

Quality is our Passion  
Passion Flower (*Passiflora incarnata*)

## Silymarin: Concentrated Liver Support

As early as the late 1960s concentrated extract of Milk Thistle was evaluated in clinical trials in Europe to support healthy liver function. This special, concentrated extract contains about 70 to 80% of flavanolignans that are collectively known as silymarin. The main flavanolignans are silybin, silychristin and silydianin. Because MediHerb's Silymarin contains a high percentage of flavanolignans it is a highly potent form of Milk Thistle.\*

### The extraordinary liver

Important functions of the liver include metabolism of food, hormones and foreign chemicals (such as drugs). The liver changes their composition into substances more easily used by body cells. It also has the ability to detoxify or excrete into the bile many drugs. Some of the hormones secreted by the endocrine glands are either chemically altered or excreted by the liver. So the liver needs to be functioning well to ensure these hormones do not accumulate in the body fluids.<sup>1</sup> The liver, skin and bone marrow are unique because they maintain themselves naturally by regeneration rather than repair. Regeneration occurs normally to replace aging tissue. In conditions of reduced health and advancing age the ability of the liver to regenerate is reduced.<sup>2\*</sup>

### Why the liver is important

A poorly functioning liver can have a wide-ranging effect on health eg poor digestion, constipation and digestive issues such as food intolerances. Alcohol, medications (eg painkillers, contraceptive drugs) and a diet high in fat may put the liver under stress.<sup>3</sup> The liver makes bile which is then stored in the gallbladder. Bile is released when you eat – it plays an important role in fat digestion and absorption. It also helps with excretion of several important waste products from the blood.<sup>1</sup> The connection in medicine between the health of the liver and healthy skin was made as far back as the 2nd century in the days of the Roman Empire.<sup>4</sup> More recently, natural clinicians have understood the need for the eliminatory organs of the body (liver, bowel, kidney, lungs and skin) to be functioning well. Excess stress on any one organ may put a burden on others, with implications for general health.<sup>5\*</sup>

## How Silymarin Keeps You Healthy Promotes healthy liver function and general health

In controlled clinical trials, concentrated Milk Thistle seed extract (containing 70 to 80% of flavanolignans – silymarin) was shown to support liver function. In a placebo-controlled trial, concentrated Milk Thistle seed extract supported healthy bile composition. In addition to healthy liver function, concentrated Milk Thistle seed extract supported healthy skin and digestive function in one uncontrolled trial.<sup>6\*</sup>

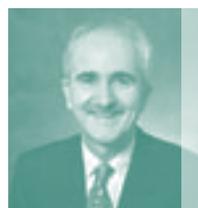
### Supplement Facts

Serving size:	1 tablet	
Servings per container:	60	
Amount per Serving		%DV
Calories	1	
Calcium	20 mg	2%
Milk Thistle fruit 70:1 extract from <i>Silybum marianum</i> fruit 14.7 g Containing flavanolignans calc. as silybin 168 mg	210 mg	†
† Daily Value (DV) not established.		

Other ingredients: Calcium acid phosphate, cellulose, sodium starch glycolate, silica and magnesium stearate.

**Caution:** Not to be used during pregnancy and lactation unless otherwise directed by a qualified health care professional. In anemia and cases where iron supplementation is required, do not take simultaneously with meals or iron supplements.

Product No	Content
M1420	60 Tablets



Associate Professor Kerry Bone  
MediHerb Co-Founder and  
Director of Research and Development

### A Phytotherapist's Passion

*"Philosopher and teacher Rudolf Steiner once said that, for every human illness, somewhere in the world there exists a plant which is the cure. I believe that there is a healing potential locked inside plants which is integral with their evolution, just as it is part of human evolution to learn to tap this wonderful gift of Nature."*

## Protects liver tissue by supporting normal cellular defenses

A review of controlled clinical trials found that concentrated Milk Thistle seed extract may support liver function by helping ensure the integrity of the liver cell.<sup>7</sup> The flavanolignans of Milk Thistle do this by providing protection from the damaging effects of excessive free radicals,<sup>8,9</sup> and by eliminating toxins.<sup>8</sup> The flavanolignans of Milk Thistle also provide support by increasing the normal rate of synthesis of structural and functional proteins in liver cells. This helps the liver's normal process of regeneration.<sup>8,\*</sup>

