Supplementary file 1 Overview of the transcriptomic studies used

ID	GEO[a] accession number	*Aspergillus* strain	Experiment	RNAseq[b]	Reference
Experiment 1	GSE277801	*A. fumigatus* Af293 and Δ*meaB*	Nitrosative stress response (induced by nitrite) was studied in submerged cultures.	Samples were collected in three biological replicates. Library preparation was performed using poly(A)-selected RNA. Single-read 75 bp Illumina sequencing was performed in one lane of a sequencing flow. The hisat2 software was used for mapping the raw reads and DESeq2 software was used to determine differentially expressed genes and calculate rlog values.	[28]
Experiment 2	GSE189016	*A. nidulans* THS30	Carbon starvation and limitation stress responses were studied in submerged cultures on glucose, lactose, arabinogalactan or without any carbon source.		[22]
Experiment 3	GSE244381 GSE269970	*A. nidulans* THS30 and Δ*sodB*; *A. fumigatus* akuB^{KU80} and Δ*sodB*	Oxidative stress response (induced by menadione sodium bisulfite) was studied in submerged cultures.		[29-30]
Experiment 4	GSE166128	*A. nidulans* THS30 and Δ*atfA*	Heavy metal stress response (induced by $CdCl_2$) was studied in submerged culture.		[32]
Experiment 5	GSE255841	*A. nidulans* THS30 and Δ*gfdB*; *A. wentii* CBS141173 and An-*gfdB*	Hyperosmotic stress responses (induced by NaCl, sorbitol, or NaCl and sorbitol) were studied in submerged cultures.		[35]
Experiment 6	GSE256524	*A. fumigatus* Af293	Oxidative stress response (induced by H_2O_2) was studied in the presence and absence of glucose and/or iron in submerged cultures.		[38]

[a] - GEO: Gene Expression Omnibus (http://www.ncbi.nlm.nih.gov/geo/)

[b] – Further details are available in the shown reference and at the GEO accession number.

Supplementary file 2 Coordinates used for plotting four points in three dimensions.

To show the position of four transcriptomes (***a***, ***b***, ***c***, ***d***) in a 3D plot coordinates of the four points (***A***, ***B***, ***C***, ***D***) were calculated as follows. While keeping the distances between the points, we moved ***a*** to ***A*** = (0,0,0), then rotated ***b*** to fall on the X axis,

B = (B_x, B_y, B_z) = ($|b-a|$, 0,0), and ***c*** on the XY plane,

C = (C_x, C_y, C_z) = $\left(\frac{|c-b|^2-|c-a|^2-|b-a|^2}{-2\cdot|b-a|}, \sqrt{|c-a|^2-C_x^2}, 0\right)$.

After these transformations ***d*** becomes $D = \left(D_x, D_y, D_z\right)$, $D =$

$\left(\frac{|d-b|^2-|d-a|^2-|b-a|^2}{-2\cdot|b-a|}, \frac{|d-c|^2-|d-a|^2-C_x^2-C_y^2+2D_xD_y}{-2\cdot C_y}, \sqrt{|d-a|^2-D_x^2-D_y^2}\right)$