

Supplementary material to:

Exploring polyamine metabolism of the yeast-like fungus, *Emergomyces africanus*

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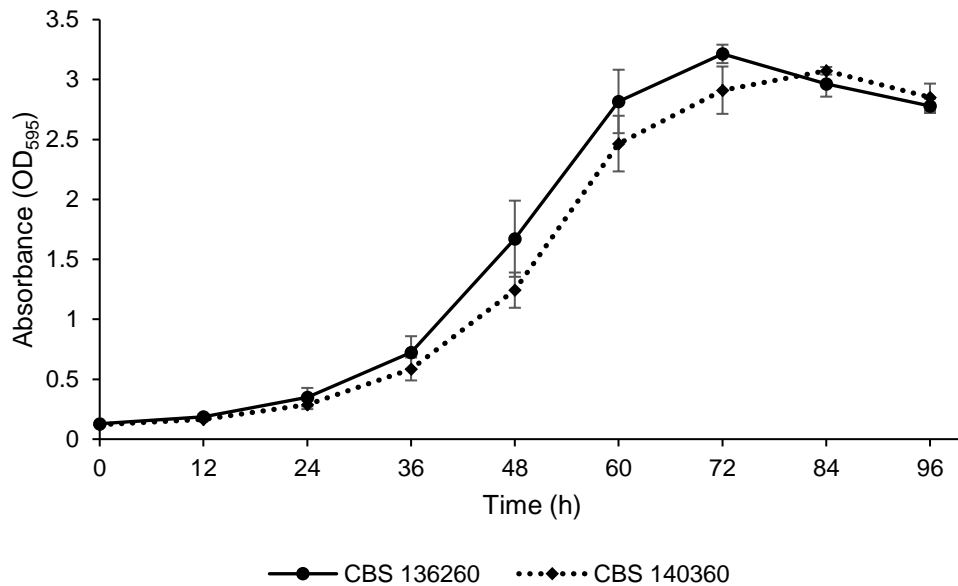


Figure S1. Growth of *E. africanus* strains CBS 136260 and CBS 140360 in Brain Heart Infusion broth at 37°C measured by optical density at 595 nm (OD₅₉₅). Growth media were inoculated with ca. 1×10^7 yeast-like cells/mL. Values were recorded over a period of 96 hours at 12-hour intervals. Data points represent the average \pm standard error of three biological replicates ($n=3$).

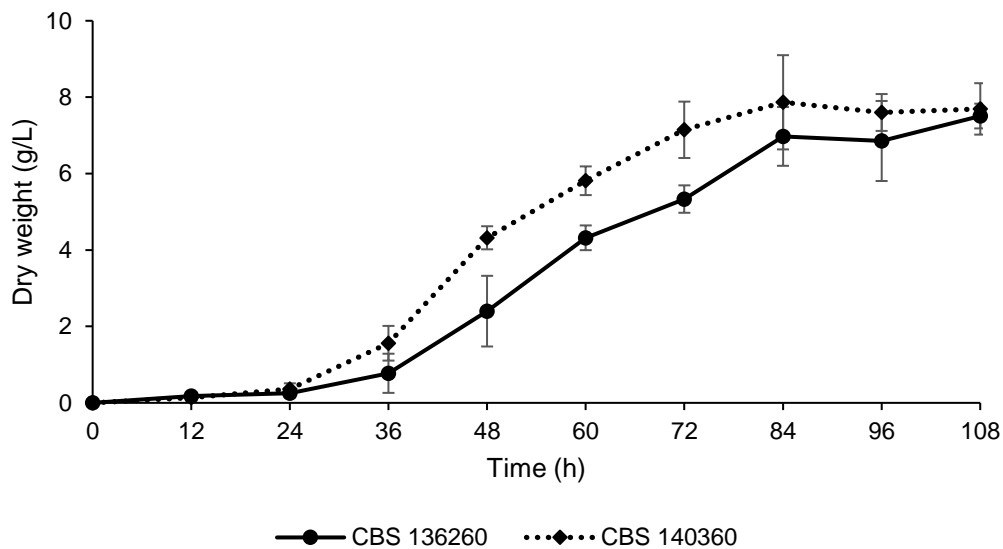
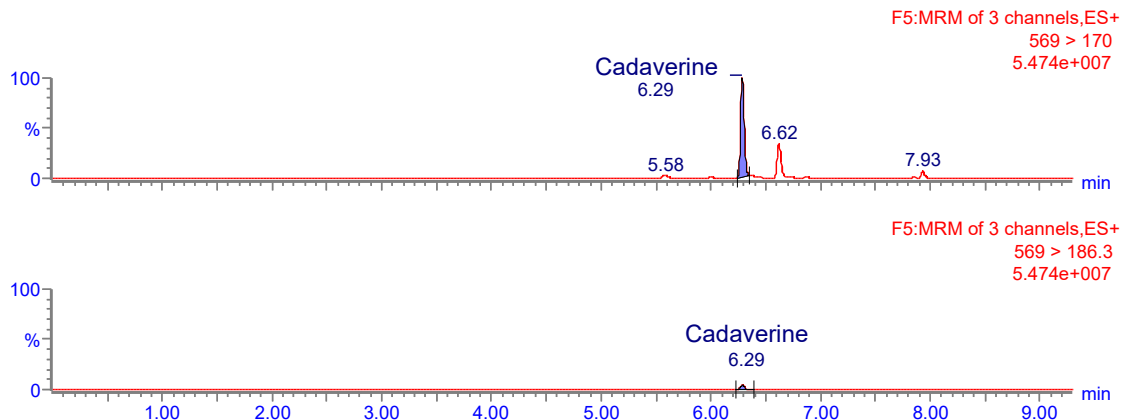


