure_3.jpeg)

Peak #	RT [min]	Width [min]	Area	Area %
1 2	6.774	0.319	5552.345 6727.819	42.40
3	9.138 10.150	0.407	368.636 445.921	2.82 3.41

![](_page_95_Figure_5.jpeg)

Peak #	RT [min]	Width [min]	Area	Area %
1	6.740	0.312	2255.689	24.71
2	7.238	0.305	2247.246	24.61
3	9.032	0.386	2245.698	24.60
4	10.010	0.390	2381.641	26.09

## *Johnston, et al.* **Figure 94.** HPLC trace of **16.**

![](_page_96_Figure_2.jpeg)

Signal 1: DAD1 C, Sig=210,8 Ref=360,100

Peak #	RT [min]	Width [min]	Area	Area %
1	10.755	0.297	12554.079	93.23
2	12.343	0.331	911.479	6.77

![](_page_96_Figure_5.jpeg)

Peak #	RT [min]	Width [min]	Area	Area %
1	10.498	0.279	2143.544	50.28
2	12.475	0.388	2119.343	49.72

![](_page_96_Figure_8.jpeg)

## *Johnston, et al.* **Figure 95.** HPLC trace of **17.**

,H

ΝO<sub>2</sub>

Boc.

![](_page_97_Figure_2.jpeg)

#### Signal 1: DAD1 D, Sig=230,16 Ref=360,100

Peak #	RT [min]	Width [min]	Area	Area %
1	8.088	0.214	3048.847	92.85
2	8.881	0.244	234.871	7.15

![](_page_97_Figure_5.jpeg)

Peak #	RT [min]	Width [min]	Area	Area %
1	8.045	0.207	1473.206	51.15
2	8.806	0.260	1406.843	48.85

## *Johnston, et al.* **Figure 96.** HPLC trace of **18.**

![](_page_98_Figure_2.jpeg)

![](_page_98_Figure_3.jpeg)

Peak #	RT [min]	Width [min]	Area	Area %
1	7.835	0.214	4458.328	95.20
2	8.886	0.252	224.879	4.80

![](_page_98_Figure_5.jpeg)

Peak #	RT [min]	Width [min]	Area	Area %
1	7.539	0.207	2098.937	50.08
2	8.607	0.277	2092.085	49.92

![](_page_98_Figure_8.jpeg)

## *Johnston, et al.* **Figure 97.** HPLC trace of **19.**

![](_page_99_Figure_2.jpeg)

#### Signal 1: DAD1 C, Sig=210,8 Ref=360,100

Peak #	RT [min]	Width [min]	Area	Area	8
1	6.695	0.183	7051.388	94.	05
2	7.443	0.209	446.144	5.	95

![](_page_99_Figure_5.jpeg)

Peak #	RT [min]	Width [min]	Area	Area %
1	6.748	0.183	3230.231	49.58
2	7.501	0.243	3284.427	50.42

![](_page_99_Figure_8.jpeg)

![](_page_100_Figure_2.jpeg)

#### Signal 1: DAD1 C, Sig=210,8 Ref=360,100

Peak #	RT [min]	Width [min]	Area	Area %
1	8.276	0.365	4606.396	42.19
2	9.545	0.439	5080.101	46.53
3	10.382	0.461	550.527	5.04
4	11.742	0.495	681.689	6.24

![](_page_100_Figure_5.jpeg)

Peak #	RT [min]	Width [min]	Area	Area %
1 2 3	8.090 9.373 10.185	0.370 0.422 0.444	3308.149 3063.356 3308.714	25.96 24.04 25.97
				24.02

![](_page_100_Figure_8.jpeg)

## *Johnston, et al.* **Figure 99.** HPLC trace of **21.**

![](_page_101_Figure_2.jpeg)

#### Signal 1: DAD1 C, Sig=210,8 Ref=360,100

Peak #	RT [min]	Width [min]	Area	Area %
1	6.532	0.146	1589.153	13.18
2	7.939	0.152	10468.359	86.82

![](_page_101_Figure_5.jpeg)

Peak #	RT [min]	Width [min]	Area	Area %
1	6.577	0.170	2928.512	51.42
2	8.040	0.105	2766.864	48.58

