

## Supplementary Material

# Rhizoferrin glycosylation in *Rhizopus microsporus*

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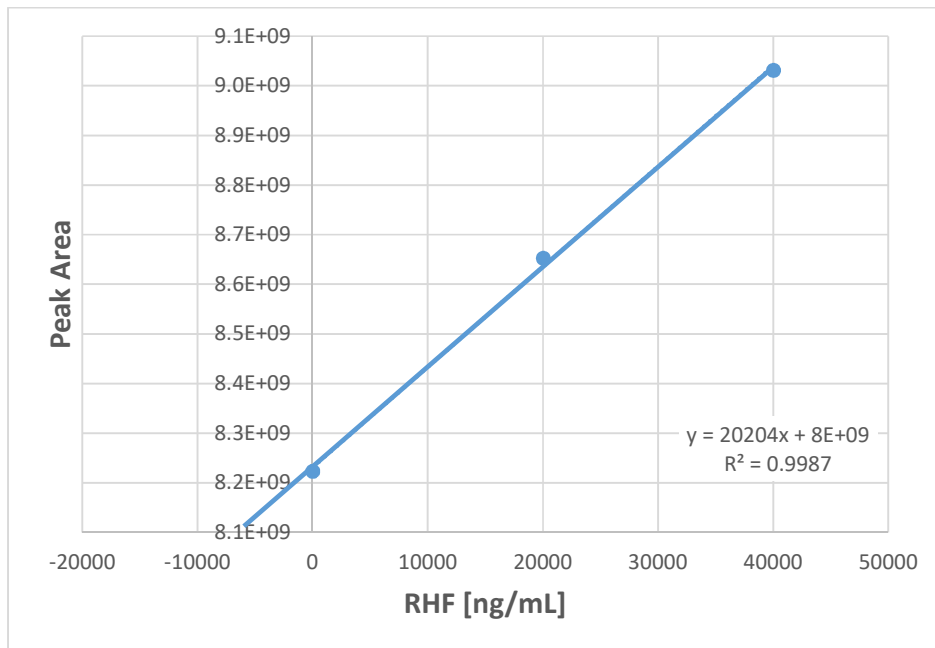
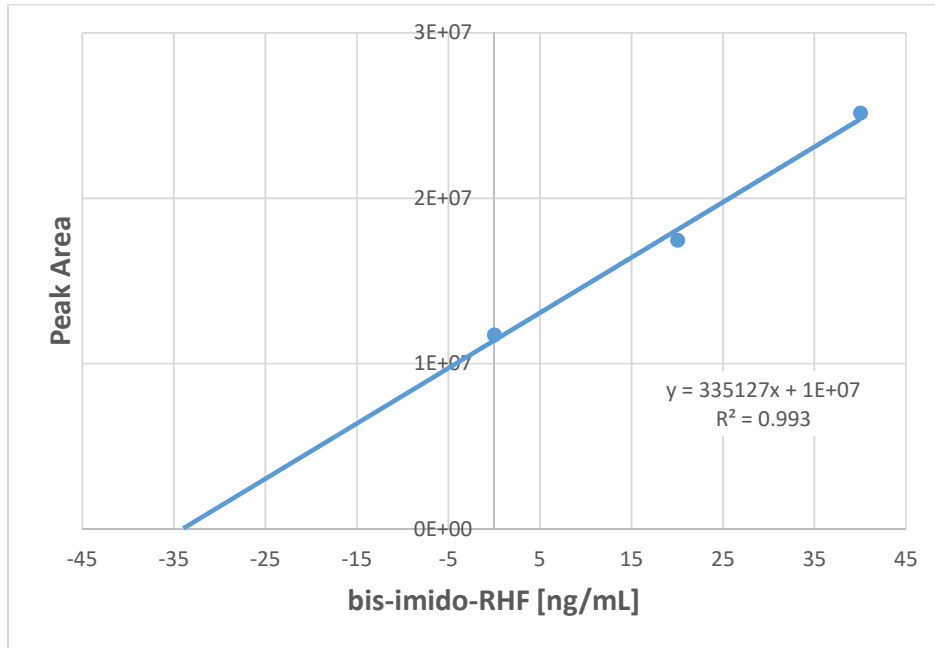
