

Table S1. Intra- and inter-day accuracy and precision of *S*-(+)-sulconazole and *R*-(-)-sulconazole in plasma and tissue samples.

Analytes	Nominal concentration (ng/mL)	Intra-day (n=6)			Inter-day (n=18)			
		Calculated concentration (ng/mL)	RE (%)	RSD (%)	Calculated concentration (ng/mL)	RE (%)	RSD (%)	
Plasma	1.0	0.9±0.1	-10.0	11.1	1.1±0.1	10.0	9.1	
	<i>S</i> -(+)-Sul	4.0	4.2±0.2	5.0	4.8	3.9±0.2	-2.5	5.1
	40.0	39.6±1.7	-1.0	4.3	41.4±1.5	3.5	3.6	
	80.0	81.8±2.8	2.3	3.4	78.3±2.1	-2.1	2.7	
<i>R</i> -(-)-Sul	1.0	0.9±0.1	-10.0	11.1	1.1±0.1	10.0	9.1	
	4.0	4.1±0.2	2.5	4.9	3.9±0.2	-2.5	5.1	
	40.0	39.1±1.8	-2.3	4.6	41.6±1.8	4.0	4.3	
	80.0	81.5±2.6	1.9	3.2	78.8±2.5	-1.5	3.2	
Brain	2.5	2.3±0.1	-8.0	4.3	2.7±0.3	8.0	11.1	
	<i>S</i> -(+)-Sul	10.0	9.4±0.3	-6.0	3.2	10.8±0.4	8.0	3.7
	40.0	42.0±2.6	5.0	6.2	41.3±1.6	3.3	3.9	
	80.0	81.4±3.7	1.8	4.5	79.3±2.2	-0.9	2.8	
<i>R</i> -(-)-Sul	2.5	2.4±0.2	-4.0	8.3	2.6±0.2	4.0	7.7	
	10.0	9.5±0.3	-5.0	3.2	11.1±0.4	11.0	3.6	
	40.0	41.9±2.5	4.8	6.0	41.1±1.5	2.8	3.6	
	80.0	81.8±3.5	2.3	4.3	79.7±2.8	-0.4	3.5	
Heart	1.0	1.1±0.1	10.0	9.1	0.9±0.1	-10.2	11.1	
	<i>S</i> -(+)-Sul	4.0	4.4±0.3	10.0	6.8	4.2±0.3	5.0	7.1
	200.0	206.3±3.0	3.2	1.5	205.3±3.4	2.7	1.7	

		400.0	395.7±4.9	-1.1	1.2	406.3±5.2	1.6	1.3
		1.0	1.1±0.1	10.0	9.1	0.9±0.1	-10.0	11.1
	<i>R</i> -(-)-Sul	4.0	4.1±0.3	2.5	7.3	4.1±0.2	2.5	4.9
		200.0	205.9±3.3	3.0	1.6	204.6±3.1	2.3	1.5
		400.0	396.4±5.0	-0.9	1.3	405.8±4.9	1.5	1.2
		1.0	1.1±0.1	10.0	9.1	1.1±0.1	10.0	9.1
	<i>S</i> -(+)-Sul	4.0	4.2±0.4	5.0	4.8	4.2±0.3	5.0	7.1
Liver		200.0	191.7±3.5	-4.2	1.8	205.0±3.3	2.5	1.6
		400.0	405.9±6.4	1.5	1.6	408.7±4.5	2.2	1.1
		1.0	1.1±0.1	10.0	9.1	1.1±0.1	10.0	9.1
	<i>R</i> -(-)-Sul	4.0	4.1±0.3	2.5	4.9	4.3±0.3	7.5	7.0
		200.0	193.0±4.0	-3.5	2.1	207.1±4.8	3.6	2.3
		400.0	408.2±7.1	2.1	1.8	410.1±4.8	2.5	1.2
		1.0	0.9±0.1	-10.0	11.1	0.9±0.1	-10.0	11.1
	<i>S</i> -(+)-Sul	2.0	2.1±1.7	5.0	8.1	2.2±0.7	10.0	3.2
Spleen		40.0	39.1±5.7	-2.3	1.5	42.1±2.4	5.3	5.7
		80.0	82.8±4.7	3.5	5.7	78.9±5.1	-1.4	6.5
		1.0	0.9±0.1	-10.0	11.1	0.9±0.1	-10.0	11.1
	<i>R</i> -(-)-Sul	2.0	2.2±1.9	10.0	8.6	2.2±0.8	10.0	3.6
		40.0	38.8±4.4	-3.0	11.3	41.8±2.5	4.5	6.0
		80.0	82.1±4.0	2.6	4.9	78.6±4.9	-1.8	6.2
		1.0	0.9±0.1	-10.0	11.1	1.1±0.1	10.0	9.1
	<i>S</i> -(+)-Sul	4.0	3.8±2.1	-5.0	5.5	4.2±3.2	5.0	4.8
Lung		200.0	206.1±4.8	3.1	2.3	195.3±4.2	-2.4	2.2