![](_page_101_Figure_8.jpeg)

## *Johnston, et al.* **Figure 100.** HPLC trace of **22.**

![](_page_102_Figure_2.jpeg)

![](_page_102_Figure_3.jpeg)

Signal 1: DAD1 C, Sig=210,8 Ref=360,100

Peak	RT	Width	Area	Area 🖇
#	[min]	[min]		
1	9.704	0.479	629.836	1.53
2	15.928	0.835	40410.633	98.47

![](_page_102_Figure_6.jpeg)

1 9.882			
2 15.667	).397 6	5774.301	50.15
	).621 6	5733.175	49.85

## *Johnston, et al.* **Figure 101.** HPLC trace of **23.**

![](_page_103_Figure_2.jpeg)

![](_page_103_Figure_3.jpeg)

Signal 1: DAD1 C, Sig=210,8 Ref=360,100

Peak # 	RT [min]	Width [min]	Area	Area %
1	5.857	0.235	660.275	5.87
2	9.836	0.389	10593.490	94.13

![](_page_103_Figure_6.jpeg)

Peak #	RT [min]	Width [min]	Area	Area %
1	6.153	0.263	7704.800	51.75
2	10.294	0.382	7183.816	48.25

## *Johnston, et al.* **Figure 102.** HPLC trace of **24.**

![](_page_104_Figure_2.jpeg)

Signal 1: DAD1 C, Sig=210,8 Ref=360,100

Peak #	RT [min]	Width [min]	Area	Area	8
1	5.515	0.193	357.410	2.	79
2	8.312	0.324	12456.632	97.	21

![](_page_104_Figure_5.jpeg)

Peak #	RT [min]	Width [min]	Area	Area %
1	5.542	0.225	6136.816	52.31
2	8.367	0.303	5595.277	47.69

## *Johnston, et al.* **Figure 103.** HPLC trace of **25.**

![](_page_105_Figure_2.jpeg)

Signal 1: DAD1 C, Sig=210,8 Ref=360,100

Peak #	RT [min]	Width [min]	Area	Area	%
1 2	6.239 9.235	0.270 0.374	2828.864 13663.194	17. 82.	15 85

![](_page_105_Figure_5.jpeg)

Peak #	RT [min]	Width [min]	Area	Area %
1	6.185	0.272	2718.587	51.22
2	9.272	0.362	2588.798	48.78

![](_page_105_Figure_8.jpeg)

## *Johnston, et al.* **Figure 104.** HPLC trace of **26.**

#### Supporting Information II

![](_page_106_Figure_2.jpeg)

![](_page_106_Figure_3.jpeg)

Signal 1: DAD1 C, Sig=210,8 Ref=360,100

Peak #	RT [min]	Width [min]	Area	Area %
1	6.975	0.324	293.220	6.88
2	10.526		3970.541	93.12

![](_page_106_Figure_6.jpeg)

Peak #	RT [min]	Width [min]	Area	Area %
1	6.869	0.298	2013.638	50.98
2	10.465	0.453	1936.296	49.02

## *Johnston, et al.* **Figure 105.** HPLC trace of **27.**

![](_page_107_Figure_2.jpeg)

![](_page_107_Figure_3.jpeg)

Signal 1: DAD1 C, Sig=210,8 Ref=360,100

Peak #	RT [min]	Width [min]	Area	Area %
1	6.371	0.212	297.915	2.37
2	11.336	0.456	12260.380	97.63

![](_page_107_Figure_6.jpeg)

Peak #	RT [min]	Width [min]	Area	Area %
1	6.405	0.256	14290.754	48.85
2	11.393	0.479	14966.102	51.15
# *Johnston, et al.* **Figure 106.** HPLC trace of **28.**





Signal 1: DAD1 C, Sig=210,8 Ref=360,100

Peak #	RT [min]	Width [min]	Area	Area %
1	6.248	0.216	633.736	3.88
2	11.181	0.443	15711.052	96.12



Peak #	RT [min]	Width [min]	Area	Area %
1	6.259	0.248	5936.624	49.35
2	11.348	0.438	6093.895	50.65