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1. Standard addition
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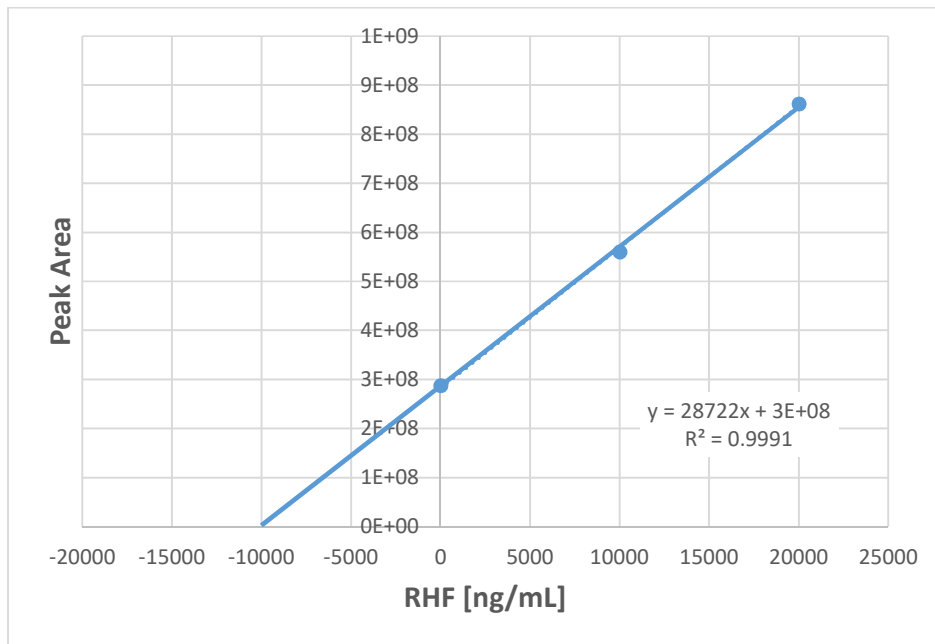
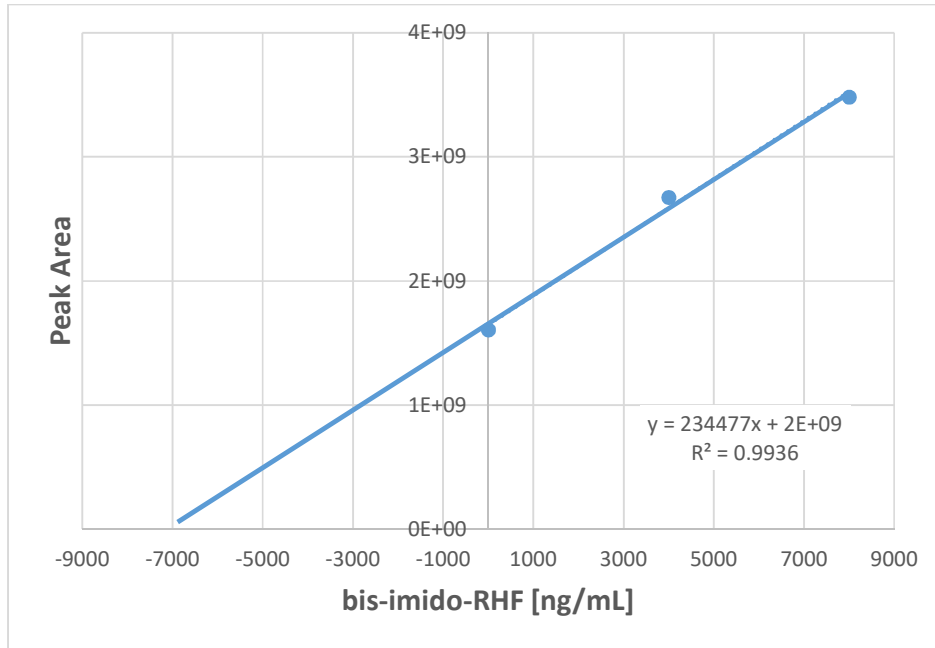
### 1. Standard addition