Figure S2. Growth of *E. africanus* strains CBS 136260 and CBS 140360 in Brain Heart Infusion broth at 26°C measured by dry weight (g/L). Growth media were inoculated with ca. 1×10^7 yeast-like cells/mL. Growth was measured by filtering a sample of the culture medium (2.5 mL) through a pre-weighed Pasteur pipette containing glass wool and drying the retained biomass at 80°C to obtain a measurement of dry weight. Three flasks were used as one biological replicate. Dry weight values were recorded over a period of 108 hours at 12-hour intervals. Data points represent the average \pm standard error of three biological replicates ($n=3$).

Figure S3. Representative multiple reaction monitoring (MRM) chromatograms of cadaverine (A), agmatine (B), putrescine (C), spermidine (D), spermine (E), and the internal standard heptylamine (F) in prepared standards and random samples.

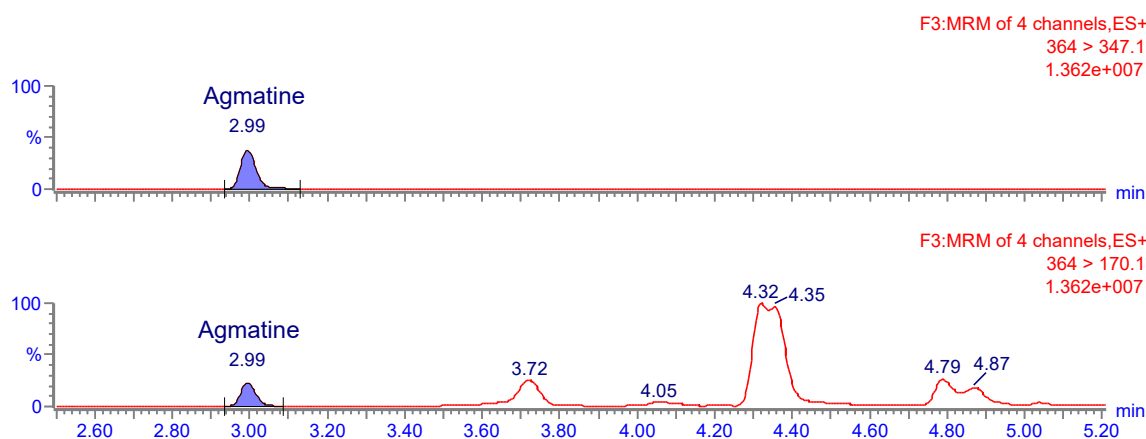
(A)

