In the present invention, there is provided an angelica extract for treating fatty liver disease obtained by extracting roots of Chinese angelica through a process of supercritical fluid extraction, water extraction, or organic solvent extraction, and a medication for treating fatty liver comprising the said angelica extract.
ANGELICA EXTRACT FOR TREATING FATTY LIVER DISEASE

BACKGROUND OF THE INVENTION

[0001] 1. Field of the Invention

[0002] The present invention relates to an angelica extract for treating fatty liver and, more particularly, to an angelica extract for treating fatty liver disease and a medication comprising the said angelica extract for treating fatty liver.

[0003] 2. Description of the Related Art

[0004] Fatty liver, also known as fatty liver disease (FLD), is characterized by large vacuoles of lipid, such as triglyceride, accumulating in liver cells, or steatosis (also called fatty degeneration) within liver cell.

[0005] It is reported that, 25% to 36% of adults in Taiwan suffer from fatty liver disease. However, due to the non-obviousness of fatty liver disease in clinical symptoms, for example non-specific gastrointestinal disorders including upper abdomen pain, loss of anorexia, flatulence, burnout, or liver pain and, thus that people usually aware of their pathogenesis only when acute hepatomegaly and fulminant hepatitis occur or in an abdominal ultrasound diagnosis.

[0006] Fatty liver disease is mainly occurred in person who has excessive drinking, obesity, malnutrition, diabetes (having high incidence, about 80%), to fatty liver disease) or use steroid for a long time. Generally, conventional treatments of fatty liver disease depends on what is causing it, and basically, treating the underlying cause will reverse the process of steatosis accompanied with healthy diet and moderate exercises so as to relieve the accumulation of triglyceride in liver cells.

[0007] However, negative attitudes in conventional treatment of fatty liver disease usually result in disease progression, such as hypercholesterolemia, poor blood circulation, slow bloodstream and increase incideneces to cardiovascular diseases and serious complication, such as chronic hepatitis, fulminant hepatitis, cirrhosis or liver cancer, leading to irreversible consequences.

[0008] On the other hand, for people who have hypercholesterolemia and fatty liver, conventional hypolipidemic agents only can effectively reduce level of blood fat, but is poor in reducing fat in liver cells. Also, the conventional hypolipidemic agents will increase hepatotoxicity after long-term of treatment. Besides, for perople who only have fatty liver disease, the conventional hypolipidemic agents are useless in treatment. As a result, due to the inconvenience of the conventional treatments, there is no preferable medication for suppressing fatty liver disease till now.

SUMMARY OF THE INVENTION

[0009] The primary objective of this invention is to provide an angelica extract for treating fatty liver disease, which can reduce accumulation of lipid in liver cells and, thus avoid pathogenesis of fatty liver disease.

[0010] The secondary objective of this invention is to provide a medication for treating fatty liver disease, which comprises natural herbal extract obtained from Chinese angelica and will not cause any hepatotoxicity to life-form.

[0011] An angelica extract for treating fatty liver disease is obtained by extracting roots of Chinese angelica through a process of supercritical fluid extraction, water extraction, or organic solvent extraction.

[0012] A medication for treating fatty liver disease, comprise an angelica extract obtained as defined in claim 1 or an angelica extract as defined in claim 4; and a pharmaceutical acceptable carrier substrate or excipient.

[0013] Further scope of the applicability of the present invention will become apparent from the detailed description given hereinafter. However, it should be understood that the detailed description and specific examples, while indicating preferable embodiments of the invention, are given by way of illustration only, since various others will become apparent from this detailed description to those skilled in the art.

BRIEF DESCRIPTION OF THE DRAWINGS

[0014] The patent or application file contains at least one drawing executed in color. Copies of this patent or patent application publication with color drawing(s) will be provided by the Office upon request and payment of the necessary fee.

