

Supporting Information

ASYMMETRIC SYNTHESIS OF 2,3-DIMETHOXY-8-OXOBERBINE, PRECURSOR OF *O*-METHYLBHARATAMINE

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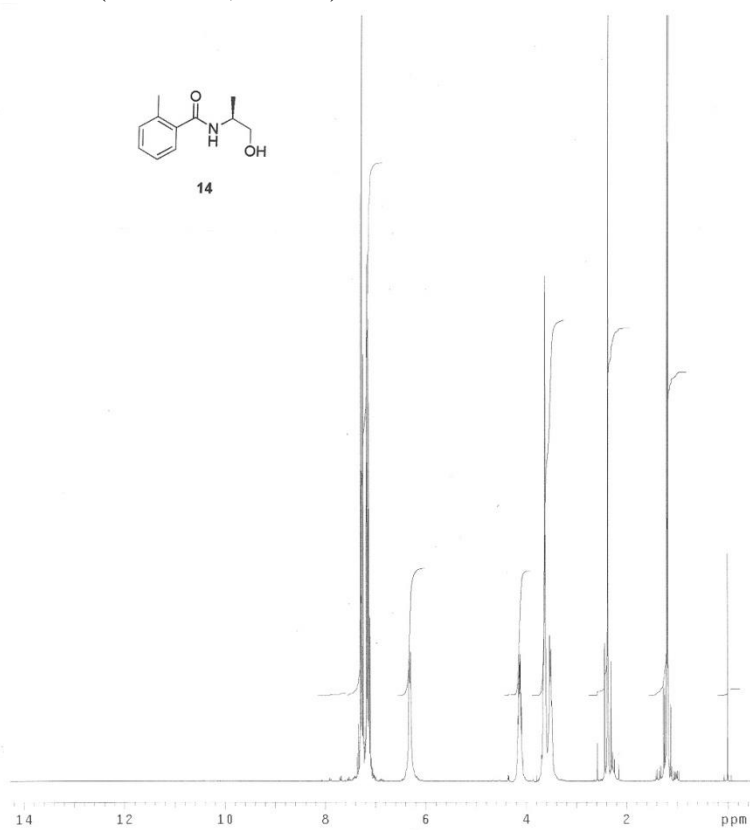
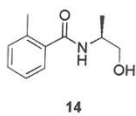
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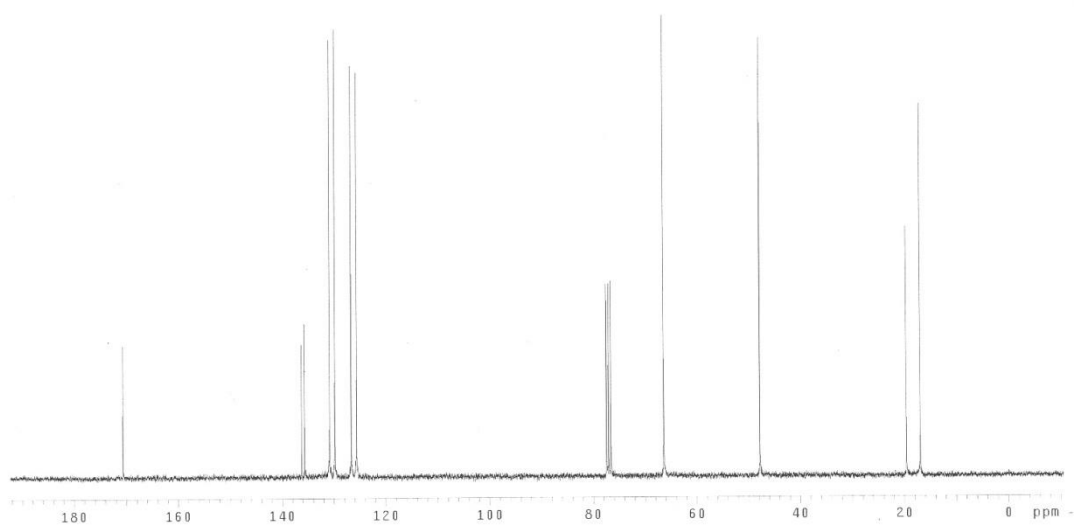
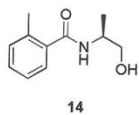
1. NMR data of compound 14	S2
2. NMR data of compound 7c	S3
3. NMR data of compound 15	S4
4. HPLC data	S5

