What is claimed is:

1. A method for cultivating CHO-K1 cells, comprising the steps of: (a) providing a cell culture medium, which is serum-free, comprising 0.6 ± 0.09 mM ornithine and 0.714 ± 0.11 mM putrescine, and (b) propagating or maintaining a CHO-K1 cell in the cell culture medium to form a cell culture, wherein the cell expresses a protein of interest.

2. The method of claim 1, wherein:

(a) the cell culture medium is hydrolysate-free or is chemically defined;

(b) the cell cultured medium comprises ≥ 40 ± 6 mM of a mixture of amino acids or salts thereof, preferably wherein the mixture of amino acids consists of alanine, arginine, asparagine, aspartic acid, cysteine, glutamic acid, glycine, histidine, isoleucine, leucine, lysine, methionine, phenylalanine, proline, serine, threonine, tryptophan, tyrosine, and valine;

(c) the cell culture medium comprises one or more fatty acids, preferably wherein the one or more fatty acids are selected from the group consisting of linoleic acid, linolenic acid, thioctic acid, oleic acid, palmitic acid, stearic acid, arachidic acid, arachidonic acid, lauric acid, behenic acid, decanoic acid, dodecanoic acid, hexanoic acid, lignoceric acid, myristic acid, and octanoic acid;

(d) the cell culture medium comprises a mixture of nucleosides, preferably wherein the mixture of nucleosides comprises one or more of adenosine, guanosine, cytidine, uridine, thymidine, and hypoxanthine;

(e) the cell culture medium comprises adenosine, guanosine, cytidine, uridine, thymidine, and hypoxanthine;

(f) the cell culture medium comprises one or more divalent cations, preferably wherein the divalent cation is magnesium, calcium, or both; and/or

(g) the cell culture medium comprises $Ca^{2+}$ and $Mg^{2+}$.

3. The method of any one of the preceding claims, wherein ~~the cell is selected from the group consisting of a mammalian cell, avian cell, insect cell, bacterial cell, and yeast cell, preferably wherein the cell is a CHO cell.~~

~~4. The method of any one of the preceding claims, wherein~~:

(a) the protein of interest is an antigen binding protein;

(b) the protein of interest comprises an Fc domain; and/or

(c) the protein of interest is a receptor-Fc-fusion protein, preferably wherein the receptor-Fc-fusion protein is a trap protein.

~~5~~4. The method of claim ~~4~~3, wherein the protein of interest is a receptor-Fc-fusion protein which is a trap protein, and wherein the trap protein is an IL-1 antagonist or a VEGF antagonist.

~~6~~5. The method of ~~any one of claims~~claim 1 ~~to 3~~or 2, wherein the protein of interest is an antibody, a Fab or F(ab')$_2$ antibody fragment, preferably wherein the antibody, the Fab or F(ab')$_2$ antibody fragment is a recombinant human antibody or Fab or F(ab')$_2$ fragment thereof.

~~7~~6. The method of any one of claims 1 to ~~6~~5, wherein:

(a) the cells have an average doubling time of ≤ 30 hours;

(b) the cells have an average doubling time of ≤ 24 hours;

(c) the cells have an average doubling time that is at least one third that of cells grown in a cell culture medium that contains < 0.3 ± 0.045 mM ornithine and < 0.2 ± 0.03 mM putrescine;

(d) the cell culture is capable of attaining a viable cell count density that is at least 15% greater than a ~~similar~~ cell culture in media that contains < 0.09 ± 0.014 mM ornithine and < 0.2 ± 0.03 mM putrescine;

(e) the cell culture is capable of attaining a viable cell count density that is at least 3~~-fold greater than~~ times that of a ~~similar~~ cell culture in a ~~similar~~ cell culture medium that contains < 0.09 ± 0.014 mM ornithine and < 0.2 ± 0.03 mM putrescine; and/or

(f) the method ~~comprising~~further comprises the step of adding one or more ~~point-of-use~~ additions to the cell culture medium during said propagating or maintaining, preferably wherein the ~~point-of-use~~ additions comprise one of more of $NaHCO_3$, glutamine, insulin, glucose, $CuSO_4$, $ZnSO_4$, $FeCl_3$, $NiSO_4$, $Na_4$ EDTA, and $Na_3$ Citrate and/or each of $NaHCO_3$, glutamine, insulin, glucose, $CuSO_4$, $ZnSO_4$, $FeCl_3$, $NiSO_4$, $Na_4$ EDTA, and $Na_3$ Citrate ~~are added to the medium as point-of-use additions~~.

~~8~~7. A method for producing a protein comprising the steps of:

(a) introducing into a CHO-K1 cell a nucleic acid comprising a sequence encoding a protein of interest;

(b) selecting a CHO-K1 cell carrying the nucleic acid;

(c) culturing the selected CHO-K1 cell according to the method of any one of claims 1-~~7~~6; and

(d) expressing the protein of interest in the CHO-K1 cell, wherein the protein of interest is secreted into the medium.

~~9~~8. The method of claim ~~8, wherein in the CHO cell is a CHO-K1 cell, CHO DUX-B-11 cell, a Veggie-CHO cell, a GS-CHO cell, an S-CHO cell or a CHO lec mutant cell.~~

~~10. The method of claim 8 or 9~~7, wherein:

(a) the protein of interest is an antigen-binding protein;

(b) the protein of interest comprises an Fc domain; and/or

(c) the protein of interest is selected from the group consisting of receptor-Fc-fusion protein (TRAP), soluble TCR-Fc fusion protein, antibody, Fc-fusion protein, and ScFv protein.

~~11~~9. The method ~~according to any one~~ of ~~claims~~claim 7 or 8 ~~to 10~~, wherein:

(a) the protein-of-interest is produced at an average 7-day titer that is at least 7% greater than the average 7-day titer produced by a ~~similar~~ cell in a cell culture medium that contains less than 0.09 ± 0.014 mM ornithine and less than 0.2 ± 0.03 mM putrescine;

(b) the protein-of-interest is produced at an average 7-day titer that is at least 14% greater than the average 7-day titer produced by a ~~similar~~ cell in a cell culture medium that contains less than 0.09 ± 0.014 mM ornithine and less than 0.2 ± 0.03 mM putrescine;

(c) the protein-of-interest is produced at an average 7-day titer that is at least 80% greater than the average 7-day titer produced by a ~~similar~~ cell in a cell culture medium that contains less than 0.09 ± 0.014 mM ornithine and less than 0.2 ± 0.03 mM putrescine;

(d) the protein-of-interest is produced at an average 7-day titer that is at least 2~~-fold greater than~~ times that of the average 7-day titer produced by a ~~similar~~ cell in a cell culture medium that contains less than 0.09 ± 0.014 mM ornithine and less than 0.2 ± 0.03 mM putrescine; and/or

(e) the protein-of-interest is produced at an average 7-day titer that is at least 3~~-fold greater than~~ times that of the average 7-day titer produced by a ~~similar~~ cell in a cell culture medium that contains less than 0.09 ± 0.014 mM ornithine and less than 0.2 ± 0.03 mM putrescine.

~~12~~10. The method according to any one of claims ~~8~~7 to ~~11~~9, wherein the protein-of interest is a recombinant human antibody.