[0015] The present invention will become more fully understood from the detailed description given herein below and the accompanying drawings which are given by way of illustration only, and thus are not limiting of the present invention, and wherein:

[0016] FIG. 1 is a diagram illustrating a preparation method of an angelica extract in the present invention;

[0017] FIG. 2 is a diagram illustrating a preparation method of an angelica extract in the present invention;

[0018] FIG. 3 is a bar chart illustrating body weight of hamsters in Groups A0-A4;

[0019] FIG. 4 is a bar chart illustrating levels of total cholesterol in hamsters of Groups A0-A4;

[0020] FIG. 5 is a bar chart illustrating levels of total triglyceride in hamsters of Groups A0-A4;

[0021] FIG. 6 is a bar chart illustrating levels of low-density lipoprotein in hamsters of Groups A0-A4;

[0022] FIG. 7 is a bar chart illustrating levels of high-density lipoprotein in hamsters of Groups A0-A4;

[0023] FIG. 8 is a histossection datum of liver tissue in hamsters in Group A0;

[0024] FIG. 9 is a histossection datum of liver tissue in hamsters in Group A1;

[0025] FIG. 10 is a histossection datum of liver tissue in hamsters in Group A2;

[0026] FIG. 11 is a histossection datum of liver tissue in hamsters in Group A3;

[0027] FIG. 12 is a histossection datum of liver tissue in hamsters in Group A4.

[0028] All figures are drawn for ease of explaining the basic teachings of the present invention only; the extensions of the figures with respect to number, position, relationship, and dimensions of the parts to form the preferred embodiment will be explained or will be within the skill of the art after the following teachings of the present invention have been read and understood. Further, the exact dimensions and dimensional proportions conforming to specific force, weight, strength, and similar requirements will likewise be within the skill of the art after the following teachings of the present invention have been read and understood.

DETAILED DESCRIPTION OF THE INVENTION

[0029] The present invention relates to an angelica extract, which can significantly reduce levels of total cholesterol, total triglyceride and high-density lipoprotein in blood, and particularly avoid the accumulation of triglyceride and promote
the metabolism of fat in liver cells of life-form, so as to reduce the incidence to fatty liver disease. [0030] In FIG. 1, a preparation method of the *angelica* extract of the present invention is shown and comprises steps of “drying S1,” and “extracting S2,” wherein the *angelica* extract of the present invention is but not limit to be obtained via the preparation method. It is suggested the preparation method can also be processed with a proper modification by a person who has ordinary skill in the art. [0031] In the step of “drying S1,” roots of Chinese *angelica* is prepared and dried till a water content of the roots of Chinese *angelica* decreasing at 10% or less than 10% to obtain a sample of dry Chinese angicica. Precisely, the roots of Chinese angicica are but not limit to be dried through a process of lyophilization, spray drying, evaporation or heating drying. In the present invention, the roots of Chinese *angelica* is obtained from *Angelica acutiloba* Kitagawa, *Angelica acutiloba* Kitagawa var. sugiyamae Hikino, *Angelica koreana* Max or *Angelica sinensis* Oliv., preferably from their main roots, lateral roots, bases or fibers. In a preferable example of the present invention, roots of *Angelica acutiloba* Kitagawa are prepared and dried via a process of lyophilization to obtain a dry herbal sample. [0032] Chinese *angelica*, being sweet, spicy and moderate in test, is widely in used in Chinese traditional medicine to treat heart, liver, and spleen related diseases. Chinese *angelica* is rich in ferulic acid and ligustilide, which has therapeutic effects of anti-bacterium, anti-oxidation, anti-inflammation, and anti-tumor. In fact, ferulic acid performs well in anti-oxidation and clearance of free radicals, and which can avoid peroxidation of lipid, reduce production of fat in blood, and suppress synthesis of cholesterol in liver cells. With such performance in the step of “drying S1,” active substances, such as ferulic acid and ligustilide, is condensed and apt to be easily extract in the step of “extracting S2” with a high efficiency. [0033] In the step of “extracting S2,” the sample of dry Chinese *angelica* is extracted with a solvent, to obtain an *angelica* extract. For example, the step of “extracting S2” can be processed through a method of supercritical fluid extraction, water extraction, or organic solvent extraction. Additionally, with reference to FIG. 2, a step of “condensation S21,” needs to be further processed if the method of water extraction or organic solvent extraction is performed in the step of “extracting S2,” wherein active substances of *angelica* obtained in water or solvent are condensed via a process of lyophilization, spray drying, evaporation or heating drying to obtain the *angelica* extract. In an embodiment of the present invention, the sample of dry Chinese *angelica* is but not limit to be extracted via a 1000 bar extraction pilotplant, with supercritical carbon dioxide fluid extracting the sample of Chinese *angelica* at 200-650 bar and 50-65°C. With such performance in the present embodiment, the supercritical carbon dioxide fluid used in the step of “extracting S2” will become vapor after extracting, so as to obtain the *angelica* extract as dry without additional condensation in the step of “condensation S21.” Therefore, the *angelica* extract obtained from the present embodiment will be easy in use in pharmaceutical industry. [0034] In the next paragraphs, the therapeutic effect of the *angelica* extract on avoid incidence to fatty liver disease is demonstrated in an animal trial by preparing and feeding hypercholesterolemia animal with the *angelica* extract, and valuating the course of fatty liver disease via analyzing levels of total cholesterol (TC), total triglyceride (TG), low-density lipoprotein (LDL-C), high-density lipoprotein (HDL-C) and liver dissection thereof. [0035] In the present embodiment, male and 4-weeks-old Golden Syrian hamsters purchased from National Laboratory Animal Center in Taiwan are prepared and housed at a standard laboratory environment, such as keeping 25±1°C and with a 12 hours light/dark cycle, wherein the hamster’s body weight and or diet weight are monitored and recorded during the housing period. [0036] In the present embodiment, male and 4-weeks-old Golden Syrian hamsters are divided into 5 groups (8 hamsters in each group), including a group of (A0), as a control and fed with chow diet comprising of 18% protein, 10% moisture, 6% crude fat, 6% crude fiber, 6% ash, and 5% soluble nitrogen free extract during housing, and groups of (A1) to (A4) all fed with high-fat diet comprising TestDiet STJJ with 1% cholesterol during housing, with their body weight and levels of TC, TG, LDL-C and HDL-C being recorded during 4 weeks of housing. With such arrangement, hyperlipidemic hamsters (HL hamster) are successfully obtained after 4 weeks of housing (8-weeks-old hamster), having a TC level high than 200 mg/dl, a TG level high than 150 mg/dl, a LDL-C level higher than 130 mg/dl, and a HDL-C level lower than 40 mg/dl.