(2S)-2-*o*-Tolamide-1-propanol (14)

¹H NMR (300 MHz, CDCl₃)

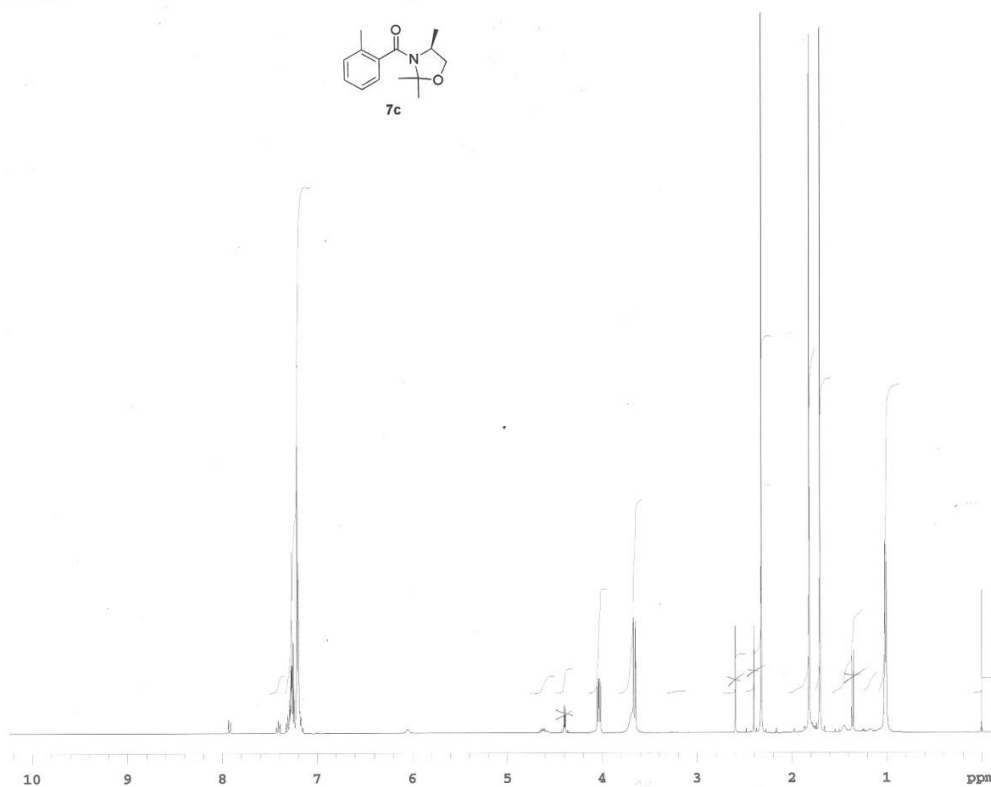
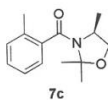


¹³C NMR (75 MHz, CDCl₃)

