

## Herbs for the Treatment of Hepatobiliary Disorders

### Globe Artichoke

The history of *Cynara scolymus* is divided into periods when it was used for medicinal purposes, interspersed by long intervals when only its culinary properties were known. From classical times the leaves and roots were known to stimulate the bile as well as having diuretic and antirheumatic properties. In 17th Century Europe, Globe Artichoke leaf was specially noted as a treatment for jaundice and liver insufficiency.<sup>1</sup>

Globe Artichoke leaf continues to be used in Europe as a traditional medicine with choleric, cholagogue and laxative properties to stimulate appetite and to treat liver insufficiency and hypercholesterolaemia. In France it is also regarded as a liver tonic with hepatoprotective activity.<sup>2</sup> The Quechua community of northern Bolivia use an infusion of Globe Artichoke leaf for cirrhosis of the liver and colic caused by gallstones.<sup>3</sup>

### Clinical Studies

Constituents include the bitter tasting sesquiterpene lactone cynaropicrin as well as caffeic acid derivatives (including cynarin) and flavonoids.<sup>2</sup> Clinical studies have often used the isolated caffeic acid derivatives or leaf extracts standardised to a particular content of these (especially cynarin).

Results from clinical studies have demonstrated the efficacy and safety of Globe Artichoke extracts in the treatment of hepatobiliary dysfunction and digestive complaints, such as sensation of fullness, loss of appetite, nausea and abdominal pain. Administration of a high dose of Globe Artichoke (9 g dried herb) significantly stimulated bile flow in healthy volunteers. Early findings of lipid lowering and hepatoprotective effects have been confirmed. *In vitro* and *in vivo* animal studies indicate that the caffeic acid derivatives and flavonoids are mainly responsible for the observed activity.<sup>4,5</sup>

Clinical observation of outpatients with dyspeptic syndrome showed that Globe Artichoke extract had a strong antiemetic effect.<sup>6</sup>

### St Mary's Thistle

For centuries *Silybum marianum* has been recommended in Europe for the treatment of liver disorders,<sup>7</sup> and more recently for jaundice, gallstones, gallbladder colic, hepatitis and haemorrhoids.<sup>8</sup> In the traditional medicine of Germany, the fruit is regarded as a cholagogue, hepatoprotective and stimulant of portal circulation. In Greece, other uses include the treatment of varicose veins and duodenal ulcer.<sup>7</sup>

In addition to many of these indications St Mary's Thistle was also used by the Eclectic physicians for splenic, hepatic and renal congestion, and for splenic pain even where no enlargement could be detected.<sup>9</sup> It is used in other countries such as Pakistan for haemorrhage and liver diseases,<sup>10</sup> and in Bulgaria for liver and gallbladder diseases.<sup>11</sup>

St Mary's Thistle fruit contains an active, lipophilic, flavanolignan mixture known as silymarin, consisting mainly of three isomers: silybin, silychristin and silydianin. Most standardized extracts contain 70–80% of silymarin.<sup>12,13</sup> A 1999 review concluded that silymarin (280–800 mg/day) may improve the clinical course and survival rates from acute and chronic hepatitis, and drug-, toxin- and alcohol-induced hepatitis.<sup>14</sup>

### Dandelion Root

*Taraxacum officinalis* root is a choleric, cholagogue, bitter tonic and mild laxative herb used traditionally for liver and gallbladder disorders such as inflammation of the gallbladder, gallstones, jaundice and dyspepsia with constipation.<sup>15,16</sup>

### Fringe Tree

*Chionanthus virginicus* root bark is a cholagogue and laxative herb. Popularised by the Eclectics, it has been used in western herbal medicine for liver disease, jaundice, inflammation of the liver or gallbladder, bilious headache and enlargement of the liver or spleen.<sup>9,15,17</sup>

## Bupleurum

In traditional Chinese medicine (TCM) Bupleurum is used to regulate the gastrointestinal system, and to soothe and restore liver function. It has been used to treat cholecystitis and hepatitis.<sup>18-21</sup> In Korea, Bupleurum is regarded as a liver tonic.<sup>22</sup> It is a major component in Japanese traditional prescriptions for the treatment of hepatobiliary diseases.<sup>23</sup>

Well-researched active constituents of Bupleurum are the triterpenoid saponins known as the saikosaponins.<sup>2</sup> Long-term oral administration of a mixture of saikosaponins (6 mg/day) reduced serum liver transaminase levels in patients with chronic hepatitis. Statistical significance was observed at 3, 6 and 12 months after the start of medication, compared with controls.<sup>23,24</sup>

## Synergistic Formulation

These herbs would complement each other in a very potent formulation with the following actions: choleric, cholagogue, hepatoprotective, liver toning and mild laxative.

## Indications

- Poor digestive function, poor liver function.
- Conditions associated with deficient bile production.
- Constipation due to sluggish liver.
- Symptoms associated with gallbladder dysfunction.

## Cautions and Contraindications

Globe artichoke is contraindicated in closure of the gallbladder.

## REFERENCES

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