### TABLE 1

<table>
<thead>
<tr>
<th>Groups</th>
<th>Weight (g)</th>
<th>TG(mg/dl)</th>
<th>TG(mg/dl)</th>
<th>LDL-C(mg/dl)</th>
<th>HDL-C(mg/dl)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A0</td>
<td>108.2 ± 1.2</td>
<td>127.2 ± 2.1</td>
<td>61.2 ± 2.1</td>
<td>32.1 ± 1.3</td>
<td>45.4 ± 1.0</td>
</tr>
<tr>
<td>A1</td>
<td>142.3 ± 2.0</td>
<td>223.5 ± 2.6</td>
<td>211.5 ± 2.6</td>
<td>201.4 ± 1.8</td>
<td>10.2 ± 0.9</td>
</tr>
<tr>
<td>A2</td>
<td>148.2 ± 1.7</td>
<td>219.6 ± 1.5</td>
<td>204.9 ± 2.1</td>
<td>204.9 ± 2.1</td>
<td>10.6 ± 1.2</td>
</tr>
<tr>
<td>A3</td>
<td>140.5 ± 2.1</td>
<td>202.4 ± 1.8</td>
<td>197.2 ± 1.9</td>
<td>190.5 ± 2.4</td>
<td>10.8 ± 0.7</td>
</tr>
<tr>
<td>A4</td>
<td>138.3 ± 1.8</td>
<td>191.5 ± 1.4</td>
<td>193.6 ± 1.7</td>
<td>181.3 ± 1.8</td>
<td>10.7 ± 0.4</td>
</tr>
</tbody>
</table>
TABLE 2

<table>
<thead>
<tr>
<th>Groups</th>
<th>Weight (g)</th>
<th>TG (mg/dl)</th>
<th>TC (mg/dl)</th>
<th>LDL-C (mg/dl)</th>
<th>HDL-C (mg/dl)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(AO)</td>
<td>118.6 ± 1.6</td>
<td>129.5 ± 1.9</td>
<td>65.4 ± 2.0</td>
<td>36.4 ± 1.7</td>
<td>43.2 ± 1.2</td>
</tr>
<tr>
<td>(A1)</td>
<td>186.4 ± 2.1</td>
<td>252.1 ± 2.3</td>
<td>250.8 ± 2.3</td>
<td>228.1 ± 2.0</td>
<td>10.3 ± 0.7</td>
</tr>
<tr>
<td>(A2)</td>
<td>148.1 ± 1.9</td>
<td>186.3 ± 1.7</td>
<td>209.2 ± 2.0</td>
<td>187.4 ± 1.9</td>
<td>10.4 ± 1.0</td>
</tr>
<tr>
<td>(A3)</td>
<td>139.3 ± 2.0</td>
<td>174.2 ± 1.5</td>
<td>195.2 ± 1.7</td>
<td>170.8 ± 2.1</td>
<td>10.9 ± 0.8</td>
</tr>
<tr>
<td>(A4)</td>
<td>134.3 ± 1.7</td>
<td>183.8 ± 1.9</td>
<td>191.2 ± 1.9</td>
<td>164.3 ± 1.9</td>
<td>10.9 ± 0.6</td>
</tr>
</tbody>
</table>