Standard

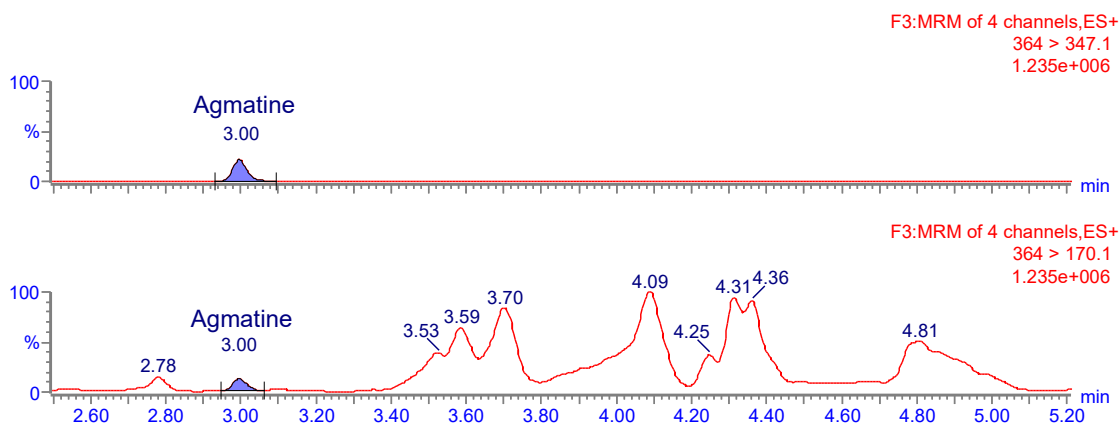


(B)

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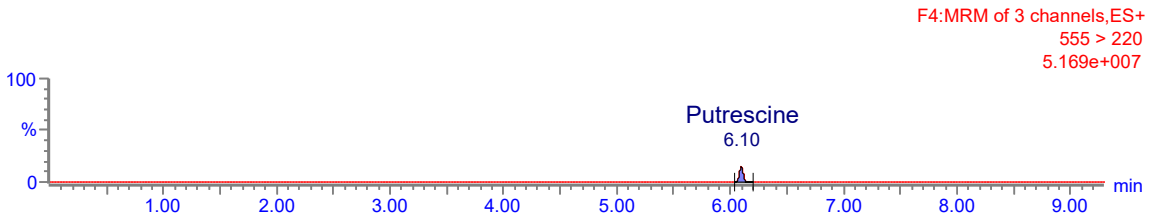
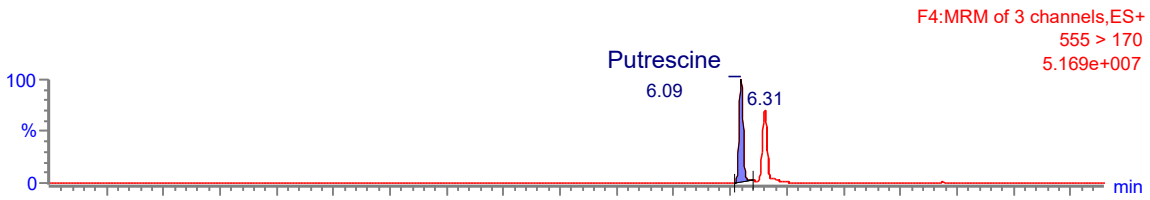


Sample

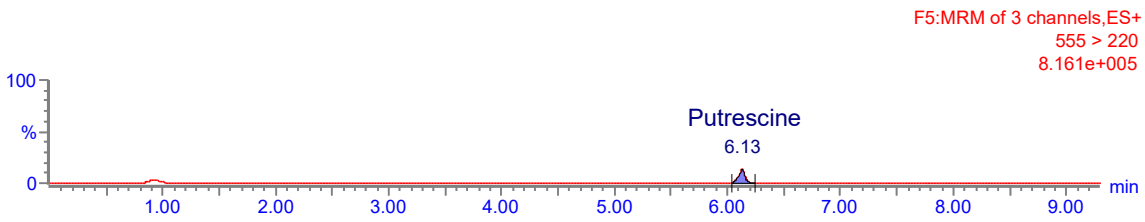
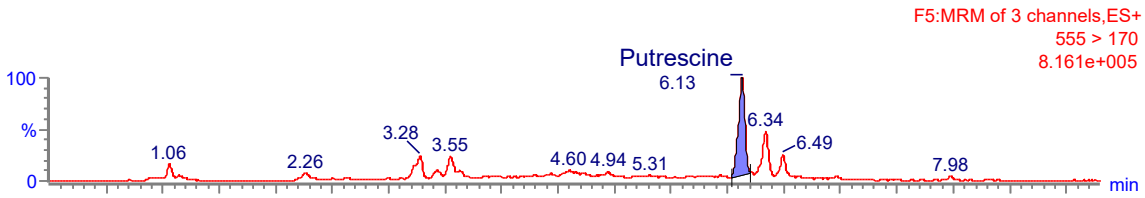


