

Chinese medicine composition for lowering lipid and protecting liver as well as preparation method and application thereof

TECHINICAL FIELD

The present invention relates to the field of Chinese medicine composition, particularly to a Chinese medicine composition for lowering lipid and protecting liver as well as preparation method and application thereof.

BACKGROUND

Liver injury comprises viral liver injury and chemical liver injury. The viral liver injury is the liver inflammation infected by pathogenic microorganism such as virus, e.g. hepatitis A, hepatitis B. The chemical liver injury is caused by various toxicants, such as alcohol in foods, chemical toxicant in the environment, or medicines. Viral hepatitis is an infectious disease spreading all over the world, hundreds of millions of patients suffer from hepatitis every year, and about two million people died from it. Major chemical liver injury (including alcoholic liver injury) comprise steatosis, lipid peroxidation which is a special form of toxic liver injury, and cholestasis, mainly relating to dysfunction of bile acid excretion caused by injury of liver cell membrane and microvilli. Such two kinds of liver injuries are one of diseases damaging physical and psychological health severely.

With improvement of living standard, people's dietary pattern and life style has changed greatly. Experts predict that population of obesity will be more than 200 millions, morbidities of hyperlipidemia and fatty liver will rise accordingly. Currently, the population of patients suffering hyperlipidemia is up to 90 millions.

It is significant to research on medicines and health products for preventing and treating hepatitis as well as hyperlipidemia, which are suitable for long-term use, by using resources of traditional Chinese medicine and modern technology of biology and preparation.

SUMMARY OF THE INVENTION

The object of the present invention is to provide a Chinese medicine composition for lowering lipid and protecting liver, having a function of preventing and treating hepatitis as well as hyperlipidemia.

Another object of the present invention is to provide a preparation method of aforesaid Chinese medicine composition for lowering lipid and protecting liver.

Further object of the present invention is to provide application of aforesaid Chinese

medicine composition for lowering lipid and protecting liver on preparing medicines or health products used for preventing and treating hyperlipidemia, obesity, viral hepatitis, chemical liver injury, and alcoholic liver injury.

The objects of the present invention can be achieved by a Chinese medicine composition for lowering lipid and protecting liver, which is the compound preparation formed by Chinese medicine components and pharmaceutical adjuvants, comprising 60 to 120 parts by weight of *Gynura divaricata*, 50 to 110 parts by weight of *Radix Puerariae* and 20 to 60 parts by weight of *Radix Paeoniae Alba*.

Preferably, *Gynura divaricata* is 80 to 100 parts by weight, *Radix Puerariae* is 70 to 90 parts by weight, and *Radix Paeoniae Alba* is 30 to 50 parts by weight.

The *Gynura divaricata* is the whole herb of *Gynura divaricata*.

The *Radix Puerariae* is the dried root of *Pueraria lobata*.

The *Radix Paeoniae Alba* is the dried root of *Paeonia lactiflora*.

The compound preparation is in form of capsules, pills, granules, or oral liquid.

The pharmaceutical adjuvant is one of, or a mixture of two or more of dextrin, saccharose, lactose, starch, sodium carboxymethyl starch, polyvinylpyrrolidone, and magnesium stearate.

The preparation method of the aforesaid Chinese medicine composition comprises steps as follows:

- 1) decocting *Gynura divaricata* with water for 1.5 to 2 hours, wherein the weight of water is 8 to 12 times the weight of *Gynura divaricata*, collecting the extracting solution; then adding water again into the residue thereof, wherein the weight of water is 5 to 8 times the weight of the residue, decocting them for 1 to 1.5 hours, collecting the extracting solution again; mixing both extracting solutions, filtrating and concentrating it, then adding alcohol thereto and making the content of alcohol in 70% to 90%, filtrating, concentrating and drying the alcohol solution, and obtaining the extractive of *Gynura divaricata*;
- 2) decocting *Radix Puerariae* with water for 1.5 to 2 hours, wherein the weight of water is 8 to 12 times the weight of *Radix Puerariae*, collecting the extracting solution; then adding water again into the residue thereof, wherein the weight of water is 5 to 8 times the weight of the residue, decocting them for 1 to 1.5 hours, collecting the extracting solution again; mixing both extracting solutions, filtrating and concentrating it, then adding alcohol thereto and making the content of alcohol in 70% to 90%, filtrating, concentrating and drying the alcohol solution, and obtaining the extractive of *Radix Puerariae*;

- 3) decocting *Radix Paeoniae Alba* with water for 1.5 to 2 hours, wherein the weight of water is 8 to 12 times the weight of *Radix Paeoniae Alba*, collecting the extracting solution; then adding water again into the residue thereof, wherein the weight of water is 5 to 8 times the weight of the residue, decocting them for 1 to 1.5 hours, collecting the extracting solution again; mixing both extracting solutions, filtrating and concentrating it, then adding alcohol thereto and making the content of alcohol in 70% to 90%, filtrating, concentrating and drying the alcohol solution, and obtaining the extractive of *Radix Paeoniae Alba*; and
- 4) mixing the extractives of *Gynura divaricata*, *Radix Puerariae* and *Radix Paeoniae Alba* evenly all together to obtain a total extractive, then adding the pharmaceutical adjuvants thereto, and producing various dosage forms by using proper technology.

After adding pharmaceutical adjuvants into the total extractive, mixing them evenly, pelleting and drying them, then pills can be produced by tableting them, or capsules can be produced by packing them into capsules, or granules can be produced by packing them.

Oral liquid also can be prepared by the following steps:

- 1) decocting *Gynura divaricata* with water for 1.5 to 2 hours, wherein the weight of water is 8 to 12 times the weight of *Gynura divaricata*, collecting the extracting solution; then adding water again into the residue thereof, wherein the weight of water is 5 to 8 times the weight of the residue, decocting them for 1 to 1.5 hours, collecting the extracting solution again; mixing both extracting solutions, filtrating and concentrating it, then adding alcohol thereto and making the content of alcohol in 70% to 90%, filtrating and concentrating the alcohol solution, and obtaining the extractive solution of *Gynura divaricata*;
- 2) decocting *Radix Puerariae* with water for 1.5 to 2 hours, wherein the weight of water is 8 to 12 times the weight of *Radix Puerariae*, collecting the extracting solution; then adding water again into the residue thereof, wherein the weight of water is 5 to 8 times the weight of the residue, decocting them for 1 to 1.5 hours, collecting the extracting solution again; mixing both extracting solutions, filtrating and concentrating it, then adding alcohol thereto and making the content of alcohol in 70% to 90%, filtrating and concentrating the alcohol solution, and obtaining the extractive solution of *Radix Puerariae*;
- 3) decocting *Radix Paeoniae Alba* with water for 1.5 to 2 hours, wherein the weight of water is 8 to 12 times the weight of *Radix Paeoniae Alba*, collecting the extracting solution; then adding water again into the residue thereof, wherein the weight of water is 5 to 8 times the weight of the residue, decocting them for 1 to 1.5 hours, collecting the extracting solution again; mixing both extracting solutions, filtrating and concentrating it, then adding alcohol thereto and making the content of alcohol in 70% to 90%, filtrating and concentrating the alcohol solution, and obtaining the extractive solution of *Radix Paeoniae Alba*; and

- 4) mixing the extractive solutions of *Gynura divaricata*, *Radix Puerariae* and *Radix Paeoniae Alba* evenly all together, and adding corrective thereto to obtain an oral liquid.