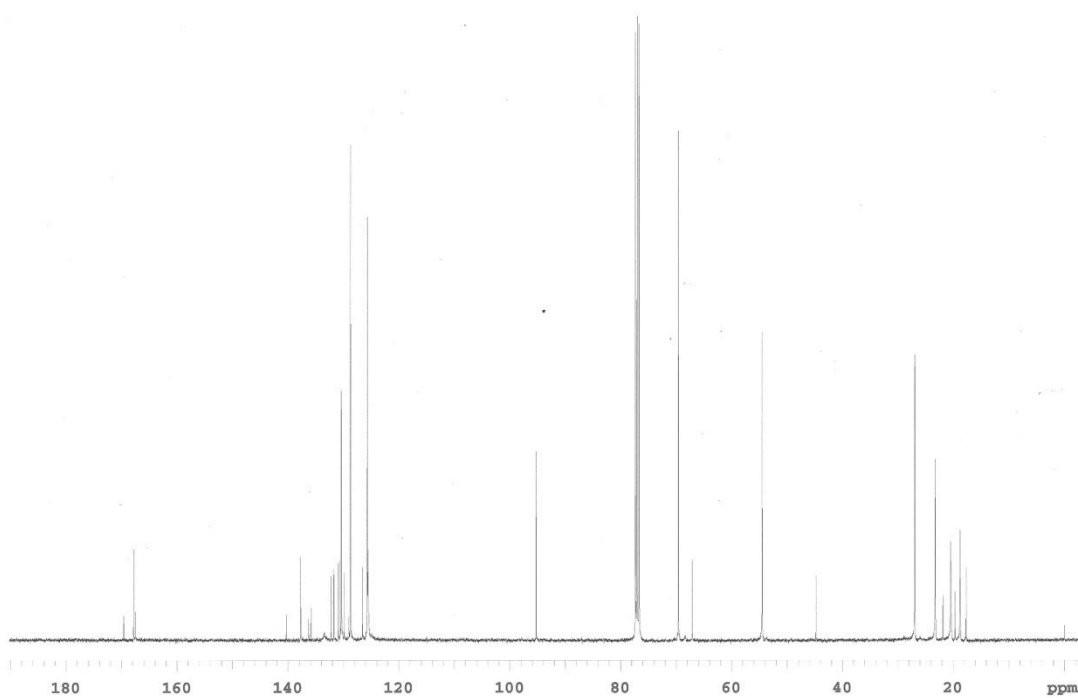
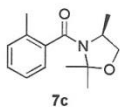


(4S)-2,2,4-Trimethyl-3-(*o*-toluoyl)oxazolidine (7c)

^1H NMR (300 MHz, CDCl_3)

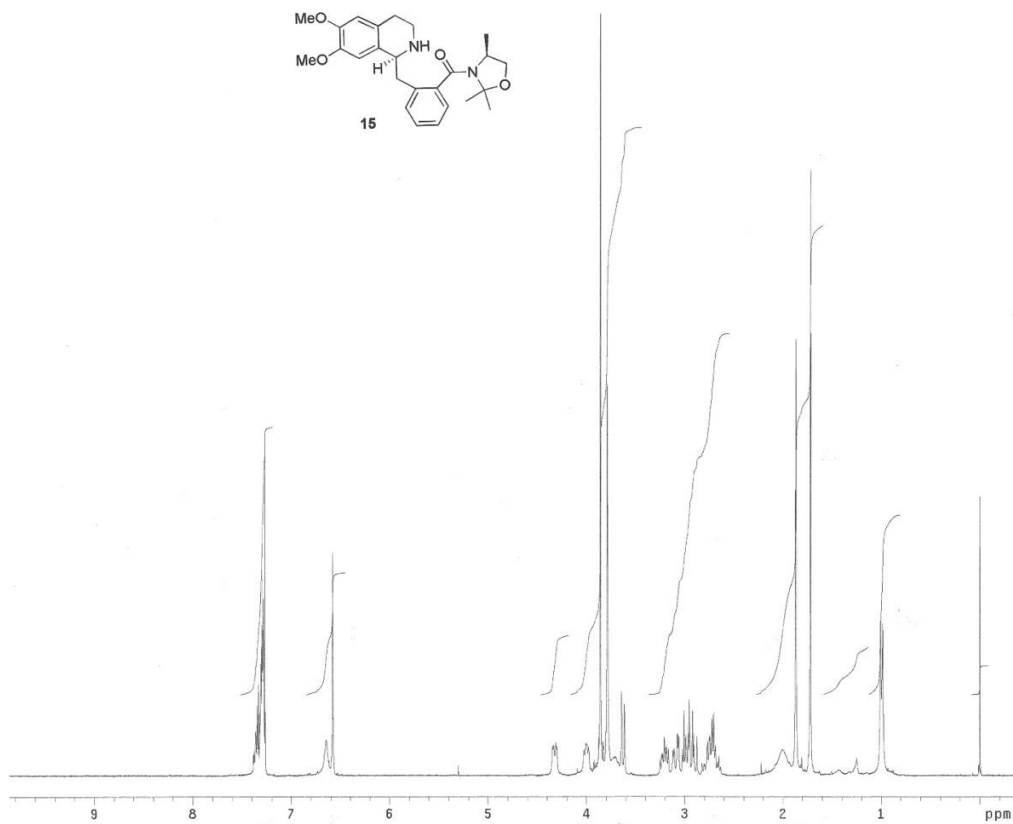
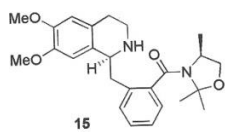