[0037] In the following 4 weeks, the hamsters in group (AO) are continually fed with chow diet and water, but the HL hamsters in groups (A1) to (A4) are fed with high-fat diet and the *angelica* extract in various dosages, such as 150, 300, and 600 mg per kg of hamster everyday with reference to TABLE 3. Furthermore, levels of TC, TG, LDL-C and HDL-L of hamsters (12-weeks-old) in each group are further monitored and recorded in TABLE 3 in the present embodiment.

TABLE 3

<table>
<thead>
<tr>
<th>Groups</th>
<th>Feeding (mg/kg/day)</th>
<th>Weight (g)</th>
<th>TC (mg/dl)</th>
<th>TG (mg/dl)</th>
<th>LDL-C (mg/dl)</th>
<th>HDL-C (mg/dl)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(AO)</td>
<td>Chow diet 1 ml water</td>
<td>129.3 ± 1.9</td>
<td>131.3 ± 2.1</td>
<td>68.2 ± 1.7</td>
<td>38.2 ± 1.9</td>
<td>42.7 ± 1.5</td>
</tr>
<tr>
<td>(A1)</td>
<td>High-fat diet 1 ml water</td>
<td>201.2 ± 2.3</td>
<td>271.3 ± 2.6</td>
<td>276.2 ± 3.6</td>
<td>233.1 ± 2.3</td>
<td>93.3 ± 1.3</td>
</tr>
<tr>
<td>(A2)</td>
<td>150 <em>angelica</em> extract</td>
<td>158.2 ± 3.4</td>
<td>175.2 ± 1.8</td>
<td>203.1 ± 3.4</td>
<td>173.2 ± 2.8</td>
<td>10.4 ± 1.2</td>
</tr>
<tr>
<td>(A3)</td>
<td>500</td>
<td>148.4 ± 2.7</td>
<td>166.2 ± 2.3</td>
<td>192.4 ± 2.6</td>
<td>162.4 ± 3.0</td>
<td>10.2 ± 1.2</td>
</tr>
<tr>
<td>(A4)</td>
<td>600</td>
<td>145.0 ± 3.1</td>
<td>160.5 ± 2.0</td>
<td>182.3 ± 2.8</td>
<td>157.2 ± 3.1</td>
<td>10.5 ± 1.0</td>
</tr>
</tbody>
</table>

[0038] With reference to TABLE 3 and FIGS. 3 to 7, the hamsters of group (AO) show normal weight and levels of blood lipid after feeding water or the *angelica* extract. Yet, in comparison with hamsters in group (A1), either body weight or levels of blood lipid of hamsters in group (A1) to (A4) are significantly lower, with their body weight having 40-55 grams lower than that of hamsters in group (A1) (see FIG. 3), with their levels of TC having 95-110 mg/dl lower than that of hamsters in group (A1) (see FIG. 4), with their levels of TG having 70-95 mg/dl lower than that of hamsters in group (A1) (see FIG. 5), with their levels of HDL-C having 0.9-1.2 mg/dl higher than that of hamsters in group (A1) (see FIG. 6). It is verified that hamsters in groups (A2) to (A4) and groups (A1) show dramatic difference in body weight, and levels of TC, TG and HDL-C.

[0039] It is suggested that with the treatment of the *angelica* extract in the present invention, it is sufficient to suppress hypercholesterolemia by modulating levels of blood lipid, particularly for levels of TC and TG in liver-forms.

[0040] For further proving pathogenesis of fatty liver in hypercholesterolemia animal and the therapeutic effects of the *angelica* extract in treating of fatty liver disease, hamsters (12-weeks-old) in each group are dissected, and histossection data of each group are prepared, analyzing pathogenic affection in liver tissue of each hamster, including hepatic hydropic degeneration, central lobular necrosis, hepatic lipidosis, and hepatic fibrosis. Precisely, the histossection data of liver tissues in each hamster are collected from the same site at right lobe of liver tissue, being 1 cm² of area, followed by fixed with 10% neutral formalin solution, embodied in paraffin, and stained by hematoxylin and eosin stain (HE stain). In the present invention, the degrees of pathogenic affection, including hepatocellular hydropic degeneration, central lobular necrosis, hepatic lipidosis, and hepatic fibrosis of liver tissue, in each hamster are presented as score and summarized in TABLE 4.