For determination of the RHF and bis-imido-RHF contents in fermentation broths, 3 aliquots of resuspended samples (45  $\mu$ L, 3-fold diluted solution) were transferred to new vials, and then, mixed RHF and bis-imido-RHF standard solution or 5% ACN (nonspiked sample) was added to obtain a final volume of 50  $\mu$ L. Since the final concentration of analytes changed for each point of the standard addition curve, the added volumes of mixed bis-imido-RHF and RHF standard and 5% ACN varied for each aliquot (for example, in the first fortified sample, 5  $\mu$ L of the mixed bis-imido-RHF and RHF standard was added). Then, prepared samples were subjected to UHPLC-HRMS analysis in triplicate. Finally, a standard addition curve was constructed by plotting the peak area at each point against the added RHF and bis-imido-RHF concentration used for the spikes. The analyte contents in fermentation broths were determined as the value of the intercept of the curve on the x-axis. The concentration of imido-RHF presented in the main article was calculated using data for bis-imido-RHF (we assume an equal response factor) as the corresponding imido-RHF standard is not available on the market.

Fresh fermentation broth sample:



Five-month-old fermentation broth sample:



## 2. Exact tandem mass spectrometry

m/z measured		m/z		
Parent	Fragment	Calculated	Composition	Error (ppm)
1085.34769	1085.34769	1085.35149	C <sub>40</sub> H <sub>65</sub> N <sub>2</sub> O <sub>32</sub>	3.50
	1067.34629	1067.34093	C <sub>40</sub> H <sub>63</sub> N <sub>2</sub> O <sub>31</sub>	-5.02
	1049.33566	1049.33036	C <sub>40</sub> H <sub>61</sub> N <sub>2</sub> O <sub>30</sub>	-5.04
	1031.32399	1031.31980	C <sub>40</sub> H <sub>59</sub> N <sub>2</sub> O <sub>29</sub>	-4.06
	905.29277	905.28811	C <sub>34</sub> H <sub>53</sub> N <sub>2</sub> O <sub>26</sub>	-5.15
	887.28193	887.27754	C <sub>34</sub> H <sub>51</sub> N <sub>2</sub> O <sub>25</sub>	-4.20
	869.27122	869.26698	C <sub>34</sub> H <sub>49</sub> N <sub>2</sub> O <sub>24</sub>	-3.25
761.24601	761.24601	761.24585	C <sub>28</sub> H <sub>45</sub> N <sub>2</sub> O <sub>22</sub>	-0.21
	743.23536	743.23528	C <sub>28</sub> H <sub>43</sub> N <sub>2</sub> O <sub>21</sub>	-0.20
	725.22485	725.22471	C <sub>28</sub> H <sub>41</sub> N <sub>2</sub> O <sub>20</sub>	-0.19
	707.21462	707.21415	C <sub>28</sub> H <sub>39</sub> N <sub>2</sub> O <sub>19</sub>	-0.74
	689.20344	689.20358	C <sub>28</sub> H <sub>37</sub> N <sub>2</sub> O <sub>18</sub>	0.20
	599.19375	599.19302	C <sub>22</sub> H <sub>35</sub> N <sub>2</sub> O <sub>17</sub>	-1.21
	581.18313	581.18245	C <sub>22</sub> H <sub>33</sub> N <sub>2</sub> O <sub>16</sub>	-1.17
	563.17241	563.17189	C <sub>22</sub> H <sub>31</sub> N <sub>2</sub> O <sub>15</sub>	-0.92
	545.16200	545.16133	C <sub>22</sub> H <sub>29</sub> N <sub>2</sub> O <sub>14</sub>	-1.22
	527.15150	527.15076	C <sub>22</sub> H <sub>27</sub> N <sub>2</sub> O <sub>13</sub>	-1.40
437.14016	437.14016	437.14020	C <sub>16</sub> H <sub>25</sub> N <sub>2</sub> O <sub>12</sub>	0.09
	419.12947	419.12963	C <sub>16</sub> H <sub>23</sub> N <sub>2</sub> O <sub>11</sub>	0.38
	391.13475	391.13472	C <sub>15</sub> H <sub>23</sub> N <sub>2</sub> O <sub>10</sub>	-0.07
	373.12415	373.12415	C <sub>15</sub> H <sub>21</sub> N <sub>2</sub> O <sub>9</sub>	0.00
	355.11356	355.11359	C <sub>15</sub> H <sub>19</sub> N <sub>2</sub> O <sub>8</sub>	0.08
	337.10294	337.10303	C <sub>15</sub> H <sub>17</sub> N <sub>2</sub> O <sub>7</sub>	0.26
	329.13442	329.13433	C <sub>14</sub> H <sub>21</sub> N <sub>2</sub> O <sub>7</sub>	-0.28
	319.09255	319.09246	C <sub>15</sub> H <sub>15</sub> N <sub>2</sub> O <sub>6</sub>	-0.29
	263.12390	263.12376	C <sub>10</sub> H <sub>19</sub> N <sub>2</sub> O <sub>6</sub>	-0.53

	245.11339	245.11319	$C_{10}H_{17}N_2O_5$	-0.81
	228.08675	228.08665	$C_{10}H_{14}NO_5$	-0.431241