***Supplementary Material***

**Integrated metabolomics and lipidomics analyses suggest the temperature-dependent lipid desaturation promotes aflatoxin biosynthesis in *Aspergillus flavus***

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1. **Supplementary Figures and Tables**
2. **Supplementary Figures**



**Supplementary Figure 1. Effects of temperature on AF production in *A. flavus*.** (A) The contents of AFs in mycelia across 6 days. (B) The contents of AFs in GMS media across 6 days.



**Supplementary Figure 2.** The relative contents of fatty acids quantified by GC-MS.

1. **List of Supplementary Tables**

**Supplementary Table S1**. List of genes and primers used in this study.

**Supplementary Table S2**. The total peak information for primary metabolome in mycelia samples detected by GC-MS.

**Supplementary Table S3**. The total peak information for lipidome in mycelia samples detected by LC-MS (ESI+).

**Supplementary Table S4**. The total peak information for lipidome in mycelia samples detected by LC-MS (ESI-).

**Supplementary Table S5**. The peak information for fatty acids in mycelia samples detected by GC-MS.