^{13}C NMR (75 MHz, CDCl_3)



Amine 15

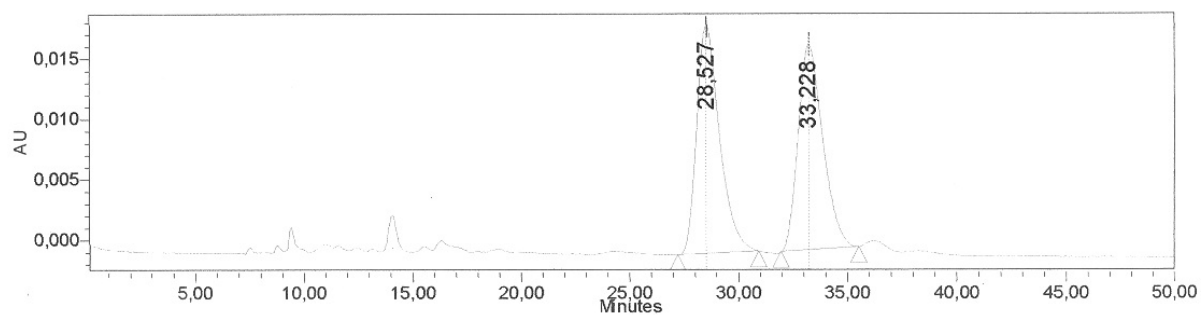
¹H NMR (300 MHz, CDCl₃)



HPLC data

(±)-2,3-Dimethoxy-8-oxoberbine 3a

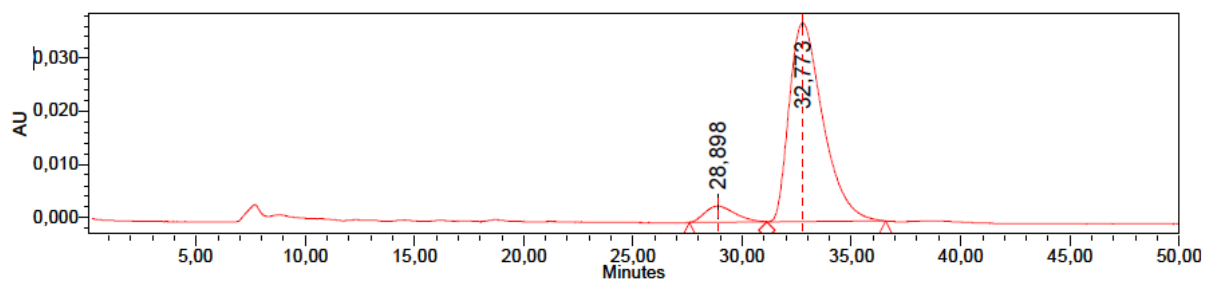
Daicel Chiralcel OD-H column (250 x 4.6 mm), hexane/propan-2-ol = 4:1, flow rate 0.5 mL/min, 254 nm.



Peak Results

	Name	RT	Area	% Area	Height	Amount	Units
1		28,527	1375861	50,92	18831		
2		33,228	1326309	49,08	16919		

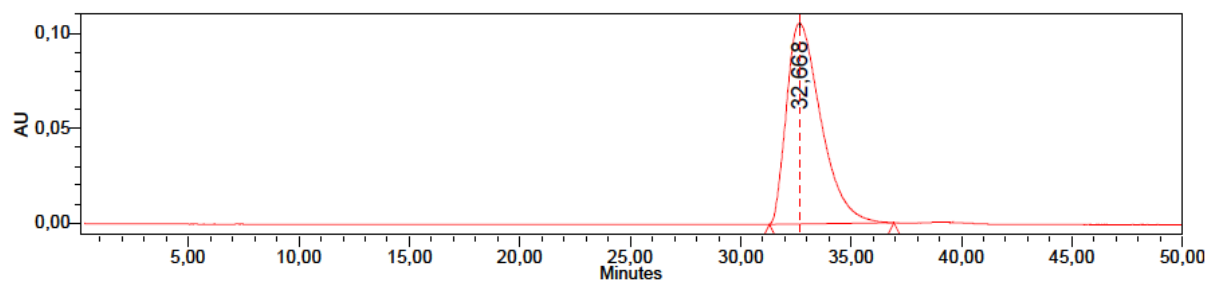
(S)-2,3-Dimethoxy-8-oxoberbine 3a 87% ee