	400.0	392.0±5.6	-2.0	1.4	406.3±5.2	1.6	1.3
	1.0	0.9±0.1	-10.0	11.1	1.1±0.1	10.1	9.1
<i>R</i> -(-)-Sul	4.0	3.8±2.3	-5.0	6.1	4.3±2.9	7.5	6.7
	200.0	207.3±5.0	3.7	2.4	193.8±4.5	-3.1	2.3
	400.0	391.5±6.1	-2.1	1.6	405.9±5.0	1.5	1.2
	1.0	1.1±0.1	10.0	9.1	1.1±0.1	10.0	9.1
<i>S</i> -(+)-Sul	4.0	4.2±0.3	5.0	7.1	3.8±0.2	-5.0	5.3
	200.0	191.5±8.9	-4.3	4.6	193.5±6.8	-3.3	3.5
Kidney	400.0	405.5±8.8	1.4	2.2	406.1±5.1	1.5	1.3
	1.0	1.1±0.1	10.0	9.1	1.1±0.1	10.0	9.1
<i>R</i> -(-)-Sul	4.0	4.3±0.4	7.5	9.3	3.9±0.1	-6.0	2.6
	200.0	192.0±9.0	-4.0	4.7	192.8±7.0	-5.1	3.6
	400.0	406.3±9.0	1.6	2.2	407.8±5.4	3.3	1.3
	2.0	1.9±0.2	-5.0	10.5	2.1±0.2	5.0	9.5
<i>S</i> -(+)-Sul	10.0	10.8±0.4	8.0	3.7	9.1±0.3	-9.0	3.3
Small intestine	200.0	193.1±8.4	-3.5	4.4	207.2±6.1	3.6	2.9
	400.0	408.5±5.4	2.1	1.3	391.3±5.2	-2.2	1.3
	2.0	1.9±0.1	-5.0	5.3	2.1±0.2	5.0	9.5
<i>R</i> -(-)-Sul	10.0	10.6±0.4	6.0	3.8	9.4±0.3	-4.0	3.2
	200.0	194.7±8.4	-2.7	4.3	206.8±5.9	3.4	2.9
	400.0	408.1±5.9	2.0	1.4	392.0±4.8	-2.0	1.2
	1.0	1.1±0.1	10.0	9.1	0.9±0.1	-10.0	11.1
<i>S</i> -(+)-Sul	4.0	3.9±0.4	-2.5	10.3	4.2±0.4	5.0	9.5
Muscle	40.0	41.7±2.8	4.3	6.7	38.4±3.7	-4.0	9.6

	80.0	78.8±5.2	-1.5	6.6	81.9±6.9	2.3	8.4
	1.0	1.1±0.1	10.0	9.1	0.9±0.1	-10.0	11.1
<i>R</i> -(-)-Sul	4.0	3.7±0.3	-7.5	8.1	4.1±0.3	2.5	7.3
	40.0	42.0±3.1	5.0	7.4	38.6±3.5	-3.5	9.1
	80.0	79.2±5.6	-1.0	7.1	82.1±7.3	2.6	8.9

Table S2. Extraction recoveries and matrix effects of *S*-(+)-sulconazole and *R*-(-)-sulconazole in plasma and tissue samples.

Analytes	Nominal concentration (ng/mL)	Recovery		NMF	
		(mean ± SD, %)	RSD (%)	(mean ± SD, %)	RSD (%)
Plasma	4.0	92.6±3.3	3.6	104.3±3.2	3.1
	40.0	100.8±5.3	5.3	98.4±5.1	5.2
	80.0	91.4±3.4	3.7	101.3±2.9	2.9
<i>R</i> -(-)-Sul	4.0	95.7±4.1	4.3	102.9±3.8	3.7
	40.0	100.4±4.9	4.9	97.7±4.2	4.3
	80.0	94.3±3.3	3.5	101.8±3.1	3.0

