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(54) Title: HOST CELLS WITH ARTIFICIAL ENDOSYMBIONTS

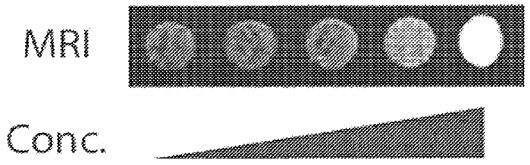


FIG. 1

(57) Abstract: The present invention is directed generally to eukaryotic cells comprising single-celled organisms that are introduced into the eukaryotic cell through human intervention and which transfer to daughter cells of the eukaryotic cell through at least five cell divisions, and methods of introducing such single-celled organisms into eukaryotic cells. The invention provides single- celled organisms that introduce a phenotype to eukaryotic cells that is maintained in daughter cells. The invention additionally provides eukaryotic cells containing magnetotactic bacteria.