UT RESPONSE PACK

IMMUNE HEALTH

UT Response Pack is a two-pronged system, designed to provide both immediate support and long-term maintenance of urinary health. It includes Cystistatin, providing quick support to soothe the mucosal lining of the urinary tract and promoting microflora balance. It also includes UT Defense, a formula specifically designed to reestablish healthy microflora balance for long-term urinary tract health and to promote urinary excretion. Together, this combination offers full-spectrum support for optimal kidney and urinary tract function, promoting microbial balance, healthy detoxification and urine excretion. The UT Response Pack is the most comprehensive nutritional and botanical urinary tract support available.

Overview
The urinary tract is made up of the kidneys, bladder, the ureters and the urethra. The urinary tract is responsible for producing urine and eliminating it from the body. As an important organ of elimination, a healthy urinary system is essential to the health of the entire body. Many individuals, including pregnant women and the elderly, may benefit from additional support for the urinary tract. The approach of the UT Response Pack works to help to maintain short- and long-term urinary tract health by promoting a healthy microbial balance, as well as by including soothing botanicals to maintain the comfort of the mucosal lining in the bladder.

UT Defense
Cranberries/Cran-Max®†
Cranberry juice has been used historically as support for urinary tract health.[1] The Cran-Max® in UT Defense formula is made of 100% cranberry fruit solids concentrated through a proprietary process by using 34 pounds of whole fresh cranberries to produce one pound of Cran-Max®. This process intensifies the natural benefits of the whole cranberry, without the use of any solvents, preservatives, sugars, water, flavorings or color. The mechanism of action of cranberry juice and its extracts is the inhibition of microbial binding to host cell surface membranes. In vitro studies have observed it to promote healthy microbial balance [2,3] facilitated by proanthocyanidins (PACs), which impact bacterial adherence and maintain the microbial health of the urinary tract.[4] A recent meta-analysis of 10 clinical trials and 1,494 subjects, showed supplementation of cranberry products supported urinary tract health and urine flow in women and children.[5] A meta-analysis of the results of four randomized, controlled clinical trials, found prophylactic use of cranberry significantly supported urinary tract health over a 12-month period, compared with placebo.[6] In another published clinical study,[7] more patients experienced better urinary tract health markers in the Cran-Max® supplemented group, compared to the group given dry cranberry powder.

Hibiscus sabdariffa†
H. sabdariffa extracts have long been used in herbal teas and for urinary tract support. H. sabdariffa calyx in a 10:1 extract (patented UTI Rose extract) includes compounds that promote microbial balance. It prevents bacteria from adhering to the bladder wall, especially substantial amounts of flavonoids, sambubiocides, anthocyanidins, proanthocyanidins and chlorogenic acids. In addition, other ingredients such as polysaccharides and a high concentration of simple organic acids provide urinary tract support. An in vitro study on H. sabdariffa calyx and protocatechuic acid has shown its ability to

† These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.
promote microbial balance, mediated by protocatechuic acid content and a six-month, double-blind, placebo-controlled study significantly promoted urinary tract health by 77%.

**Dandelion Leaf Extract†**

Dandelion leaf has a history of use in various preparations including infusions, extracts, and fresh expressed juice for improving urinary tract function. A clinical study of 17 participants given an extract of fresh dandelion leaf found it acts as a natural diuretic to increase the frequency and excretion ratio of fluids in these healthy subjects.

**Directions**

2 capsules per day or as recommended by your health care professional.

**Does Not Contain**

Gluten, corn, yeast, artificial colors and flavors.

**Cautions**

If you are pregnant or nursing, consult your physician before taking this product.

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**Supplement Facts**

<table>
<thead>
<tr>
<th>Serving Size 2 Capsules</th>
<th>Amount Per % Daily Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 capsules contain</td>
<td></td>
</tr>
<tr>
<td>Cranberry Concentrate</td>
<td>500 mg *</td>
</tr>
<tr>
<td>(Cran-Max®)</td>
<td></td>
</tr>
<tr>
<td>Dandelion Leaf Extract</td>
<td>225 mg *</td>
</tr>
<tr>
<td>Hibiscus Flower Extract</td>
<td>200 mg *</td>
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<td>(Ellirose™)</td>
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* Daily Value not established

**UT Defense ID# 500060 60 Capsules**

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**Cystistatin**

**Uva Ursi†**

The uva ursi extract in Cystistatin is standardized to contain 20% arbutin, which once converted to hydroxyquinone in the bladder, supports microbial balance. The medicinal portion of uva ursi is the dried leaves, which in addition to arbutin, includes methylarbutin, flavonoids, allantoin, tannins, organic acids, volatile oils and resins, among others. uva ursi has been found to promote microbial balance in the bladder and improve urinary excretion. A double-blind, prospective, randomized study of 57 women treated with either uva ursi or placebo for one month, found, at one-year follow-up, a statistically significant difference in the status of the uva ursi group’s urinary mucosal health.

**Berberine Sulfate†**

Berberine sulfate provides a salt form of berberine. Berberine sulfate contributes to microbial balance by blocking adhesion and assembly of adhesion molecules (fibriae). A study on the effect of berberine on erythrocytes and epithelial cells, found berberine’s promotion of microbial balance to be mediated by the selective suppression of the synthesis and assembly of fibriae by uropathogenic organisms. Another study found berberine to disrupt adhesion both by releasing the adhesin lipoteichoic acid from the cell surface, and another found it to directly prevent or dissolve lipoteichoic acid-fibronectin complexes.

**Marshmallow Root†**

Marshmallow root is a traditional demulcent herb with a long history of use for coating the gastric lining. Its mucilage polysaccharides swell when mixed with liquid and provide a slippery, soothing property to mucus membranes. The German Commission E has approved the use of marshmallow root for promoting the normal inflammatory process within the gastric mucosa. The demulcent activity of marshmallow root allows its promotion of a healthy mucosal surface in the urinary tissues and membranes.

**Celery Seed Extract†**

Celery seed, a part of the same family as carrots, parsley and fennel, has been used for centuries and is still in use today for its soothing and microbial balancing qualities. Celery seed also contains a number of constituents that help microbial balancing and acts to increase urine output to help flush the urinary tract. It has also been shown to reduce the membrane integrity of various microbes.

**Bladderwrack†**

Bladderwrack is a perennial seaweed found along the shores of Europe and America that has been used to support urinary health, although its name is probably derived from the bladder-like vesicles along its fronds. Bladderwrack has been used historically for its diuretic properties, as well as to support normal levels of inflammation in the bladder.
**Directions**
1-2 capsules three times per day or as recommended by your health care professional.

**Does Not Contain**
Gluten, yeast, artificial colors and flavors.

**Cautions**
Do not consume this product if you are pregnant or nursing. Consult your physician for further information.

**Supplement Facts**

![Supplement Facts Table]

- **Cystatin**
  - ID# 561060 60 Capsules

- **UT Response Pak**
  - ID# 526002 2-60 Capsule Bottles

**References**

21. Celery Seed. Integrative Medicine Access

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