[0041] In FIGS. 8 to 12, it is noted that vacuoles within liver tissues are lipid, as more vacuoles placing in liver tissue as more serious it does in accumulation of lipid in liver. Wherein, ratios of vacuoles in liver tissue are 84%, 64%, 52%, and 40% respectively in hamsters of groups (A1), (A2), (A3) and (A4). It is clear that the ratios of vacuoles in liver tissue in hamsters of groups (A2) to (A4) are significantly lower than that of hamsters of groups (A1) (p<0.05). Furthermore, there is no dramatic difference in ratios of vacuoles in liver tissue between hamsters of groups (A4) and (A0). Hence, it is proved that the *angelica* extract of the present invention can relieve the accumulation of lipid in liver tissue of hypercholesterolemia animal.

[0042] It is noted that the hydropic degeneration is characterized by a large amount of bubble or limpid liquid in cytoplasm caused by abnormal metabolism in liver cells, wherein the symptoms of hydropic degeneration is reversible if causes thereof has removed.

[0043] It is noted that the central lobular necrosis is characterized by irreversible necrosis around the central vein leading to condensation of nucleus and cytoplasm.

[0044] It is noted that the hepatic fibrosis is characterized by a large amount of cell necrosis occurred at central vein developing into excessive connective tissue in the liver, which is an irreversible symptom.

[0045] In the present invention, the pathogenic affections in each group is reviewed and quantified by a doctor in pathol-
ogy department without knowing detail procedure of the trial of the present invention, wherein, point “0” means no symptom is occurred, point “1” means 25% and less than 25% of area in histosection has symptom, point “2” means 25–50% of area in histosection has symptom, point “3” means 50–75% of area in histosection has symptom, point “4” means 75% and more than 75% of area in histosection has symptom.

**TABLE 4**

<table>
<thead>
<tr>
<th>Groups</th>
<th>Weight of liver tissue (g)</th>
<th>Hydropic degeneration</th>
<th>Central lobular necrosis</th>
<th>Hepatic lipidosis</th>
<th>Hepatic fibrosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>A0</td>
<td>3.78 ± 1.23</td>
<td>0.0 ± 0.0</td>
<td>0.0 ± 0.0</td>
<td>0.0 ± 0.0</td>
<td>0.0 ± 0.0</td>
</tr>
<tr>
<td>A1</td>
<td>10.22 ± 1.29</td>
<td>4.5 ± 0.1</td>
<td>3.5 ± 0.3</td>
<td>4.2 ± 0.3</td>
<td>4.2 ± 0.3</td>
</tr>
<tr>
<td>A2</td>
<td>8.38 ± 1.22</td>
<td>3.3 ± 0.1</td>
<td>2.9 ± 0.2</td>
<td>3.1 ± 0.2</td>
<td>3.2 ± 0.2</td>
</tr>
<tr>
<td>A3</td>
<td>7.54 ± 1.12</td>
<td>3.2 ± 0.2</td>
<td>2.8 ± 0.1</td>
<td>2.9 ± 0.2</td>
<td>2.6 ± 0.2</td>
</tr>
<tr>
<td>A4</td>
<td>6.83 ± 1.23</td>
<td>2.3 ± 0.1</td>
<td>2.5 ± 0.1</td>
<td>2.8 ± 0.3</td>
<td>2.0 ± 0.1</td>
</tr>
</tbody>
</table>

[0046] With reference to TABLE 4, it is obvious that the histosection datum of group (A1) has the most serious pathogenic affection among others groups (p<0.05). On the other hand, the histosection datum of group (A4) has the least serious pathogenic affection among other groups. It is suggested that, the *angelica* extract of the present invention, preferably at a dosage of 150–600 mg per kg of individual per day, can effectively relieve symptoms of fatty liver in hypercholesterolemia animal and prevent from fatty liver disease.

[0047] It seems that with treatment of the *angelica* extract in the present invention, the levels of total cholesterol, total triglyceride, and high-density lipoprotein in hypercholesterolemia animal can be significantly controlled, so as to protect liver and prevent from fatty liver disease.