The preparation of the present invention may be taken by oral administration clinically, and the dosage varies according to different dosage forms. Wherein 12 to 20 grams of granules should be taken one day, 10 to 25 pills should be taken one day, 10 to 25 capsules should be taken one day, and 30 to 50 milliliters of oral liquid should be taken one day.

The beneficial effect of the present invention is that effective prescription for lowering lipid and protecting liver can be prepared according to theory of traditional Chinese medicine, whereby modern dosage forms are prepared by means of modern pharmaceuticals, contributing to prominent effect and easy administration of preparation of the present invention. The present invention is capable of lowering lipid and protecting liver, and can be used to prevent and treat hyperlipidemia, obesity, viral hepatitis, chemical liver injury, alcoholic liver injury and the like.

DETAILED DESCRIPTION OF THE INVENTION

The present invention relates to a Chinese medicine composition for lowering lipid and protecting liver, being a compound preparation prepared by Chinese medicine components and pharmaceutical adjuvants, wherein the Chinese medicine components comprise the formula in parts by weight: 60 to 120 parts of *Gynura divaricata*, 50 to 110 parts of *Radix Puerariae* and 20 to 60 parts of *Radix Paeoniae Alba*.

Preferably, *Gynura divaricata* is 80 to 100 parts by weight, *Radix Puerariae* is 70 to 90 parts by weight and *Radix Paeoniae Alba* is 30 to 50 parts by weight.

Wherein, *Gynura divaricata* is the whole herb of *Gynura divaricata* (L.) DC. [*G. ovalis* DC. ; *G. pseudo-china* (L.) DC.] of feverfew, *Radix Puerariae* is the dried root of *Pueraria lobata* (Willd.) Ohwi of leguminosae, *Radix Paeoniae Alba* is the dried root of *Paeonia lactiflora* Pall. of ranunculaceae.

The pharmaceutical adjuvant is one of, or a mixture of two or more of dextrin, saccharose, lactose, starch, sodium carboxymethyl starch, polyvinylpyrrolidone, and magnesium stearate. The compound preparation is in the forms of capsules, pills, granules, or oral liquid.

The preparation method of the above Chinese medicine composition comprises the following steps:

- 1) decocting *Gynura divaricata* with water for 1.5 to 2 hours, wherein the weight of water is 8 to 12 times the weight of *Gynura divaricata*, collecting the extracting solution; then adding water again into the residue thereof, wherein the weight of water is 5 to 8 times the weight of the residue, decocting them for 1 to 1.5 hours, collecting the extracting solution again; mixing both extracting solutions, filtrating and concentrating it, then adding alcohol thereto and making the content of alcohol in 70% to 90%, filtrating, concentrating and drying the alcohol solution, and obtaining the extractive of *Gynura divaricata*;
- 2) decocting *Radix Puerariae* with water for 1.5 to 2 hours, wherein the weight of water is 8 to 12 times the weight of *Radix Puerariae*, collecting the extracting solution; then adding water again into the residue thereof, wherein the weight of water is 5 to 8 times the weight of the residue, decocting them for 1 to 1.5 hours, collecting the extracting solution again; mixing both extracting solutions, filtrate and concentrate it, then adding alcohol thereto and making the content of alcohol in 70% to 90%, filtrating, concentrating and drying the alcohol solution, and obtaining the extractive of *Radix Puerariae*;
- 3) decocting *Radix Paeoniae Alba* with water for 1.5 to 2 hours, wherein the weight of water is 8 to 12 times the weight of *Radix Paeoniae Alba*, collecting the extracting solution; then adding water again into the residue thereof, wherein the weight of water is 5 to 8 times the weight of the residue, decocting them for 1 to 1.5 hours, collecting the extracting solution again; mixing both extracting solutions, filtrating and concentrating it, then adding alcohol thereto and making the content of alcohol in 70% to 90%, filtrating, concentrating and drying the alcohol solution, and obtaining the extractive of *Radix Paeoniae Alba*; and
- 4) mixing the extractives of *Gynura divaricata*, *Radix Puerariae* and *Radix Paeoniae Alba* evenly all together to obtain a total extractive, then adding pharmaceutical adjuvants thereto, and producing various dosage forms by proper processes. For example, after adding pharmaceutical adjuvants into the total extractive, mixing them evenly, pelleting and drying them, then pills can be produced by tableting them, or capsules can be produced by packing them into capsules, or granules can be produced by packing them.

The preparation method is further explained by the following embodiments, which should not be deemed to limit the scope of the present invention.

Embodiment 1

90g *Gynura divaricata* is decocted with water for 2 hours, wherein the weight of water is 10 times the weight of *Gynura divaricata*, then the extracting solution is collected. Water is added again into the residue thereof to be decocted for 1.5 hours, wherein the weight of water is 6 times the weight of the residue, then the extracting solution is also collected. Both extracting solutions are mixed, and the mixed

solutions are filtrated and concentrated to a relative density of 1.10 to 1.12, then alcohol is added thereto until content of alcohol reaches 85%. The alcohol solution is filtrated, concentrated and dried thereafter, whereby the extractive of *Gynura divaricata* can be obtained.

80g *Radix Puerariae* is decocted with water for 2 hours, wherein the weight of water is 10 times the weight of *Radix Puerariae*, then the extracting solution is collected. Water is added again into the residue thereof to be decocted for 1.5 hours, wherein the weight of water is 6 times the weight of the residue, then the extracting solution is also collected. Both extracting solutions are mixed, and the mixed solution are filtrated and concentrated to a relative density of 1.20 to 1.30, then alcohol is added thereto until content of alcohol reaches 90%. The alcohol solution is filtrated, concentrated and dried thereafter, whereby the extractive of *Radix Puerariae* can be obtained.

40g *Radix Paeoniae Alba* is decocted with water for 2 hours, wherein the weight of water is 10 times the weight of *Radix Paeoniae Alba*, then the extracting solution is collected. Water is added again into the residue thereof to be decocted for 1.5 hours, wherein the weight of water is 6 times the weight of the residue, then the extracting solution is also collected. Both extracting solutions are mixed, and the mixed solution are filtrated and concentrated to a relative density of 1.15 to 1.25, then alcohol is added thereto until content of alcohol reaches 80%. The alcohol solution is filtrated, concentrated and dried thereafter, whereby the extractive of *Radix Paeoniae Alba* can be obtained.

The extractives of *Gynura divaricata*, *Radix Puerariae* and *Radix Paeoniae Alba* are mixed evenly all together, appropriate amount of magnesium stearate is added thereto to form a mixture, which will be encapsulated eventually.

