CLAIMS

1. A genetically modified *Thermothelomyces heterothallica* fungus for producing an exogenous protein of interest, the genetically modified fungus comprises at least one cell having reduced expression and/or activity of KEX2 protease and reduced expression and/or activity of at least 12 additional proteases, the at least one cell comprising an exogenous polynucleotide encoding the protein of interest.

2. The genetically modified fungus of claim 1, having reduced expression and/or activity of ALP7.

3. The genetically modified fungus of any one of claims 1 or 2, wherein KEX2 comprises the amino acids of SEQ ID NO:14.

4. The genetically modified fungus of any one of claims 2 to 3, wherein ALP7 comprises the amino acids of SEQ ID NO:13.

5. The genetically modified fungus of claim 1, having reduced expression and/or activity of a protease selected from the group consisting of ALP1, PEP4, ALP2, PRT1, SRP1, ALP3, PEP1, MTP2, PEP5, MTP4, PEP6, and ALP4.

6. The genetically modified fungus of any one of claims 1 to 5, having reduced expression and/or activity of ALP1, PEP4, ALP2, PRT1, SRP1, ALP3, PEP1, MTP2, PEP5, MTP4, PEP6, ALP4 and KEX2.

7. The genetically modified fungus of any one of claims 1 to 6, having reduced expression and/or activity of ALP1, PEP4, ALP2, PRT1, SRP1, ALP3, PEP1, MTP2, PEP5, MTP4, PEP6, ALP4, ALP7 and KEX2.

8. The genetically modified fungus of any one of claims 1 to 7, wherein said genetically modified fungus produces the protein of interest in an increased amount compared to the amount produced by its non-genetically modified parent fungus strain cultured under similar conditions.

9. The genetically modified fungus of any one of claims 1 to 8, wherein the protein produced by said genetically modified fungus has increased stability compared to said protein produced by the non-genetically modified parent fungus strain

cultured under similar conditions.

10. The genetically modified fungus of claim 1, wherein the fungus is *Thermothelomyces heterothallica* C1.

11. The genetically modified fungus of any one of claims 1 to 10, wherein the protein of interest is selected from the group consisting of an antigen, an antibody, an enzyme, a vaccine, and a structural protein.

12. The genetically modified fungus of any one of claims 1 to 11, wherein the protein of interest is fused to a tag.

13. The genetically modified fungus of claim 11, wherein the protein of interest is a viral component.

14. A method for producing a *Thermothelomyces heterothallica* fungus capable of producing a protein of interest, the method comprising transforming at least one cell of the fungus with at least one exogenous polynucleotide encoding the protein of interest; said at least one cell of the fungus having reduced expression and/or activity KEX2 protease and at least 12 additional proteases.

15. The method of claim 14, said method further comprises engineering the fungus to have inhibited expression and/or protease activity of ALP7.

16. A method of producing at least one protein of interest, the method comprising culturing the genetically modified fungus of any one of claims 1 to 13 in a suitable medium; and recovering the produced protein of interest.