## Aids in the elimination of normal toxin accumulation in the liver

Milk Thistle has been used traditionally to aid in the elimination of toxins and cleanse the liver.<sup>10</sup> One of the ways this is achieved is due to enterohepatic circulation – the circulation that occurs between the intestine and the liver:<sup>10,11</sup>

- after the flavanolignans in Milk Thistle are swallowed they are absorbed in the intestine,
- then excreted from the liver in the bile,
- and then they are reabsorbed in the intestine.\*

This means that the cells of the liver are in contact with the flavanolignans at a higher concentration than the level reached in the bloodstream.<sup>10,11</sup> It is the contact at the cellular level of the liver that is important.\*

## What Makes Silymarin Unique

Silymarin is unique in the professional herbal products industry because:

- It states on the label exactly how much each tablet contains of the important plant constituents (flavanolignans)
- MediHerb tests the quantity of flavanolignans in Milk Thistle raw material
- MediHerb's testing also ensures the flavanolignans are retained in the product throughout manufacture
- MediHerb developed an accurate chemical analysis to assess the true level of flavanolignans

## Unique Manufacture & Analytical Testing

### Quality and safety ensured

- Manufactured in Australia to the high standards of international pharmaceutical Good Manufacturing Practice
- Raw materials and finished product are subjected to tough quality standards, including use of the latest and most relevant chemical analysis methods

### References

- <sup>1</sup> Guyton AC, Hall JE. *Textbook of Medical Physiology*, 10th Edn. W.B. Saunders, Philadelphia, 2000.
- <sup>2</sup> Khan AZ, Mudan SS. *ANZ J Surg* 2007; **77**(1-2): 9-14
- <sup>3</sup> Mills S, Bone K. *Principles and Practice of Phytotherapy: Modern Herbal Medicine*. Churchill Livingstone, Edinburgh, 2000.
- <sup>4</sup> Reuben A. *Hepatology* 2004; **39**(3): 870-874
- <sup>5</sup> Mills SY. *Out of the Earth: The Essential Book of Herbal Medicine*. Viking Arkana (Penguin), London, 1991.
- <sup>6</sup> McKenna DJ, Jones K, Hughes K et al. *Botanical Medicines: The Desk Reference for Major Herbal Supplements*, 2nd Edn. New York, Haworth Herbal Press, 2002.
- <sup>7</sup> Crocenzi FA, Roma MG. *Curr Med Chem* 2006; **13**(9): 1055-1074
- <sup>8</sup> Wellington K, Jarvis B. *BioDrugs* 2001; **15**(7): 465-489
- <sup>9</sup> Frascini F, Demartini G, Esposti D. *Clin Drug Invest* 2002; **22**(1): 51-65
- <sup>10</sup> Rainone F. *Am Fam Physician* 2005; **72**(7): 1285-1288
- <sup>11</sup> Faulstich H, Jahn W, Wieland T. *Azneim Forsch* 1980; **30**(3): 452-454



## Quality is our Passion

MediHerb products are developed by experts and leaders in the field of herbal therapy, using scientific evidence and hundreds of years of traditional knowledge.

Kerry Bone and over 20 health care professionals work within MediHerb while still managing their own clinical practices, plus we consult with an advisory board of health care professionals from around the world.

Our products are made using only the highest quality ingredients which are extensively tested for purity and potency. The MediHerb manufacturing plant operates to a strictly regulated pharmaceutical standard and is regularly audited by the Therapeutic Goods Administration (similar to the FDA), the same body that audits conventional pharmaceutical manufacturing facilities. The comprehensive regulations in Australia mean that you receive a safe and effective product that has been manufactured to pharmaceutical standards.

We know from our experience as health care professionals that the quality of a product you take makes a huge difference to the health outcome you experience. We dedicate ourselves to researching and making the best possible products to deliver health solutions that work.



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