Example 2

120g *Gynura divaricata* is decocted with water for 1 hour, wherein the weight of water is 8 times the weight of *Gynura divaricata*, then the extracting solution is collected. Water is added again into the residue thereof to be decocted for 1.5 hours, wherein the weight of water is 8 times the weight of the residue, then the extracting solution is also collected. Both extracting solutions are mixed, and the mixed solutions are filtrated and concentrated to a relative density of 1.10 to 1.12, then alcohol is added thereto until content of alcohol reaches 90%. The alcohol solution is filtrated, concentrated and dried thereafter, whereby the extractive of *Gynura divaricata* can be obtained.

600g *Radix Puerariae* is decocted with water for 1 hour, wherein the weight of water is 12 times the weight of *Radix Puerariae*, then the extracting solution is collected. Water is added again into the residue thereof to be decocted for 1.5 hours, wherein

the weight of water is 8 times the weight of the residue, then the extracting solution is also collected. Both extracting solutions are mixed, and the mixed solution are filtrated and concentrated to a relative density of 1.10 to 1.20, then alcohol is added thereto until content of alcohol reaches 90%. The alcohol solution is filtrated, concentrated and dried thereafter, whereby the extractive of Radix Puerariae can be obtained.

20g Radix Paeoniae Alba is decocted with water for 1.5 hours, wherein the weight of water is 12 times the weight of Radix Paeoniae Alba, then the extracting solution is collected. Water is added again into the residue thereof to be decocted for 1.5 hours, wherein the weight of water is 8 times the weight of the residue, then the extracting solution is also collected. Both extracting solutions are mixed, and the mixed solution are filtrated and concentrated to a relative density of 1.10 to 1.20, then alcohol is added thereto until content of alcohol reaches 70%. The alcohol solution is filtrated, concentrated and dried thereafter, whereby the extractive of Radix Paeoniae Alba can be obtained.

The extractives of Gynura divaricata, Radix Puerariae and Radix Paeoniae Alba are mixed evenly all together, appropriate amount of magnesium stearate is added thereto to form a mixture, which will be encapsulated eventually.

Example 3

60g Gynura divaricata is decocted with water for 2 hours, wherein the weight of water is 12 times the weight of Gynura divaricata, then the extracting solution is collected. Water is added again into the residue thereof to be decocted for 1.5 hours, wherein the weight of water is 10 times the weight of the residue, then the extracting solution is also collected. Both extracting solutions are mixed, and the mixed solutions are filtrated and concentrated to a relative density of 1.10 to 1.12, then alcohol is added thereto until content of alcohol reaches 80%. The alcohol solution is filtrated, concentrated and dried thereafter, whereby the extractive of Gynura divaricata can be obtained.

50g Radix Puerariae is decocted with water for 2 hours, wherein the weight of water is 12 times the weight of Radix Puerariae, then the extracting solution is collected. Water is added again into the residue thereof to be decocted for 1.5 hours, wherein the weight of water is 10 times the weight of the residue, then the extracting solution is also collected. Both extracting solutions are mixed, and the mixed solution are filtrated and concentrated to a relative density of 1.10 to 1.15, then alcohol is added thereto until content of alcohol reaches 80%. The alcohol solution is filtrated, concentrated and dried thereafter, whereby the extractive of Radix Puerariae can be obtained.

60g *Radix Paeoniae Alba* is decocted with water for 2 hours, wherein the weight of water is 8 times the weight of *Radix Paeoniae Alba*, then the extracting solution is collected. Water is added again into the residue thereof to be decocted for 1.5 hours, wherein the weight of water is 6 times the weight of the residue, then the extracting solution is also collected. Both extracting solutions are mixed, and the mixed solution are filtrated and concentrated to a relative density of 1.10 to 1.18, then alcohol is added thereto until content of alcohol reaches 70%. The alcohol solution is filtrated, concentrated and dried thereafter, whereby the extractive of *Radix Paeoniae Alba* can be obtained.

The extractives of *Gynura divaricata*, *Radix Puerariae* and *Radix Paeoniae Alba* are mixed evenly all together, appropriate amount of magnesium stearate is added thereto to form a mixture, which will be encapsulated eventually.

Example 4

90g *Gynura divaricata* is decocted with water for 2 hours, wherein the weight of water is 10 times the weight of *Gynura divaricata*, then the extracting solution is collected. Water is added again into the residue thereof to be decocted for 1.5 hours, wherein the weight of water is 6 times the weight of the residue, then the extracting solution is also collected. Both extracting solutions are mixed, and the mixed solutions are filtrated and concentrated to a relative density of 1.10 to 1.12, then alcohol is added thereto until content of alcohol reaches 85%. The alcohol solution is filtrated, concentrated and dried thereafter, whereby the extractive of *Gynura divaricata* can be obtained.

80g *Radix Puerariae* is decocted with water for 2 hours, wherein the weight of water is 10 times the weight of *Radix Puerariae*, then the extracting solution is collected. Water is added again into the residue thereof to be decocted for 1.5 hours, wherein the weight of water is 6 times the weight of the residue, then the extracting solution is also collected. Both extracting solutions are mixed, and the mixed solution are filtrated and concentrated to a relative density of 1.20 to 1.30, then alcohol is added thereto until content of alcohol reaches 90%. The alcohol solution is filtrated, concentrated and dried thereafter, whereby the extractive of *Radix Puerariae* can be obtained.

40g *Radix Paeoniae Alba* is decocted with water for 2 hours, wherein the weight of water is 10 times the weight of *Radix Paeoniae Alba*, then the extracting solution is collected. Water is added again into the residue thereof to be decocted for 1.5 hours, wherein the weight of water is 6 times the weight of the residue, then the extracting solution is also collected. Both extracting solutions are mixed, and the mixed solution are filtrated and concentrated to a relative density of 1.15 to 1.25, then alcohol is added thereto until content of alcohol reaches 80%. The alcohol solution is

filtrated, concentrated and dried thereafter, whereby the extractive of Radix Paeoniae Alba can be obtained.

The extractives of Gynura divaricata, Radix Puerariae and Radix Paeoniae Alba are mixed evenly all together, appropriate amount of magnesium stearate and dextrin are added thereto to form a mixture, which will be produced to tablets by drying and tableting it eventually.

Example 5

120g Gynura divaricata is decocted with water for 1 hour, wherein the weight of water is 8 times the weight of Gynura divaricata, then the extracting solution is collected. Water is added again into the residue thereof to be decocted for 1.5 hours, wherein the weight of water is 8 times the weight of the residue, then the extracting solution is also collected. Both extracting solutions are mixed, and the mixed solutions are filtrated and concentrated to a relative density of 1.10 to 1.12, then alcohol is added thereto until content of alcohol reaches 90%. The alcohol solution is filtrated, concentrated and dried thereafter, whereby the extractive of Gynura divaricata can be obtained.

600g Radix Puerariae is decocted with water for 1 hour, wherein the weight of water is 12 times the weight of Radix Puerariae, then the extracting solution is collected. Water is added again into the residue thereof to be decocted for 1.5 hours, wherein the weight of water is 8 times the weight of the residue, then the extracting solution is also collected. Both extracting solutions are mixed, and the mixed solution are filtrated and concentrated to a relative density of 1.10 to 1.20, then alcohol is added thereto until content of alcohol reaches 80%. The alcohol solution is filtrated, concentrated and dried thereafter, whereby the extractive of Radix Puerariae can be obtained.