		10.0	89.4±5.1	5.7	98.3±5.8	5.9
	S-(+)-Sul	40.0	93.8±2.8	3.0	99.1±4.0	4.0
Brain		80.0	96.0±4.9	5.1	101.2±8.9	8.8
		10.0	89.1±5.0	5.6	98.2±5.5	5.6
	R-(-)-Sul	40.0	93.1±3.3	3.5	99.9±4.7	4.7
		80.0	95.8±4.2	4.4	102.1±8.0	7.8
		4.0	95.8±6.5	6.5	98.8±4.8	5.6
	S-(+)-Sul	200.0	94.1±4.0	4.3	99.1±3.0	3.0
Heart		400.0	101.8±3.1	3.0	102.7±5.2	5.1
		4.0	95.5±6.1	5.8	97.9±4.5	5.0
	R-(-)-Sul	200.0	93.7±3.2	3.4	98.8±2.5	2.5
		400.0	101.4±2.9	2.9	103.2±5.9	5.7
		4.0	92.8±6.1	6.6	98.2±4.9	5.0
	S-(+)-Sul	200.0	97.6±5.3	5.4	103.6±5.6	5.4
Liver		400.0	90.2±4.0	4.4	99.4±6.0	6.0
		4.0	92.0±5.0	5.4	99.7±5.0	5.0
	R-(-)-Sul	200.0	97.0±4.9	5.1	103.0±6.1	5.9
		400.0	89.1±3.8	4.3	99.8±4.8	4.8
		2.0	93.1±4.1	4.4	98.2±4.6	4.7
	S-(+)-Sul	40.0	100.2±9.4	9.4	103.1±6.7	6.5
Spleen		80.0	93.2±2.9	3.1	102.4±4.1	4.0
		2.0	92.3±3.6	3.9	97.7±4.0	4.1
	R-(-)-Sul	40.0	100.4±8.6	8.6	103.9±7.1	6.8
		80.0	93.0±3.1	3.3	101.9±3.5	3.4

		4.0	96.4±6.0	6.2	98.1±7.2	7.3
	S-(+)-Sul	200.0	92.8±4.3	4.6	104.3±5.4	5.2
Lung		400.0	95.0±2.8	2.9	101.5±2.0	2.0
		4.0	97.1±5.5	5.7	99.4±7.6	7.6
	R-(-)-Sul	200.0	92.5±3.7	4.0	104.5±5.1	4.9
		400.0	95.8±3.1	3.2	101.0±1.9	1.9
		4.0	88.7±3.4	3.8	103.3±4.2	4.1
	S-(+)-Sul	200.0	101.3±4.8	4.7	99.7±6.9	6.9
		400.0	95.0±5.8	6.1	101.0±7.2	7.1
Kidney		4.0	91.1±4.0	4.4	102.9±4.8	4.7
	R-(-)-Sul	200.0	100.8±3.0	3.0	99.5±7.0	7.0
		400.0	94.6±5.5	5.8	101.5±6.6	6.5
		10.0	102.5±5.5	7.2	98.6±5.4	6.8
	S-(+)-Sul	200.0	97.4±1.9	2.0	99.9±3.2	3.2
Small intestine		400.0	92.0±3.0	3.3	98.6±5.2	5.3
		10.0	101.3±4.5	7.3	97.9±5.3	6.3
	R-(-)-Sul	200.0	97.5±2.2	2.3	100.3±2.1	2.1
		400.0	92.9±3.8	4.1	98.4±5.0	5.1
		4.0	96.3±3.3	3.4	101.6±8.1	8.0
	S-(+)-Sul	40.0	101.4±5.2	5.1	99.2±2.9	3.1
Muscle		80.0	94.1±4.0	4.3	98.6±3.3	3.4
		4.0	95.8±3.9	4.1	102.0±7.7	7.5
	R-(-)-Sul	40.0	101.9±5.0	4.9	99.1±2.1	2.2
		80.0	93.2±1.8	1.9	98.0±3.5	3.6

NMF: normalized matrix factor.

Table S3. Stability results of *S*-(+)- and *R*-(-)-sulconazole in plasma and tissues under various storage conditions (n = 6)

Analytes	Nominal concentration (ng/mL)	Room temperature for 12 h		On the autosampler tray 4°C for 24 h		-80°C for 30 days		Three freeze-thaw cycles		
		RE (%)	RSD (%)	RE (%)	RSD (%)	RE (%)	RSD (%)	RE (%)	RSD (%)	
Plasma	4.0	-9.6	8.8	6.3	8.8	4.6	5.2	10.2	10.2	
	S-(+)-Sul	40.0	3.7	5.4	3.7	6.2	-6.7	2.8	-6.9	6.1
	80.0	1.9	2.8	-1.8	2.6	5.2	4.7	4.1	3.7	
	4.0	-9.8	9.1	6.5	9.1	4.8	5.4	10.8	9.9	
	R-(-)-Sul	40.0	4.0	5.0	4.1	6.1	-7.1	3.0	-7.2	6.0
	80.0	2.1	3.1	-1.5	3.0	5.1	4.9	3.9	3.9	
Brain	10.0	-6.2	9.2	9.8	7.3	8.6	6.8	-8.4	7.4	
	S-(+)-Sul	40.0	-3.7	4.3	5.9	5.5	-6.7	7.1	6.7	5.2
	80.0	5.1	3.6	-4.2	2.8	2.2	3.4	4.1	3.7	
	10.0	-6.5	9.0	10.1	7.5	8.8	6.4	-8.6	7.1	
	R-(-)-Sul	40.0	-3.5	4.5	6.0	5.3	-7.1	7.0	6.2	5.5
	80.0	5.0	4.1	-4.1	2.9	2.0	3.5	4.5	4.0	
Heart	4.0	9.7	7.4	-10.8	9.4	-4.6	4.7	-1.7	3.8	
	S-(+)-Sul	200.0	-7.2	4.6	6.9	3.1	-1.9	3.2	2.8	1.8
	400.0	4.4	5.0	3.6	0.9	1.1	1.4	-1.2	4.3	
	4.0	9.5	7.1	-10.2	9.1	-4.4	4.9	-2.0	3.4	
	R-(-)-Sul	200.0	-7.0	4.2	7.0	3.0	-2.2	3.0	2.9	2.0
	400.0	4.2	5.1	3.3	1.2	1.3	1.2	-1.0	3.9	
	4.0	3.4	4.4	4.9	2.5	-9.7	7.7	4.2	3.9	

