Product Rationale: LYPO



Consider the following review of clinical research results on several important active ingredients known for their ability to control the persistence of lipoproteins such as LDL in the blood circulation and minimize the absorption of cholesterol.

Our modern diet is increasingly defined by high-fat, high-cholesterol foods. In addition to making smart choices of what we eat, supplemental enzymes can help support a healthy digestive system to encourage more complete digestion of fats and lipids. The effects of several cholesterol and triglyceride-lowering herbal ingredients were optimized in this functional enzymebased product. Additionally, Lypo provides effective antioxidants that scavenge and correct free radicals within the aqueous and lipophilic cellular environments.

# FORMULA RATIONALE

Transformation's Professional Protocol<sup>™</sup> Lypo includes several herbal ingredients that have been proven to enhance cholesterol and triglyceride control and can be used along with a healthy diet and lifestyle to support weight management efforts and to help maintain cholesterol and triglyceride levels that are already within the normal range.

**Garcinia Cambogia** contains hydroxycitrate, a powerful lipogenic inhibitor, meaning that it inhibits fat production from carbohydrates. Fatty acids are synthesized from acetyl-CoA which, in turn, is made from citrate (a product of the Kreb's cycle) by the enzyme citrate lyase. Hydroxycitrate inhibits this formation of acetyl-CoA from citrate.

**Guggulipids** is an extract of gum gugulu which has been extensively studied. Multicentric clinical trials found that gugulipid begins lowering serum cholesterol and triglycerides after 3-4 weeks.

**Bladderwrack algae** provides iodine, which provides support for the thyroid and thus for the body's overall energy metabolism. It is also known to lower cholesterol levels.

**Garlic** has been studied extensively and has repeatedly been found to have a wide variety of beneficial effects, including the lowering of serum cholesterol.

**Lecithin** assists bile with fat emulsification in the digestive tract. It is also a necessary precursor to effective digestion by lipases and optimal triglyceride hydrolysis.

Artichoke extract contains caffeylquinic acid compounds, which are probably the most important constituent for stimulating bile secretion and for lowering cholesterol.

**TZyme®** AntiOx Blend - This blend of highly active antioxidants is incorporated in order to ensure the vitality of gut epithelial cells and to prevent further oxidation of vital digestive hormones and enzymes. Two of these essential ingredients are Chromium picolinate and polynicotinate. They deliver bioavailable chromium, an essential trace element that is required for normal glucose metabolism. The benefits of Chromium picolinate include improved lipid patterns, stabilized glucose tolerance, lowered cholesterol, and enhanced lean body mass. Chromium nicotinate may be even more effective.

**Lipase** - Normal digestion of dietary fat is accomplished by lipases with the assistance of bile, which is produced by the liver and is normally supplied by way of the gall bladder. The function of bile is to bring ingested fats into emulsion so as to facilitate the work of the lipases. Incomplete digestion of fats may result in diarrhea and/or, more seriously, essential fatty acid deficiency. Adequate absorption of essential fatty acids is necessary to maintain membrane structure in cells throughout the body and to maintain healthy skin. Essential fatty acid deficiency also reduces blood-clotting time. Incomplete digestion of fat allows food particles to get coated with fat, which therefore interferes with the hydrolysis of other food components, such as proteins and carbohydrates.

**TZyme<sup>®</sup> Polysaccharolytic Blend** - The enzymes in this blend facilitate the digestion of all carbohydrates. They ensure the bio-availability of both nutrients and

active ingredients from dietary carbohydrates and also from the complex macrostructures of the plant materials.

**TZyme<sup>®</sup> Protease Blend** - This proprietary blend of enzymes consists of alkaline, neutral, and acid proteases including bromelain and papain. These proteases are active in a wide range of pH's, ensuring that proper protein digestion will begin in the stomach. This blend also includes enzymes with a wide range of specificities (e.g., both endo- and exo- peptidase activities) in order to ensure the highest degree of protein hydrolysis. The proteases will assist the hydrolyzing of dietary and cellular debris in the GI tract, which will prevent the formation of toxigenic amines.