20g Radix Paeoniae Alba is decocted with water for 1.5 hours, wherein the weight of water is 12 times the weight of Radix Paeoniae Alba, then the extracting solution is collected. Water is added again into the residue thereof to be decocted for 1.5 hours, wherein the weight of water is 8 times the weight of the residue, then the extracting solution is also collected. Both extracting solutions are mixed, and the mixed solution are filtrated and concentrated to a relative density of 1.10 to 1.20, then alcohol is added thereto until content of alcohol reaches 70%. The alcohol solution is filtrated, concentrated and dried thereafter, whereby the extractive of Radix Paeoniae Alba can be obtained.

The extractives of Gynura divaricata, Radix Puerariae and Radix Paeoniae Alba are mixed evenly all together, appropriate amount of magnesium stearate and dextrin are added thereto to form a mixture, which will be produced to tablets by tableting it eventually.

Example 6

60g *Gynura divaricata* is decocted with water for 2 hours, wherein the weight of water is 12 times the weight of *Gynura divaricata*, then the extracting solution is collected. Water is added again into the residue thereof to be decocted for 1.5 hours, wherein the weight of water is 10 times the weight of the residue, then the extracting solution is also collected. Both extracting solutions are mixed, and the mixed solutions are filtrated and concentrated to a relative density of 1.10 to 1.12, then alcohol is added thereto until content of alcohol reaches 80%. The alcohol solution is filtrated, concentrated and dried thereafter, whereby the extractive of *Gynura divaricata* can be obtained.

50g *Radix Puerariae* is decocted with water for 2 hours, wherein the weight of water is 12 times the weight of *Radix Puerariae*, then the extracting solution is collected. Water is added again into the residue thereof to be decocted for 1.5 hours, wherein the weight of water is 10 times the weight of the residue, then the extracting solution is also collected. Both extracting solutions are mixed, and the mixed solution are filtrated and concentrated to a relative density of 1.10 to 1.15, then alcohol is added thereto until content of alcohol reaches 80%. The alcohol solution is filtrated, concentrated and dried thereafter, whereby the extractive of *Radix Puerariae* can be obtained.

60g *Radix Paeoniae Alba* is decocted with water for 2 hours, wherein the weight of water is 8 times the weight of *Radix Paeoniae Alba*, then the extracting solution is collected. Water is added again into the residue thereof to be decocted for 1.5 hours, wherein the weight of water is 6 times the weight of the residue, then the extracting solution is also collected. Both extracting solutions are mixed, and the mixed solution are filtrated and concentrated to a relative density of 1.10 to 1.18, then alcohol is added thereto until content of alcohol reaches 70%. The alcohol solution is filtrated, concentrated and dried thereafter, whereby the extractive of *Radix Paeoniae Alba* can be obtained.

The extractives of *Gynura divaricata*, *Radix Puerariae* and *Radix Paeoniae Alba* are mixed evenly all together, appropriate amount of magnesium stearate and dextrin are added thereto to form a mixture, which will be produced to tablets by tableting it eventually.

Example 7

90g *Gynura divaricata* is decocted with water for 2 hours, wherein the weight of water is 10 times the weight of *Gynura divaricata*, then the extracting solution is collected. Water is added again into the residue thereof to be decocted for 1.5 hours, wherein the weight of water is 6 times the weight of the residue, then the extracting solution is also collected. Both extracting solutions are mixed, and the mixed

solutions are filtrated and concentrated to a relative density of 1.10 to 1.12, then alcohol is added thereto until content of alcohol reaches 85%. The alcohol solution is filtrated, concentrated and dried thereafter, whereby the extractive of *Gynura divaricata* can be obtained.

80g *Radix Puerariae* is decocted with water for 2 hours, wherein the weight of water is 10 times the weight of *Radix Puerariae*, then the extracting solution is collected. Water is added again into the residue thereof to be decocted for 1.5 hours, wherein the weight of water is 6 times the weight of the residue, then the extracting solution is also collected. Both extracting solutions are mixed, and the mixed solution are filtrated and concentrated to a relative density of 1.20 to 1.30, then alcohol is added thereto until content of alcohol reaches 90%. The alcohol solution is filtrated, concentrated and dried thereafter, whereby the extractive of *Radix Puerariae* can be obtained.

40g *Radix Paeoniae Alba* is decocted with water for 2 hours, wherein the weight of water is 10 times the weight of *Radix Paeoniae Alba*, then the extracting solution is collected. Water is added again into the residue thereof to be decocted for 1.5 hours, wherein the weight of water is 6 times the weight of the residue, then the extracting solution is also collected. Both extracting solutions are mixed, and the mixed solution are filtrated and concentrated to a relative density of 1.15 to 1.25, then alcohol is added thereto until content of alcohol reaches 80%. The alcohol solution is filtrated, concentrated and dried thereafter, whereby the extractive of *Radix Paeoniae Alba* can be obtained.

The extractives of *Gynura divaricata*, *Radix Puerariae* and *Radix Paeoniae Alba* are mixed evenly all together, appropriate amount of magnesium stearate and dextrin are added thereto to form a mixture, which will be produced to granules by pelleting it eventually.

Example 8

120g *Gynura divaricata* is decocted with water for 1 hour, wherein the weight of water is 8 times the weight of *Gynura divaricata*, then the extracting solution is collected. Water is added again into the residue thereof to be decocted for 1.5 hours, wherein the weight of water is 8 times the weight of the residue, then the extracting solution is also collected. Both extracting solutions are mixed, and the mixed solutions are filtrated and concentrated to a relative density of 1.10 to 1.12, then alcohol is added thereto until content of alcohol reaches 90%. The alcohol solution is filtrated, concentrated and dried thereafter, whereby the extractive of *Gynura divaricata* can be obtained.

600g *Radix Puerariae* is decocted with water for 1 hour, wherein the weight of water is 12 times the weight of *Radix Puerariae*, then the extracting solution is collected.

Water is added again into the residue thereof to be decocted for 1.5 hours, wherein the weight of water is 8 times the weight of the residue, then the extracting solution is also collected. Both extracting solutions are mixed, and the mixed solution are filtrated and concentrated to a relative density of 1.10 to 1.20, then alcohol is added thereto until content of alcohol reaches 80%. The alcohol solution is filtrated, concentrated and dried thereafter, whereby the extractive of Radix Puerariae can be obtained.

20g Radix Paeoniae Alba is decocted with water for 1.5 hours, wherein the weight of water is 12 times the weight of Radix Paeoniae Alba, then the extracting solution is collected. Water is added again into the residue thereof to be decocted for 1.5 hours, wherein the weight of water is 8 times the weight of the residue, then the extracting solution is also collected. Both extracting solutions are mixed, and the mixed solution are filtrated and concentrated to a relative density of 1.10 to 1.20, then alcohol is added thereto until content of alcohol reaches 70%. The alcohol solution is filtrated, concentrated and dried thereafter, whereby the extractive of Radix Paeoniae Alba can be obtained.