## *Johnston, et al.* **Figure 107.** HPLC trace of **29.**



Signal 1: DAD1 C, Sig=210,8 Ref=360,100

Peak # 	RT [min]	Width [min]	Area	Area %
1	4.838	0.070	328.407	3.35
2	8.361	0.340	9477.934	96.65



Peak #	RT [min]	Width [min]	Area	Area %
1	4.955	0.069	800.514	50.01
2	8.696	0.329	800.144	49.99

# *Johnston, et al.* **Figure 108.** HPLC trace of **30.**





Signal 1: DAD1 C, Sig=210,8 Ref=360,100

Peak #	RT [min]	Width [min]	Area	Area %
1	7.616	0.266	116.611	1.38
2	13.271	0.577	8324.212	98.62



Peak #	RT [min]	Width [min]	Area	Area %
1	7.998	0.319	4127.397	53.02
2	13.686	0.551	3657.124	46.98

# *Johnston, et al.* **Figure 109.** HPLC trace of **31.**





Signal 1: DAD1 C, Sig=210,8 Ref=360,100

Peak #	RT [min]	Width [min]	Area	Area %
1	9.487	0.334	70.269	2.19
2	15.314	0.697	3140.238	97.81



Peak #	RT [min]	Width [min]	Area	Area %
1	9.768	0.448	4972.060	47.41
2	15.479	0.688	5514.219	52.59

# *Johnston, et al.* **Figure 110.** HPLC trace of **32.**



Signal 1: DAD1 C, Sig=210,8 Ref=360,100

Peak #	RT [min]	Width [min]	Area	Area %
1	9.032	0.392	1229.454	6.49
2	14.309	0.583	17709.516	93.51



Peak #	RT [min]	Width [min]	Area	Area %
1	8.384	0.384	13109.295	38.16
2	13.501	0.586	21245.809	61.84

### Johnston, et al. Figure 111. HPLC trace of 33.

### Supporting Information II





Signal 1: DAD1 C, Sig=210,8 Ref=360,100

Peak #	RT [min]	Width [min]	Area	Area %
1	6.784	0.242	355.052	4.85
2	11.396	0.469	6966.001	95.15



Peak #	RT [min]	Width [min]	Area	Area %
1	6.635	0.264	8455.787	46.75
2	11.102	0.453	9631.794	53.25

# *Johnston, et al.* **Figure 112.** HPLC trace of **34.**



#### Signal 1: DAD1 C, Sig=210,8 Ref=360,100

# [n	11n] 	[min] 		
1	5.600	0.203	234.552	2.74
2	7.391	0.250 8	330.422	97.26



Peak #	RT [min]	Width [min]	Area	Area %
1	5.617	0.239	6593.606	51.26
2	7.391		6270.104	48.74



# *Johnston, et al.* **Figure 113.** HPLC trace of **35.**





Signal 1: DAD1 C, Sig=210,8 Ref=360,100

Peak #	RT [min]	Width [min]	Area	Area %
1	6.535	0.209	541.696	5.62
2	9.335	0.363	9093.938	94.38



Peak #	RT [min]	Width [min]	Area	Area %
1	6.456	0.233	1909.106	36.61
2	9.206	0.334	3306.083	63.39

# *Johnston, et al.* **Figure 114.** HPLC trace of **36.**



Signal 1: DAD1 C, Sig=210,8 Ref=360,100

Peak #	RT [min]	Width [min]	Area	Area %
1	7.497	0.275	813.074	11.37
2	11.307	0.461	6337.186	88.63



Peak #	RT [min]	Width [min]	Area	Area %
1	7.681	0.308	1689.121	33.52
2	11.666		3350.754	66.48

# *Johnston, et al.* **Figure 115.** HPLC trace of **37.**





Signal 1: DAD1 C, Sig=210,8 Ref=360,100

Peak #	RT [min]	Width [min]	Area	Area	÷
1	9.735	0.387	1636.389	11.	46
2	12.214	0.531	12641.171	88.	54



Peak #	RT [min]	Width [min]	Area	Area %
1	10.142	0.404	2104.111	50.15
2	12.675	0.511	2091.183	49.85