[0048] In summary, through the present invention, an *angelica* extract for treating fatty liver is provided, which can reduce accumulation of lipid in liver cells and, thus avoid pathogenesis of fatty liver disease, with the levels of total cholesterol, total triglyceride, and high-density lipoprotein in hypercholesterolemia animal being successfully controlled by feeding them the *angelica* extract of the present invention. Hence, it is believed that the *angelica* extract can effectively protect liver tissues, and reduce incidences to fatty liver disease.

[0049] In the present invention, the *angelica* extract is rich in ferulic acid and ligninsulide, which can avoid peroxidation of lipid, reduce levels of total cholesterol, total triglyceride, and high-density lipoprotein in liver, so as to prevent from fatty liver disease. Therefore, with the *angelica* extract of the present invention, a medication comprising the *angelica* extract is also easily obtained, and which comprises natural herbal extract obtained from Chinese *angelica* and shares natural therapeutic properties to fatty liver, being easy to put to used in pharmaceutical industries. Furthermore, the medication comprising the *angelica* extract of the present invention can be manufactured into any form of medicament including a pill, pastil, powder, capsule or solution, even in combination with other food products or drinks. In general, the medication of the present invention can be given individually or combined with any pharmaceutical acceptable carrier substrate or excipient, preferably in a dosage of 150 to 600 mg for per kg of weight and lasting for 4 weeks, so as to effectively control the pathogenesis of fatty liver in life-forms. In this way, the treatments for fatty liver disease will become easier and more acceptable to general public since no hepatotoxicity involved in the medication of the present invention.

[0050] Thus, since the invention disclosed herein may be embodied in other specific forms without departing from the spirit or general characteristics thereof, some of which forms have been indicated, the embodiments described herein are to be considered in all respects illustrative and not restrictive. The scope of the invention is to be indicated by the appended claims, rather than by the foregoing description, and all changes which come within the meaning and range of equivalency of the claims are intended to be embraced therein.

What is claimed is:

1. An *angelica* extract for treating fatty liver disease obtained by extracting roots of Chinese *angelica* through a process of supercritical fluid extraction, water extraction, or organic solvent extraction.

2. The herbal extract for treating fatty liver disease as defined in claim 1, wherein, the roots of Chinese *angelica* comprising main roots, lateral roots, barks or fibers.

3. The herbal extract for treating fatty liver disease as defined in claim 1, wherein, the Chinese *angelica* is selected from one of *Angelica acutiloba* Kitagawa, *Angelica acutiloba* Kitagawa var. *sugiyamae* Hikino, *Angelica koreana* Max and *Angelica sinensis* Oliv.

4. The herbal extract for treating fatty liver disease as defined in claim 1, wherein, the roots of Chinese *angelica* is extracted with supercritical carbon dioxide fluid at 200-650 bar and 50-65°C.

5. A preparation method of the *angelica* extract as defined in claim 1, comprising steps of:
   - drying, by providing and drying roots of Chinese *angelica* till a water content of the roots of Chinese *angelica* decreasing at 10% or less than 10%, to obtain a sample of dry Chinese *angelica*;
   - extracting, by immersing and extracting the sample of dry Chinese *angelica* with a solvent to obtain an *angelica* extract.

6. The preparation method of the *angelica* extract as defined in 5, wherein the roots of Chinese *angelica* comprising main roots, lateral roots, bases or fibers.

7. The preparation method of the *angelica* extract as defined in 5, wherein the Chinese *angelica* is selected from one of *Angelica acutiloba* Kitagawa, *Angelica acutiloba* Kitagawa var. *sugiyamae* Hikino, *Angelica koreana* Max and *Angelica sinensis* Oliv.

8. The preparation method of the *angelica* extract as defined in 5, wherein the solvent is water, ethanol, or supercritical carbon dioxide fluid.

9. The preparation method of the *angelica* extract as defined in claim 5 wherein a step of condensation is performed after the step of extracting by processing a condensation to obtain the *angelica* extract.

10. The preparation method of the *angelica* extract as defined in claim 9 wherein the step of condensation is processed via lyophilization, spray drying, evaporation or heating drying.

11. A medication for treating fatty liver disease, comprising:
   - an *angelica* extract obtained as defined in claim 1; and a pharmaceutical acceptable carrier substrate or excipient.
12. The medication for treating fatty liver disease as defined in claim 11, wherein the medication is an oral medication.

13. The medication for treating fatty liver disease as defined in claim 11, wherein the medication is in the form of a pill, pastil, powder, capsule or solution.

14. The medication for treating fatty liver disease as defined in claim 11, wherein the *angelica* extract in the medication is at a dosage of 150-600 mg for per kilogram of individual.

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