The extractive of Gynura divaricata, Radix Puerariae and Radix Paeoniae Alba are mixed evenly all together, appropriate amount of magnesium stearate and dextrin are added thereto to form a mixture, which will be produced to granules by pelleting it eventually.

Example 9

60g Gynura divaricata is decocted with water for 2 hours, wherein the weight of water is 12 times the weight of Gynura divaricata, then the extracting solution is collected. Water is added again into the residue thereof to be decocted for 1.5 hours, wherein the weight of water is 10 times the weight of the residue, then the extracting solution is also collected. Both extracting solutions are mixed, and the mixed solutions are filtrated and concentrated to a relative density of 1.10 to 1.12, then alcohol is added thereto until content of alcohol reaches 80%. The alcohol solution is filtrated, concentrated and dried thereafter, whereby the extractive of Gynura divaricata can be obtained.

50g Radix Puerariae is decocted with water for 2 hours, wherein the weight of water is 12 times the weight of Radix Puerariae, then the extracting solution is collected. Water is added again into the residue thereof to be decocted for 1.5 hours, wherein the weight of water is 10 times the weight of the residue, then the extracting solution is also collected. Both extracting solutions are mixed, and the mixed solution are filtrated and concentrated to a relative density of 1.10 to 1.15, then alcohol is added thereto until content of alcohol reaches 80%. The alcohol solution is filtrated, concentrated and dried thereafter, whereby the extractive of Radix Puerariae can be obtained.

60g Radix Paeoniae Alba is decocted with water for 2 hours, wherein the weight of water is 8 times the weight of Radix Paeoniae Alba, then the extracting solution is collected. Water is added again into the residue thereof to be decocted for 1.5 hours, wherein the weight of water is 6 times the weight of the residue, then the extracting solution is also collected. Both extracting solutions are mixed, and the mixed solution are filtrated and concentrated to a relative density of 1.10 to 1.18, then alcohol is added thereto until content of alcohol reaches 70%. The alcohol solution is filtrated, concentrated and dried thereafter, whereby the extractive of Radix Paeoniae Alba can be obtained.

The extractives of Gynura divaricata, Radix Puerariae and Radix Paeoniae Alba are mixed evenly all together, appropriate amount of magnesium stearate and dextrin are added thereto to form a mixture, which will be produced to granules by pelleting it eventually.

Example 10

60g Gynura divaricata is decocted with water for 2 hours, wherein the weight of water is 12 times the weight of Gynura divaricata, then the extracting solution is collected. Water is added again into the residue thereof to be decocted for 1.5 hours, wherein the weight of water is 10 times the weight of the residue, then the extracting solution is also collected. Both extracting solutions are mixed, and the mixed solutions are filtrated and concentrated to a relative density of 1.10 to 1.12, then alcohol is added thereto until content of alcohol reaches 80%. The alcohol solution is filtrated and concentrated thereafter, whereby the extractive of Gynura divaricata can be obtained.

50g Radix Puerariae is decocted with water for 2 hours, wherein the weight of water is 12 times the weight of Radix Puerariae, then the extracting solution is collected. Water is added again into the residue thereof to be decocted for 1.5 hours, wherein the weight of water is 10 times the weight of the residue, then the extracting solution is also collected. Both extracting solutions are mixed, and the mixed solution are filtrated and concentrated to a relative density of 1.10 to 1.15, then alcohol is added thereto until content of alcohol reaches 80%. The alcohol solution is filtrated and concentrated thereafter, whereby the extractive of Radix Puerariae can be obtained.

60g Radix Paeoniae Alba is decocted with water for 2 hours, wherein the weight of water is 8 times the weight of Radix Paeoniae Alba, then the extracting solution is collected. Water is added again into the residue thereof to be decocted for 1.5 hours, wherein the weight of water is 6 times the weight of the residue, then the extracting solution is also collected. Both extracting solutions are mixed, and the mixed solution are filtrated and concentrated to a relative density of 1.10 to 1.18, then alcohol is added thereto until content of alcohol reaches 70%. The alcohol solution is

filtrated and concentrated thereafter, whereby the extractive of Radix Paeoniae Alba can be obtained.

The extractives of Gynura divaricata, Radix Puerariae and Radix Paeoniae Alba are mixed evenly all together, appropriate amount of stevioside is added thereto to form a mixture, which will be an oral liquid eventually.

Example 11

Research on the pharmacodynamics of lowering lipid

1. Materials and Method

Tested medicines: content of capsules prepared according to Example 1.

Simvastatin tablets, provided by Hangzhou Merck Sharp & Dohme Pharmaceutical Co., Ltd.; Batch number: 110689.

Animals: 70 SD male rats, SPF grade, each having weight of 170 to 200 g. Quality certificate number for laboratory animal: 2006A051; Certificate number of approved environment condition for SPF laboratory animal: 2006B023; Number of production licence of SPF laboratory animal: SCXK GD-2011-0015; animals are supplied by Animal Laboratory Center of Southern Medical University.

High-fat feed: 12% lard oil (homemade), 2% cholesterol (Aladdin Industrial Corporation; Batch number: 1216021), 0.2% propylthiouracil (Guangdong Southern China Pharmaceutical Co., Ltd.; Batch number: 120601), 0.5% 3# cholate (Guangdong Huankai Microbial Sci. & Tech Co., Ltd.; Batch number: 3201077), 85.3% ordinary mixed feed meal (Animal Laboratory Center of Southern Medical University); Mix above materials evenly manually, and stir them with machine, press to make granules of round strips, place them in the freezer and chill for later use. The high-fat feed is prepared by Animal Laboratory Center of Southern Medical University.

Primary chemical reagents and detecting instruments: formaldehyde solution with grade of analytical reagent and batch number: 20111007, supplied by Guangdong Guanghua Sci-Tech Co., Ltd.; OLYMPUS BH-2 fluorescence microscope, supplied by OLYMPUS Corporation in Japan; BECKMANTM30 refrigerated centrifuge, supplied by BACKMAN Corporation in USA; LEICA RM2135 microtome, supplied by LEICA Corporation in Germany; ECHO LCD biochemical analyzer supplied by EICAM Corporation in Italy.

Experimental methods and dosages: animals are divided into normal group, model group, simvastatin group (10mg/kg), high dose group (1.12g/kg), medium dose group (0.56g/kg), low dose group (0.28g/kg), and very low dose group (0.14g/kg).

There are 10 animals in each group. Except the normal group, around 20g high-fat feed, instead of normal feed, is fed to each animal of other groups per day. Tap water is poured into stomachs of rats in the normal group and model group, and medicines are poured into stomachs of rats in other medicated groups once every afternoon with a dosage of 1ml/100g per rat. The experiment lasts for 21 days since started. After the last dosing in the evening before the experiment finishes, any feed is forbidden, but water could be supplied normally. In the next forenoon, blood collection of abdomen aorta is conducted after anesthesia, and then sent to Medical Testing Center of Southern Hospital of Southern Medical University to test TG(triglyceride), CHO(total Cholesterol), HDL(high density lipoprotein) and LDL(low density lipoprotein). At site which is 1.5 cm away from edge of left lobe of liver, transect a liver tissue, fix it in neutral formalin liquid, and make HE stain after conventional dehydration. The experimental data is illustrated by $\bar{x} \pm SD$ and rank/frequency table, and processed by spss 8.0 statistical software, i.e. One-Way ANOVA LST, or method of DunnettT3 and *Nonparametric Test* 2 Independent Samples Tests.