(C)

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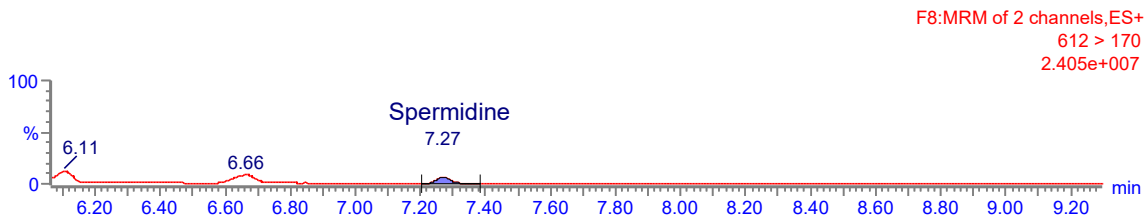
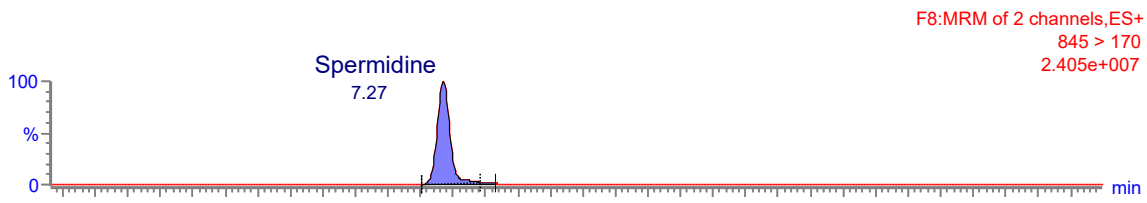


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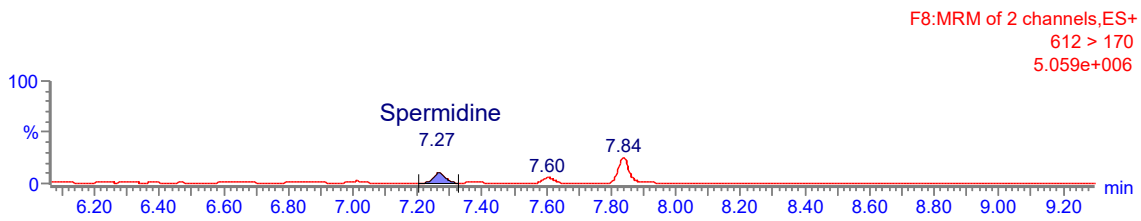
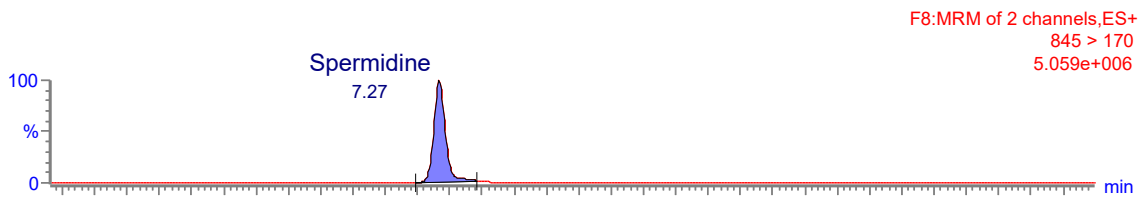


(D)

