We claim:

1. A eukaryotic host cell comprising an artificial endosymbiont, wherein the artificial endosymbiont introduces a protein into the eukaryotic host cell and thereby imparts a phenotype to the eukaryotic host cell, wherein the protein is heterologous to the artificial endosymbiont.

2. The eukaryotic host cell of claim 1, wherein the protein is a selectable marker.

3. The eukaryotic host cell of claim 1, wherein the protein is a reporter protein.

4. The eukaryotic host cell of claim 3, wherein the reporter protein is a GFP.

5. The eukaryotic host cell of claim 1, wherein the artificial endosymbiont is an α-proteobacterium.

6. The eukaryotic host cell of claim 1, wherein the artificial endosymbiont is a magnetotactic bacterium.

7. The eukaryotic host cell of claim 1, wherein the eukaryotic host cell is a mammalian cell.

8. The eukaryotic host cell of claim 7, wherein the mammalian cell is selected from mouse, rat, rabbit, hamster, porcine, bovine, feline, canine or human cell.

9. A method for introducing a phenotype into a eukaryotic host cell, comprising the steps of:

culturing the eukaryotic host cell comprising an artificial endosymbiont, wherein the artificial endosymbiont introduces a protein into the eukaryotic host cell and thereby imparts the phenotype to the eukaryotic host cell, wherein the protein is heterologous to the artificial endosymbiont.

10. The method of claim 9, wherein the protein is a selectable marker.

11. The method of claim 9, wherein the protein is a reporter protein.

12. The method of claim 11, wherein the reporter protein is a GFP.

13. The method of claim 9, wherein the artificial endosymbiont is an α-proteobacterium.

14. The method of claim 9, wherein the artificial endosymbiont is a magnetotactic bacterium.

15. The method of claim 9, wherein the eukaryotic host cell is a mammalian cell.

16. The method of claim 15, wherein the mammalian cell is selected from mouse, rat, rabbit, hamster, porcine, bovine, feline, canine or human cell.