2. Test result

1) weight changes of rats

The weight changes of rats are illustrated in Table 1.

Table 1. Weight Changes of Rats in Different groups ($\bar{x} \pm SD$, N=6)

Group	Animal (number)	Weight in Day 1 (g)	Weight in Day 8 (g)	Weight in Day 15 (g)	Weight in Day 22 (g)	Percent of increased weight (%)
Normal group	10	211 $\pm$ 30	262 $\pm$ 34	292 $\pm$ 31*	314 $\pm$ 31**	50 $\pm$ 14**
Model group	10	210 $\pm$ 16	250 $\pm$ 21	266 $\pm$ 20	247 $\pm$ 21	18 $\pm$ 8
Simvastatin group	10	210 $\pm$ 26	249 $\pm$ 27	271 $\pm$ 26	250 $\pm$ 22	20 $\pm$ 8
High dose group	10	210 $\pm$ 21	255 $\pm$ 29	274 $\pm$ 28	250 $\pm$ 28	19 $\pm$ 8
Medium dose group	10	210 $\pm$ 22	250 $\pm$ 25	266 $\pm$ 18	252 $\pm$ 18	21 $\pm$ 7
Low dose group	10	210 $\pm$ 21	253 $\pm$ 24	271 $\pm$ 23	249 $\pm$ 21	19 $\pm$ 6
Very low dose group	10	211 $\pm$ 22	252 $\pm$ 26	270 $\pm$ 28	254 $\pm$ 26	21 $\pm$ 12

Remark:

a. * P<0.05 as compared with the Model group;

** P<0.01 as compared with the Model group.

- b. percent of increased weight $= (\text{weight in Day 22} - \text{weight in Day 1}) / \text{weight in Day 1} \times 100$.

It could be seen from Table 1 that in the model group, the weight of rat in Day 15 and Day 22, and percent of increased weight thereof are obviously lower than that in the normal group ($P < 0.05$, $P < 0.01$, $P < 0.01$); there are no obvious differences between other groups and the model group.

2) Feed Consumption

Feed consumption amount is illustrated in Table 2.

Table 2. Feed Consumption Amount of Rats in Different Groups

Group	Animal (number)	Total feed consumption amount (g)	Average feed consumption amount per rat (g)	Feed consumption for every increasing 1g weight (g)
normal group	10	3967	397	3.8
model group	10	3596	360	9.5
simvastatin group	10	3591	359	9.0
high dose group	10	3675	368	9.2
medium dose group	10	3556	356	8.5
low dose group	10	3599	360	9.2
very low dose group	10	3640	364	8.7

It could be seen from Table 2 that the average feed consumption amounts per rat are very close. In normal group, the feed consumption for every 1g increased weight is minimum. There are no obvious differences between other groups and the model group.

3) Test results of blood fat

The test results of blood fat of rats are illustrated in Table 3.

Table 3. Test Results of Blood Fat of Rats in Different Groups ($\bar{x} \pm \text{SD}$)

Group	Animal (number)	TG (mmol/L)	CHO (mmol/L)	HDL (mmol/L)	LDL (mmol/L)	Ratio of H/T (%)
-------	-----------------	-------------	--------------	--------------	--------------	------------------

Normal group	10	0.20±0.06	136±025	067±014*	047±008**	49±3**
Model group	10	0.29±0.08	736±262	104±024	566±205	15±4
Simvastatin group	10	0.18±0.04	541±177	084±023	423±145	15±4
High dose group	10	0.16±0.04	560±209	087±028	431±159	16±4
Medium dose group	10	0.18±0.03	579±082	094±017	443±067	16±3
Low dose group	10	0.15±0.02	594±302	094±037	462±242	17±4
Very low dose group	10	0.19±0.04	597±169	088±026	464±135	15±2

Remark:

- a. * $P < 0.05$ as compared with the Model group;
** $P < 0.01$ as compared with the Model group.
- b. Ratio of H/T= HDL cholesterol/ CHO $\times 100\%$.
- c. CHO= HDL (cholesterol) + LDL + VLDL

It could be seen from Table 3, compared with the normal group, the contents of total serum cholesterol and LDL cholesterol in the model group increase obviously ($P < 0.01$), and the ratio of H/T decreases obviously ($P < 0.01$); compared with the model group, contents of serum TG in the simvastatin group, high dose group, medium dose group, low dose group decrease obviously ($P < 0.05$, $P < 0.05$, $P < 0.05$, $P < 0.01$); compared with the model group, contents of total serum cholesterol in each dosing group decrease to some extent, but without obvious difference.

4) Histopathologic examination of liver

The results of histopathologic examination of liver are illustrated in Table 4.

Table 4: Results of Histopathologic Examination of the Rat Liver in different groups

Group	Normal liver tissue (-) (number)	Low-grade fatty-liver (+) (number)	Medium -grade fatty- liver (++) (number)	Severe-grade fatty-liver (+++) (number)	P value
Normal group	0	5	5	0	0.001
Model group	0	0	4	6	
Simvastatin group	0	0	5	5	0.661

High dose group	0	0	7	3	0.189
Medium dose group	0	1	6	3	0.147
Low dose group	0	0	8	2	0.075
Very low dose group	0	0	7	3	0.189

Remark:

changes of fatty-liver:

symbol “+” indicates that the structure of hepatic lobule still exists, and the structure of liver tissue is generally normal, parts of hepatic cords arrange at random, hepatic sinusoid is getting narrow, and liver cells around portal area are swelling, with low-grade vacuolization and ballooning degeneration;

symbol “++” indicates blurry structure of hepatic lobule, disappearance of parts of hepatic cords, disordered arrangement of liver cell, swelling, vacuolization and ballooning degeneration of most liver cells, spotty necrosis and focal necrosis of liver cells in parts of animals, and little inflammatory cell infiltration in portal area;

symbol “+++” indicates the disappearance of structural outline of hepatic lobule, irregular shape of liver cells, ballooning degeneration and swelling of the very most of liver cells, vacuolization of parts of liver cells, spotty necrosis and piecemeal necrosis of liver cells in parts of animals, and inflammatory cell infiltration in portal area.

It could be seen from Table 4, compared with the normal group, fatty degeneration of rat liver in model group is severe ($P<0.01$); compared with the model group, the fatty degeneration of rat liver is relieved to some extent in each dosing group, especially in the low dose group, which is close to the significant difference ($P=0.075$), and it is corresponding to the observation on the liver generally.

3. Experimental Conclusion

Compared the model group with the normal group, in the model group, the weight decreases obviously, the contents of serum total cholesterol and LDL cholesterol increase obviously, the ratio of H/T decreases obviously, and obvious swelling of liver cells (fatty degeneration) could be seen.

Compared with the model group, the contents of serum TG of rat in the high dose group, medium dose group and low dose group decrease obviously. The contents of serum total cholesterol of rats decrease to some extent in each dosing group, but without obvious difference.