Peak Results

	Name	RT	Area	% Area	Height	Amount	Units
1		28,898	288464	6,70	3032		
2		32,773	4014797	93,30	37350		

(S)-2,3-Dimethoxy-8-oxoberbine 3a >99% ee

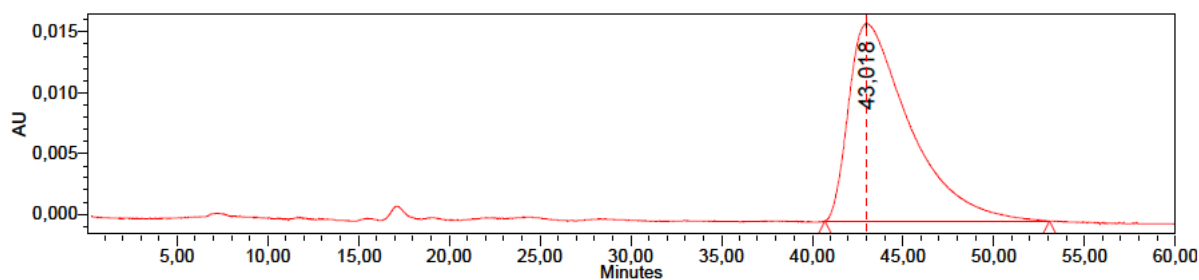


Peak Results

	Name	RT	Area	% Area	Height	Amount	Units
1		32,668	11462417	100,00	105610		

Amine 15

Daicel Chiralcel OD-H column (250 x 4.6 mm), hexane/propan-2-ol = 4:1, flow rate 0.5 mL/min, 254 nm.



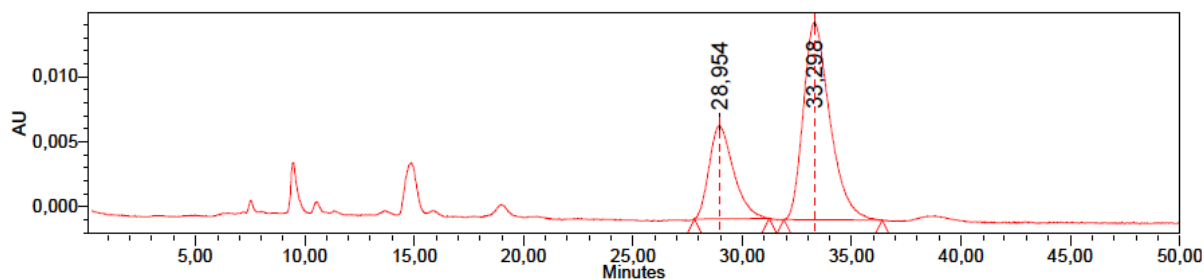
Peak Results

	Name	RT	Area	% Area	Height	Amount	Units
1		43,018	3778993	100,00	16223		

HPLC data for enantioselective approach:

(*S*)-2,3-Dimethoxy-8-oxoberbine **3a** 40% ee (product of reaction of **5c** with **4a** performed in the presence of **6**)