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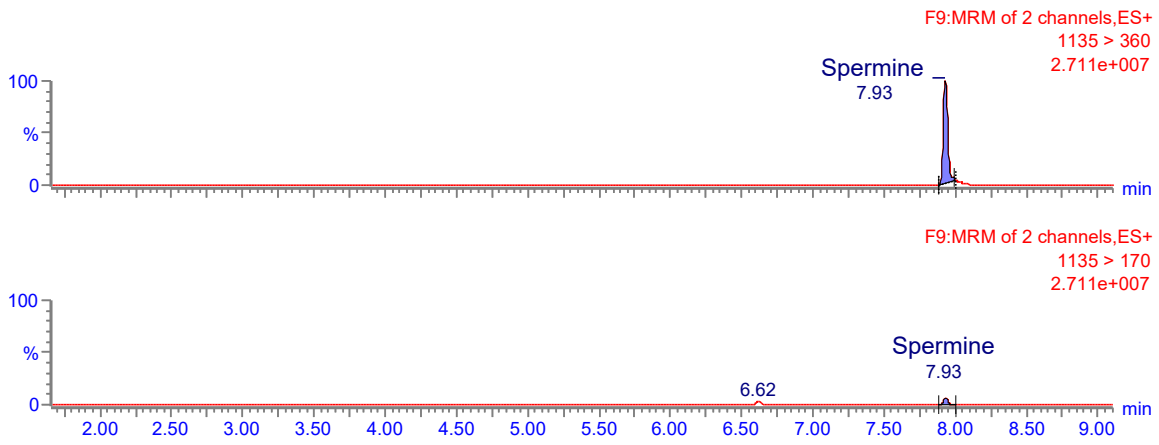


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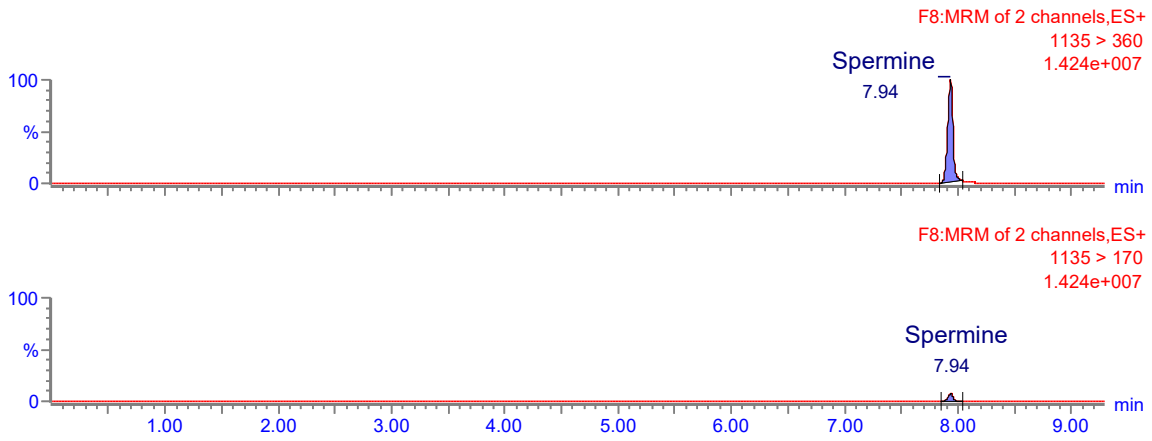


(E)