Compared with the model group, the fatty degeneration of rat liver is relieved to some extent in each dosing group, especially in the low dose group.

Example 12

Research on the pharmacodynamics of protecting liver

1. Materials and Method

1) Test Medicines: content of capsules prepared according to Example 1. Bifendate pills, supplied by Guangzhou Xingqun Pharmaceutical Co., Ltd., with batch number: JF40021.

2) Animals

Animals: 110 NIH male mice with SPF grade, each having weight of 18 to 22 g. Quality certificate number of laboratory animal: 2006A051; Certificate number of approved environment condition of laboratory animal with SPF grade: 2006B023; Number of production licence of SPF laboratory animal: SCXK GD-2011-0015; animals are supplied by Animal Laboratory Center of Southern Medical University.

3) Primary chemical reagents and detecting instruments: reagent kits of alanine aminotransferase (ALT), supplied by BioSino Bio-technology and Science Inc., with batch number: 121881; reagent kits of aspartate aminotransferase (AST), supplied by BioSino Bio-technology and Science Inc., with batch number: 120921; carbon tetrachloride solution of analytically pure grade, supplied by Tianjin Funing Fine Chemical Engineering Co., Ltd., with batch number: 111010; formaldehyde solution of analytically pure grade, supplied by Guangdong Guanghua Sci-Tech Inc., with batch number: 20111007; absolute ethyl alcohol of analytically pure grade, supplied by Tianjin Jinfeng Chemical Engineering Co., Ltd., with batch number: 20110416; xylene of analytically pure grade, supplied by Guangdong Guanghua Chemical Plant Co., Ltd., with batch number: 20101224; Hematoxylin, which is a biological chromosin and subpackaged by Beijing Dingguo Biotechnical Co., Ltd., with patch number: 060408; Eosin Y, which is a biological chromosin and supplied by Chinese East China Normal University Chemistry Plant, with patch number: 20050912; ECHO LCD biochemical analyzer supplied by ECHO Corporation in Italy; OLYMPUS AU5421 automatic biochemical analyzer, supplied by OLYMPUS Corporation in Japan; OLYMPUS BH-2 fluorescence microscope, supplied by OLYMPUS Corporation in Japan; BECKMAN™30 refrigerated centrifuge, supplied by BECKMAN Corporation in USA; LEICA RM2135 microtome, supplied by LEICA Corporation in Germany; SARTORIUS electronic balance, supplied by SARTORIUS Corporation in Germany.

4) Experimental method and doses: animals are divided into normal group, model group, bifendate group (0.2g/kg), high dose group (1.56g/kg), medium dose group

(0.78g/kg), and low dose group (0.39g/kg). There are 12 animals in each group. Medicines are poured into stomach once everyday for 7 days. For normal group and model group, the same volume tap water is poured. The medicine dose is 0.25 ml/10g per mouse, with voluntary feeding. Conduct intraperitoneal inject of 0.2ml carbon tetrachloride (prepared by pure peanut oil) with a volume ratio of 0.12 per mouse, one hour after the last intragastric administration. Feeding is forbidden, but water could be supplied normally. 16 hours later, pick eyeballs to draw blood, and centrifuge the blood to obtain serum for testing glutamic-pyruvic transaminase and glutamic oxalacetic transaminase.

5) In pathological examination, take left lobe of liver, fix it in neutral formalin liquid, make conventional dehydration, embed it in paraffin and cut sections (4 micrometer), make HE stain and observe the pathologic changes of liver tissue through light microscope. Liver tissue injury is divided into four grades: Grade 0(-), which means normal structure of liver tissue, non-obvious degeneration, necrosis and inflammatory cell infiltration; Grade I (+), which means normal structure of hepatic lobule, view of turbid and swelling of parts of liver cells, ballooning degeneration or fatty degeneration, and spotty necrosis; Grade II (++), which means indistinct structure of hepatic lobule, obvious focal necrosis accompanying with inflammatory cell infiltration; Grade III (+++), which means indistinct structure of hepatic lobule, view of obvious piecemeal necrosis accompanying with inflammatory cell infiltration.

6) The experimental data is illustrated by $\bar{x} \pm SD$ and rank/frequency table, and processed by spss 8.0 statistical software, i.e. One-Way ANOVA LST, or method of DunnettT3 and Nonparametric Test 2 Independent Samples Tests.

2. Test Results

1) Weight changes of mice

Weight changes of mice could be seen from Table 5, there are no obvious differences between mice in different groups.

Table 5. Weight Changes of Mice in Different Groups ($\bar{x} \pm SD$, N=6)

Group	Weight in Day 1 (g)	Weight in Day 7 (g)	Empty body weight in Day 8 (g)
Normal group	23.42±1.89	31.94±2.05	27.75±1.83
Model group	23.51±1.05	31.38±1.12	27.42±0.96
Simvastatin group	23.81±2.31	30.58±1.89	26.74±1.56
High dose group	23.74±2.53	31.89±2.26	27.52±2.22

Medium dose group	23.82±1.87	30.39±1.62	26.47±1.44
Low dose group	23.77±2.00	30.94±2.96	27.10±2.49

2) Test results of liver function

The test results of serum glutamic pyruvic transaminase (SGPT) and serum glutamic oxalacetic transaminase (SGOT) of mice in different groups could be seen from Table 6.

Table 6. Test Results of SGPT and SGOT of Mice in Different Groups ($\bar{x} \pm SD$, N=6)

Group	Dosage (g/kg)	GPT (U/L)	GOT (U/L)
Normal group		43±6*	113±17**
Model group		317±112	303±96
Bifendate group	0.2	47±9**	240±73
High dose group	1.56	165±56*	117±35*
Medium dose group	0.78	223±114	245±62
Low dose group	0.39	223±140	232±89

Remark:

* P<0.05 as compared with the Model group;

** P<0.01 as compared with the Model group.

It could be seen from Table 6, compared the model group with the normal group, contents of SGPT and SGOT of the model group increase obviously (P<0.01); Compared with the model group, content of SGPT in Bifendate group decreases obviously (P<0.01), contents of SGPT and SGOT in high dose group decrease obviously (P<0.05), and in the medium dose group and low dose group, decline of enzyme could be seen partly, but it is not useful for statistical significance due to different variances; There is no obvious difference between other dosing groups and the model group.

3) Effects on pathologic lesion of liver tissue of mouse having acute liver injury

As seen from the results of pathological section, the structure of mouse liver tissue in the normal group is normal, live cells arrange radially around central veins, hepatic cords and hepatic sinusoid arrange regularly, the structure of hepatic lobule is intact,

pathologic changes, such as slight swelling and spotted necrosis of parts of liver cells, could be seen. In the mice of CCl₄ model group, most liver cells arranged around central veins are turbid and swelling, the cytoplasm is loose, and ballooning degeneration is occurred partly. Spotted necrosis focal necrosis, or piecemeal necrosis arranged below central veins of hepatic lobule and capsula of liver, accompanying with pathologic changes, such as inflammatory cell infiltration. In the Bifendate group and high dose group, the necrosis of liver cell is relieved obviously ($P < 0.05$), proving protection effect on liver injury caused by CCl₄ intraperitoneal injection in the high dose group. The pathologic results could be seen from Table 7.

