

CLAIMS

What is claimed is:

1. A method for identifying at least one herbal ingredient effective in treating at least one illness classified under TCM (Traditional Chinese Medicine) using a computer, comprising:

(a) obtaining TCM data sets comprising: TCM illnesses, TCM herbal ingredients for treatment, and/or symptoms associated with the TCM illnesses;

(b) using at least one artificial neural network, computing a relevance index based on the degree of relevance between TCM data sets; and

(c) identifying at least one herbal ingredient effective in treating at least one TCM illness based on the computed relevance index,

wherein the computer comprises at least one database or access to at least one database that stores the TCM data sets, at least one program module involved with the analysis of the data in the database, and at least one artificial neural network.

2. The method of claim 1, wherein the artificial neural network(s) comprises a 3 layer artificial neural network.

3. The method of claim 1, further comprising training the artificial neural network(s) with a back propagation algorithm.

4. The method of claim 1, wherein the artificial neural network(s) comprises two dimensions or three dimensions.

5. The method of claim 1, wherein multiple artificial neural networks are computing in parallel.

6. A computer program product for use in conjunction with a computer, the computer program product comprising a computer readable storage medium and a computer program mechanism embedded therein, the computer program mechanism comprising executable instructions for performing a method comprising:

(a) obtaining TCM data sets comprising: TCM illnesses, TCM herbal ingredients for treatment, and/or symptoms associated with the TCM illnesses;

(b) using at least one artificial neural network, computing a relevance index based on the degree of relevance between TCM data sets; and

(c) identifying at least one herbal ingredient effective in treating at least one TCM illness based on the computed relevance index.

7. The computer program product of claim 6, wherein the artificial neural network(s) comprises a 3 layer artificial neural network.

8. The computer program product of claim 6, further comprising training the artificial neural network(s) with a back propagation algorithm.

9. The computer program product of claim 6, wherein the artificial neural network(s) comprises two dimensions or three dimensions.

10. The computer program product of claim 6, wherein multiple artificial neural networks are computing in parallel.

11. A computer system for identifying at least one herbal ingredient effective in treating at least one illness classified under TCM (Traditional Chinese Medicine) using a computer, comprising:

(a) a database of TCM illnesses, herbal ingredients for treatment, and/or symptoms associated with the TCM illnesses;

(b) a computer processor configured to analyze the data contained within the database; and

(c) a relevance index module including commands for (i) reading the data from the database; and (ii) computing the relevance index between herbal ingredient(s) and TCM illness(es).

12. The computer system of claim 11, wherein the relevance index module uses at least one artificial neural network to compute the relevance index.

CLAIMS

1. A system for identifying at least one herbal ingredient effective in treating an illness classified under TCM (Traditional Chinese Medicine) comprising:

one or more computer readable storage media;

program instructions for a relevance index program module stored on the one or more computer readable storage media that, when executed by a processor, direct the processor to:

construct TCM illness entity artificial neural networks from a plurality of TCM illness entities, wherein each TCM illness entity artificial neural network identifies a single TCM illness entity, wherein each TCM illness entity artificial neural network computes a relevance index indicating a probability of intersection between the single TCM illness entity and a selected one or more TCM herbal ingredient entities;

construct TCM herbal ingredient entity artificial neural networks from a plurality of TCM herbal ingredient entities, wherein each TCM herbal ingredient entity artificial neural network identifies a single TCM herbal ingredient entity, wherein each TCM herbal ingredient entity artificial neural network computes a relevance index indicating a probability of intersection between the single TCM herbal ingredient entity and a selected one or more TCM illness entities;

train the TCM illness entity artificial neural networks and the TCM herbal ingredient entity artificial neural networks from a first training dataset, comprising the plurality of TCM illness entities and one or more illness-associated-symptoms for each TCM illness entity of the plurality of TCM illness entities, and a second training dataset, comprising the plurality of TCM herbal ingredient entities and one or more ingredient-effective-symptoms for each TCM herbal ingredient entity of the plurality of TCM herbal ingredient entities;

in response to receiving an indication of a referential entity selected from the plurality of TCM illness entities:

computing relevance indexes for the referential entity using the TCM herbal ingredient entity artificial neural networks; and

identifying at least one effective TCM herbal ingredient entity from the relevance indexes.

2. The system of claim 1, wherein the first training dataset and the second training dataset are stored on a database of the one or more computer readable storage media.
3. The system of claim 1, wherein the TCM illness entity artificial neural networks and the TCM herbal ingredient entity artificial neural networks comprise feedforward artificial neural networks.
4. The system of claim 1, wherein the TCM illness entity artificial neural networks and the TCM herbal ingredient entity artificial neural networks comprise multilayer artificial neural networks.
5. The system of claim 1, wherein the training of the TCM illness entity artificial neural networks and the TCM herbal ingredient entity artificial neural networks comprises applying a backpropagation algorithm.
6. The system of claim 1, wherein the computing of the relevance indexes comprises parallel execution of a relevance index function for multiple TCM herbal ingredient artificial neural networks.
7. A system for identifying illnesses classified under Traditional Chinese Medicine benefitting from treatment by an herbal ingredient, the system comprising:
 - one or more computer readable storage media;
 - program instructions for a relevance index program module stored on the one or more computer readable storage media that, when executed by a processor, direct the processor to:
 - construct TCM illness entity artificial neural networks from a plurality of TCM illness entities, wherein each TCM illness entity artificial neural network identifies a single TCM illness entity, wherein each TCM illness entity artificial neural network computes a relevance index indicating a probability of intersection between the single TCM illness entity and a selected one or more TCM herbal ingredient entities;

construct TCM herbal ingredient entity artificial neural networks from a plurality of TCM herbal ingredient entities, wherein each TCM herbal ingredient entity artificial neural network identifies a single TCM herbal ingredient entity, wherein each TCM herbal ingredient entity artificial neural network computes a relevance index indicating a probability of intersection between the single TCM herbal ingredient entity and a selected one or more TCM illness entities;

train the TCM illness entity artificial neural networks and the TCM herbal ingredient entity artificial neural networks from a first training dataset, comprising the plurality of TCM illness entities and one or more illness-associated-symptoms for each TCM illness entity of the plurality of TCM illness entities, and a second training dataset, comprising the plurality of TCM herbal ingredient entities and one or more ingredient-effective-symptoms for each TCM herbal ingredient entity of the plurality of TCM herbal ingredient entities;

in response to receiving an indication of a referential entity selected from the plurality of TCM herbal ingredient entities:

computing relevance indexes for the referential entity using the TCM illness entity artificial neural networks; and

determining, from the relevance indexes, a TCM illness entity for which the referential entity is effective.

8. The system of claim 7, wherein the first training dataset and the second training dataset are stored on a database of the one or more computer readable storage media.

9. The system of claim 7, wherein the TCM illness entity artificial neural networks and the TCM herbal ingredient entity artificial neural networks comprise feedforward artificial neural networks.

10. The system of claim 7, wherein the TCM illness entity artificial neural networks and the TCM herbal ingredient entity artificial neural networks comprise multilayer artificial neural networks.

11. The system of claim 7, wherein the training of the TCM illness entity artificial neural networks and the TCM herbal ingredient entity artificial neural networks comprises applying a backpropagation algorithm.

12. The system of claim 7 , wherein the computing of the relevance indexes comprises parallel execution of a relevance index function for multiple TCM illness artificial neural networks.