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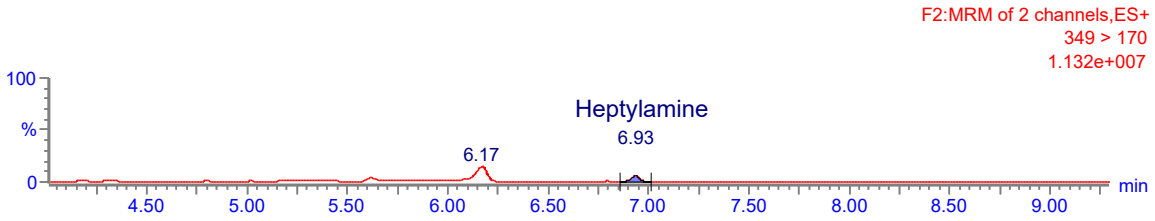
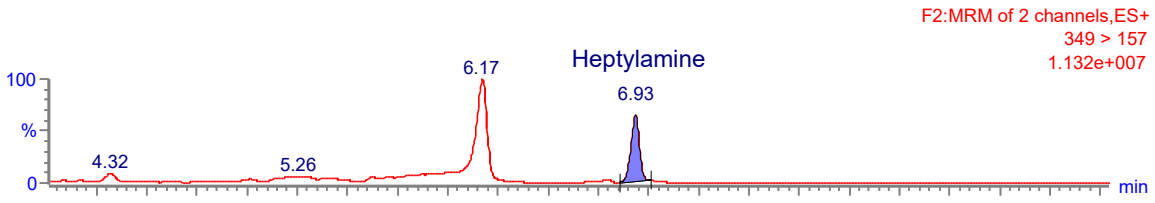


Sample



(F)

Standard



Sample

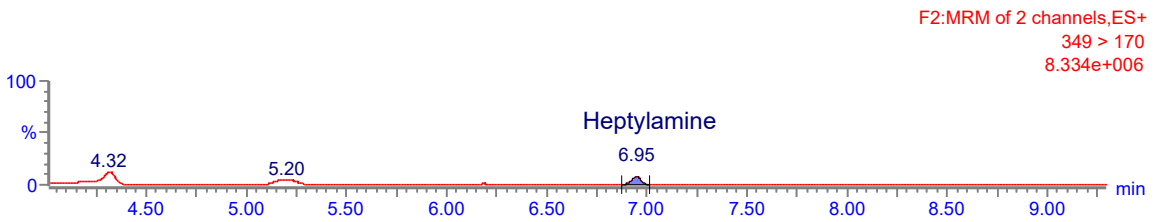
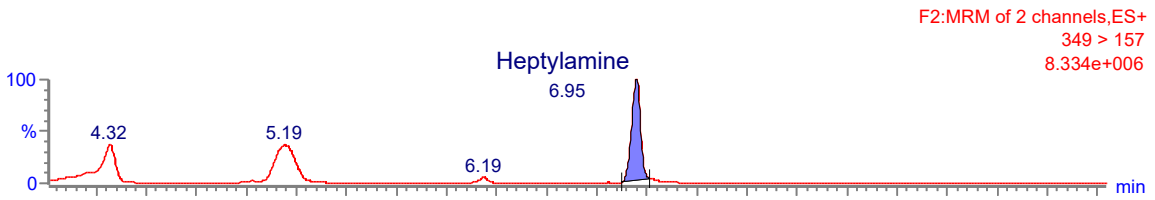


Table S1. Linearity and accuracy of polyamine analysis via UPLC-MS/MS.

Polyamine	Linear range ($\mu\text{g/L}$)	R^2	LOD ($\mu\text{g/L}$)	LOQ ($\mu\text{g/L}$)	Level 1			Level 2			Level 3		
					Spike ($\mu\text{g/L}$)	Recovery (%)	RSD (%)	Spike ($\mu\text{g/L}$)	Recovery (%)	RSD (%)	Spike ($\mu\text{g/L}$)	Recovery (%)	RSD (%)
Agmatine	1.0 - 300.0	0.993	0.31	1.00	6.00	119.44	0.81	60.00	111.39	4.61	240.00	100.01	1.02
Cadaverine	1.0 - 250.0	0.999	0.29	1.00	6.00	96.67	4.56	60.00	100.83	3.02	240.00	96.94	6.74
Putrescine	1.0 - 300.0	0.995	0.16	1.00	6.00	115.00	4.35	60.00	102.78	2.20	240.00	97.19	3.64
Spermidine	1.0 - 600.0	0.996	0.68	1.00	60.00	94.50	8.90	240.00	111.22	4.03	450.00	102.21	5.68
Spermine	5.0 - 600.0	0.994	0.80	5.00	60.00	88.00	8.15	240.00	105.01	5.54	450.00	95.33	9.32

(Abbreviations: R^2 , coefficient of determination; LOD, limit of detection; LOQ, limit of quantification; RSD, relative standard deviation)