Table 7. Effect on Pathologic Lesion of Mouse Liver Tissue having Acute Liver Injury in Different Groups

Group	Degeneration of liver cell				P value	Necrosis of liver cell				P value
	-	+	++	+++		-	+	++	+++	
Normal group	6	5	1	0	0.000	7	4	1	0	0.000
Model group	0	1	10	1		0	1	6	5	
Bifendate group	0	6	4	2	0.149	2	6	2	2	0.011
High dose group	0	4	6	2	0.446	2	3	6	1	0.021
Medium dose group	0	5	6	1	0.126	1	2	5	4	0.416
Low dose group	0	3	8	1	0.402	1	5	3	3	0.077

Remark: P value is the result as compared with the model group.

3. Conclusion

The result of the experiment indicates obvious inhibition effect in the high dose group for acute liver injury caused by CCl₄, which is shown by decrease of SGPT and SGOT, relief of degeneration of liver cell. It also shows effect for declining enzyme and protecting liver to some extent in the medium dose group and the low dose group.

What is claimed is:

1. A Chinese medicine composition for lowering lipid and protecting liver, being the compound preparation formed by Chinese medicine components and pharmaceutical adjuvants, characterized in that the Chinese medicine components comprise 60 to 120 parts by weight of *Gynura divaricata*, 50 to 110 parts by weight of *Radix Puerariae* and 20 to 60 parts by weight of *Radix Paeoniae Alba*.
2. The Chinese medicine composition according to claim 1, characterized in that the Chinese medicine components comprise 80 to 100 parts by weight of *Gynura divaricata*, 70 to 90 parts by weight of *Radix Puerariae*, and 30 to 50 parts by weight of *Radix Paeoniae Alba*.
3. The Chinese medicine composition according to claim 1 or 2, characterized in that the *Gynura divaricata* is the whole herb of *Gynura divaricata*.
4. The Chinese medicine composition according to claim 1 or 2, characterized in that the *Radix Puerariae* is the dried root of *Pueraria lobata*.
5. The Chinese medicine composition according to claim 1 or 2, characterized in that the *Radix Paeoniae Alba* is the dried root of *Paeonia lactiflora*.
6. The Chinese medicine composition according to claim 1 or 2, characterized in that the compound preparation is in form of capsules, pills, granules, or oral liquid.
7. The Chinese medicine composition according to claim 1 or 2, characterized in that the pharmaceutical adjuvant is one of, or a mixture of two or more of dextrin, saccharose, lactose, starch, sodium carboxymethyl starch, polyvinylpyrrolidone, magnesium stearate.
8. A preparation method of the Chinese medicine composition according to claim 1 or 2, characterized in that the method comprises steps as follows:
 - 1) decocting *Gynura divaricata* with water for 1.5 to 2 hours, wherein the weight of water is 8 to 12 times the weight of *Gynura divaricata*, collecting the extracting solution; then adding water again into the residue thereof, wherein the weight of water is 5 to 8 times the weight of the residue, decocting them for 1 to 1.5 hours, collecting the extracting solution again; mixing both extracting solutions, filtrating and concentrating it, then adding alcohol thereto and making the content of alcohol in 70% to 90%, filtrating, concentrating and drying the alcohol solution, and obtaining the extractive of *Gynura divaricata*.
 - 2) decocting *Radix Puerariae* with water for 1.5 to 2 hours, wherein the weight of water is 8 to 12 times the weight of *Radix Puerariae*, collecting the extracting solution; then adding water again into the residue thereof, wherein the weight of

water is 5 to 8 times the weight of the residue, decocting them for 1 to 1.5 hours, collecting the extracting solution again; mixing both extracting solutions, filtrating and concentrating it, then adding alcohol thereto and making the content of alcohol in 70% to 90%, filtrating, concentrating and drying the alcohol solution, and obtaining the extractive of Radix Puerariae;

- 3) decocting Radix Paeoniae Alba with water for 1.5 to 2 hours, wherein the weight of water is 8 to 12 times the weight of Radix Paeoniae Alba, collecting the extracting solution; then adding water again into the residue thereof, wherein the weight of water is 5 to 8 times the weight of the residue, decocting them for 1 to 1.5 hours, collecting the extracting solution again; mixing both extracting solutions, filtrating and concentrating it, then adding alcohol thereto and making the content of alcohol in 70% to 90%, filtrating, concentrating and drying the alcohol solution, and obtaining the extractive of Radix Paeoniae Alba; and
- 4) mixing the extractives of Gynura divaricata, Radix Puerariae and Radix Paeoniae Alba all together to obtain a total extractive, then adding pharmaceutical adjuvants thereto, mixing them evenly, pelleting and drying them, then pills can be produced by tableting them, or capsules can be produced by packing them into capsules, or granules can be produced by packing them.

9. A preparation method of the Chinese medicine composition according to claim 1 or 2, characterized in that the method comprises steps as follows:

- 1) decocting Gynura divaricata with water for 1.5 to 2 hours, wherein the weight of water is 8 to 12 times the weight of Gynura divaricata, collecting the extracting solution; then adding water again into the residue thereof, wherein the weight of water is 5 to 8 times the weight of the residue, decocting them for 1 to 1.5 hours, collecting the extracting solution again; mixing both extracting solutions, filtrating and concentrating it, then adding alcohol thereto and making the content of alcohol in 70% to 90%, filtrating and concentrating the alcohol solution, and obtaining the extractive solution of Gynura divaricata;
- 2) decocting Radix Puerariae with water for 1.5 to 2 hours, wherein the weight of water is 8 to 12 times the weight of Radix Puerariae, collecting the extracting solution; then adding water again into the residue thereof, wherein the weight of water is 5 to 8 times the weight of the residue, decocting them for 1 to 1.5 hours, collecting the extracting solution again; mixing both extracting solutions, filtrating and concentrating it, then adding alcohol thereto and making the content of alcohol in 70% to 90%, filtrating and concentrating the alcohol solution, and obtaining the extractive solution of Radix Puerariae;
- 3) decocting Radix Paeoniae Alba with water for 1.5 to 2 hours, wherein the weight of water is 8 to 12 times the weight of Radix Paeoniae Alba, collecting the extracting solution; then adding water again into the residue thereof, wherein the weight of water is 5 to 8 times the weight of the residue, decocting them for 1 to 1.5 hours, collecting the extracting solution again; mixing both extracting solutions, filtrating and concentrating it, then adding alcohol thereto and making

- the content of alcohol in 70% to 90%, filtrating and concentrating the alcohol solution, and obtaining the extractive solution of Radix Paeoniae Alba; and
- 4) mixing the extracting solutions of *Gynura divaricata*, Radix Puerariae and radixRadix Paeoniae Alba all together, and adding corrective thereto to obtain an oral liquid.

10. Application of the Chinese medicine composition for lowering lipid and protecting liver according to claim 1 or 2 on preparing medicines and health products for preventing and treating hyperlipidemia, obesity, viral hepatitis, chemical liver injury, and alcoholic liver injury.