	S-(+)-Sul	200.0	-4.2	1.8	-3.8	1.3	6.3	6.2	5.5	2.8
Liver		400.0	1.8	1.4	2.2	0.8	2.8	1.9	-3.9	1.2
		4.0	3.6	4.6	5.2	2.4	-9.4	7.1	4.0	3.6
	R-(-)-Sul	200.0	-4.1	2.0	-3.7	1.4	6.1	6.3	5.2	2.6
		400.0	2.0	1.5	2.0	1.1	2.2	2.2	-3.5	1.4
		2.0	12.4	8.6	6.6	4.2	-8.2	6.3	-3.1	5.7
	S-(+)-Sul	40.0	3.9	3.5	2.8	3.6	4.3	3.8	4.4	2.2
Spleen		80.0	-1.5	1.1	-4.7	1.2	2.8	1.9	1.2	0.9
		2.0	12.0	8.4	6.2	4.1	-7.7	6.5	-2.9	6.3
	R-(-)-Sul	40.0	4.1	3.0	2.5	3.2	4.1	3.3	4.1	2.0
		80.0	-1.2	0.6	-4.5	0.9	2.4	1.7	1.1	0.9
		4.0	3.8	4.3	5.2	4.0	9.3	6.4	2.8	2.6
	S-(+)-Sul	200.0	-2.9	3.9	-3.8	2.5	3.1	2.7	-5.5	4.2
Lung		400.0	1.5	1.0	1.1	2.1	-1.4	1.3	2.1	1.2
		4.0	4.1	4.0	5.1	3.8	9.6	6.9	2.5	2.2
	R-(-)-Sul	200.0	-3.0	3.5	-3.5	2.8	3.0	2.5	-5.4	3.9
		400.0	1.0	1.0	1.2	1.8	-1.5	1.2	1.9	1.6
		4.0	8.3	5.1	5.7	3.8	6.7	5.3	-7.6	6.4
	S-(+)-Sul	200.0	4.2	3.2	-2.1	1.9	-3.9	2.2	5.3	3.9
		400.0	-3.1	1.3	1.9	1.1	6.2	4.8	2.9	1.5
Kidney		4.0	8.0	4.8	5.5	3.6	6.4	5.5	-7.8	6.3
	R-(-)-Sul	200.0	4.0	2.7	-1.9	1.6	-3.3	2.4	5.5	3.5
		400.0	-2.8	1.0	2.2	1.0	6.0	4.5	2.5	1.6
		10.0	5.4	3.6	-6.2	4.2	-9.7	6.3	-7.8	6.2
	S-(+)-Sul	200.0	4.7	2.9	4.0	3.5	4.8	2.8	3.5	1.9

Small intestine		400.0	-2.5	1.1	0.9	1.4	4.2	4.6	1.7	1.3
		10.0	5.1	3.4	-5.9	4.0	-10.1	6.1	-7.5	5.9
	R-(-)-Sul	200.0	4.6	2.6	3.8	3.3	5.8	2.4	3.3	2.1
		400.0	-2.2	1.3	1.3	1.2	3.8	4.0	1.5	1.1
Muscle		4.0	8.8	6.3	-10.4	6.3	7.3	5.5	-6.6	4.2
	S-(+)-Sul	40.0	-4.3	3.8	7.3	4.2	4.8	2.6	4.3	3.2
		80.0	5.2	4.1	5.5	4.6	-2.7	1.3	2.7	1.4
		4.0	8.6	6.1	-10.9	6.6	6.9	5.3	-6.8	4.8
	R-(-)-Sul	40.0	-4.0	3.3	7.0	3.9	4.4	2.4	4.6	3.0
		80.0	4.7	3.7	5.2	4.3	-2.5	1.5	2.5	1.0