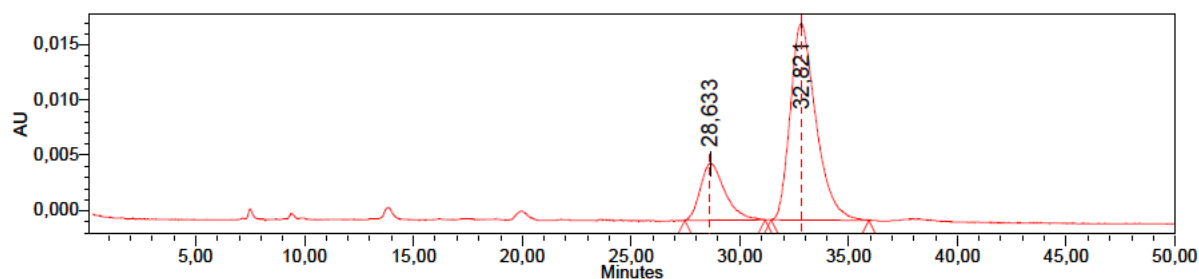
Daicel Chiralcel OD-H column (250 x 4.6 mm), hexane/propan-2-ol = 4:1, flow rate 0.5 mL/min, 254 nm.



Peak Results

	Name	RT	Area	% Area	Height	Amount	Units
1		28,954	553079	30,02	7160		
2		33,298	1289442	69,98	15215		

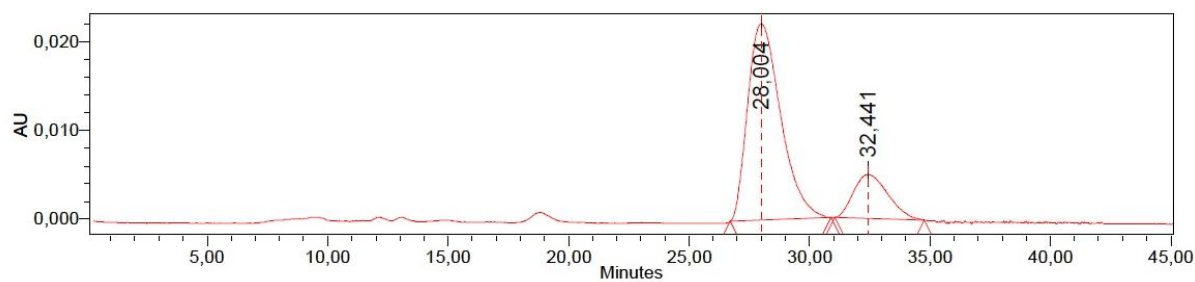
(*S*)-2,3-Dimethoxy-8-oxoberbine **3a** 57% ee (product of reaction of **16** with **4a** performed in the presence of **6**)



Peak Results

	Name	RT	Area	% Area	Height	Amount	Units
1		28,633	396695	21,43	5108		
2		32,821	1454544	78,57	17745		

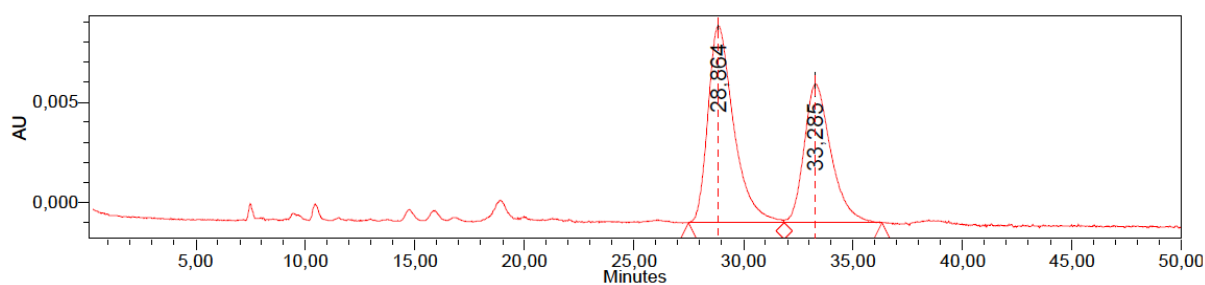
(R)-2,3-Dimethoxy-8-oxoberbine 3a 62% ee (product of reaction of **16** with **4a** performed in the presence of **20**)



Peak Results

	Name	RT	Area	% Area	Height	Amount	Units
1		28,004	2117217	81,18	22171		
2		32,441	490984	18,82	4976		

(R)-2,3-Dimethoxy-8-oxoberbine 3a 15% ee (product of reaction of **5c** with **4a** performed in the presence of **22**)



Peak Results

	Name	RT	Area	% Area	Height	Amount	Units
1		28,864	804235	57,61	9815		
2		33,285	591782	42,39	6902		