

### AMENDMENTS TO THE CLAIMS

Claim 1 (currently amended): A library of molecular profiles of chemical compositions having predetermined toxicities, produced by a method comprising the steps of:

- a) contacting an isolated mammalian embryoid body with a chemical composition having predetermined toxicities;
- b) recording alterations in genomic expression [gene expression or protein expression] in the mammalian embryoid body in response to the chemical composition to create a molecular profile of the chemical composition; and
- c) compiling a library of molecular profiles by repeating steps a) and b) with at least two chemical compositions having predetermined toxicities.

Claim 2 (original): The library of claim 1, wherein the isolated mammalian embryoid bodies are of human.

Claim 3 (original): The library of claim 2, further wherein the chemical compositions having predetermined toxicities are selected from the group consisting of therapeutic agents, neurotoxins, renal toxins, hepatic toxins, toxins of hematopoietic cells, and myotoxins.

Claim 4 (original): The library of claim 2, further wherein the chemical compositions having predetermined toxicities are selected from the group consisting of agents that are toxic to cells of one or more reproductive organs, teratogenic agents and carcinogens.

Claim 5 (original): The library of claim 2, further wherein the chemical compositions having predetermined toxicities are selected from the group consisting of agricultural chemicals, cosmetics, and environmental contaminants.

Claim 6 (original): The library of claim 1, wherein the isolated mammalian embryoid bodies are of non-human mammals.

Claim 7 (original): The library of claim 6, wherein the non-human mammals are rodents.

Claim 8 (original): The library of claim 6, further wherein the chemical compositions having predetermined toxicities are selected from the group consisting of animal therapeutics, neurotoxins, renal toxins, hepatic toxins, toxins of hematopoietic cells, and myotoxins.

Claim 9 (original): The library of claim 6, further wherein the chemical compositions having predetermined toxicities are selected from the group consisting of agents that are toxic to cells of one or more reproductive organs, teratogenic agents and carcinogens.

Claim 10 (original): The library of claim 6, further wherein the chemical compositions having predetermined toxicities are selected from the group consisting of agricultural chemicals, cosmetics, and environmental contaminants.

Claim 11 (original): The library of claim 1, wherein the library comprises molecular profiles for at least 20 chemical compositions.

Claim 12 (withdrawn): A method of creating a molecular profile of a chemical composition suspected of toxicity, comprising the steps of:

- a) contacting an isolated unmodified mammalian embryoid body with the chemical composition suspected of toxicity; and
- b) detecting and recording alterations in expression of sets of genes or proteins in the mammalian embryoid body in response to the chemical composition compared to expression of sets of genes or proteins in an embryoid body not contacted with the chemical composition, to create a pattern of alterations in gene expression or protein expression in the mammalian embryoid body in response to the chemical composition.

Claim 13 (withdrawn): The method of claim 12, wherein the alterations in gene expression or protein expression are detected by a label.

Claim 14 (withdrawn): The method of claim 13, wherein the label is selected from the group consisting of fluorescent, colorimetric, radioactive, enzyme, enzyme substrate, nucleoside analog, magnetic, glass, latex bead, colloidal gold, and electronic transponder.

Claim 15 (withdrawn): The method of claim 12, wherein the molecular profile comprises alterations in gene expression.

Claim 16 (withdrawn): The method of claim 15, wherein the alterations in gene expression are detected by a nucleotide hybridization assay.

Claim 17 (withdrawn): The method of claim 12, wherein the molecular profile comprises alterations in protein expression.

Claim 18 (withdrawn): The method of claim 17, wherein the alterations in protein expression are detected by an immunodetection assay.

Claim 19 (withdrawn): The method of claim 17, wherein the alterations in protein expression are detected by a mass spectrometry assay.

Claim 20 (withdrawn): The method of claim 12, wherein the isolated mammalian embryoid bodies are of human.

Claim 21 (withdrawn): The method of claim 20, further wherein the chemical compositions having predetermined toxicities are selected from the group consisting of therapeutic agents, neurotoxins, renal toxins, hepatic toxins, toxins of hematopoietic cells, and myotoxins.

Claim 22 (withdrawn): The method of claim 20, further wherein the chemical compositions having predetermined toxicities are selected from the group consisting of agents that are toxic to cells of one or more reproductive organs, teratogenic agents and carcinogens.

Claim 23 (withdrawn): The method of claim 20, further wherein the chemical compositions having predetermined toxicities are selected from the group consisting of agricultural chemicals, cosmetics, and environmental contaminants.

Claim 24 (withdrawn): The method of claim 12, wherein the isolated mammalian embryoid bodies are of non-human mammals.

Claim 25 (withdrawn): The method of claim 24, wherein the non-human mammals are rodents.

Claim 26 (withdrawn): The method of claim 24, further wherein the chemical compositions having predetermined toxicities are selected from the group consisting of animal therapeutics, neurotoxins, renal toxins, hepatic toxins, toxins of hematopoietic cells, and myotoxins.

Claim 27 (withdrawn): The method of claim 24, further wherein the chemical compositions having predetermined toxicities are selected from the group consisting of agents that are toxic to cells of one or more reproductive organs, teratogenic agents and carcinogens.

Claim 28 (withdrawn): The method of claim 24, further wherein the chemical compositions having predetermined toxicities are selected from the group consisting of agricultural chemicals, cosmetics, and environmental contaminants.