### OTHER INGREDIENTS

#### Hypromellose and Water

This product is encapsulated in a vegetable capsule that is dairy and gluten free. No fillers are used in this product.

## **COMPONENT BENEFITS**

Transformation's Professional Protocol<sup>™</sup> Lypo includes Chromium polynicotinate and Guggulipids extract along with other herbs known known for their ability to support healthy digestion. The lipolytic enzymes known as lipase support the digestion of fats. This formula also includes polysaccharolytic enzymes, a protease enzyme blend, the antioxidants Beta Carotene and Vitamin E, and an effective antioxidant blend to help combat free radial damage associated with high-fat foods.

Each one-capsule serving of Lypo is formulated to include:

#### Vitamins & Minerals

Vitamin E (as d-alpha tocopheryl succinate) 1.7 mg Chromium (as Chromium polynicotinate) 100 mcg

### Herbs, etc

Garcinia cambogia rind extract	150 mg
Gugulipid <sup>®</sup> extract	60 mg
(Commiphora mukul gum resin)	
Bladderwrack algae	60 mg
Garlic (bulb)	40 mg
Lecithin (from soy)	40 mg
Artichoke (leaves) extract	30 mg
TZyme <sup>®</sup> AntiOx Blend	49 mg

Dunaliella extract Alpha-lipoic acid Eleuthero (root) American Ginseng (root) CoQ10 Flaxseed

Lipase (3,898 FIP)	21 mg
--------------------	-------

TZyme <sup>®</sup> Polysaccharolytic Blend	36 mg
Amylase	4,900 DU
Alpha-galactosidase	63 Gal U
Lactase	196 ALU
Diastase	59 DP°
Invertase	20 SU
Glucoamylase	0.042 AGU
TZyme <sup>®</sup> Protease Blend Peptidases Bromelain	103 mg
Other Ingredients	
Hypromellose Water	

Gugulipid® is a registered trademark of Sabinsa Corporation.

### SUMMARY

Transformation's Professional Protocol<sup>™</sup> Lypo is an enzyme supplement with herbs and vitamins designed to support blood lipids and blood sugars already within the normal range which helps promote cardiovascular health as well as healthy skin.

# CLINICAL APPLICATIONS

Possible indications for Lypo include:

- Cholesterol / triglyceride imbalances
- Chronic skin conditions
- Fat digestion
- Obesity
- Cardiovascular disease
- Diabetes
- Metabolic Syndrome

### **RECOMMENDED USAGE**

Take one capsule after meal or between meals with 8 oz. of water or as directed by a health care practitioner.

3

One capsule may be taken with meals to enhance the digestion of fats.

## DRUG INTERACTIONS

If you are taking prescription medications, please consult your pharmacist or physician before taking supplements.

## SAFETY / QUALITY ASSURANCE

This is to certify this formula meets the specifications for enzyme preparations as described in the FCC.

## MICROBIOLOGICAL EVALUATION

APC: <100 cfu/g

This product meets the specification of NMT 100,000 cfu/g APC. Raw materials used in this formula meet Transformation Enzyme Corporation's microbial testing requirements for Salmonella, E.coli, Yeast, and Mold.

## ALLERGENS

Contains soy.

May contain fish or shellfish. Bladderwrack algae is a natural aquatic product which may contain traces of fish and/or shellfish.

### PRODUCT SPECIFICATIONS

Lypo is available in bottles of 60 capsules.

### REFERENCES

Adler AJ, Holub BJ. Effect of garlic and fish-oil supple mentation on serum lipid and lipoprotein concentrations in hypercholesterolemic men. Am J Clin Nutr 1997; 65: 445- 50.

Evans GW. Review of studies with Chromium picolinate in Humans: Part I-Part II. The Nutrition Report. Oct-Nov 1989;7(10-11);73,81.

Lietti A. Choleretic and cholesterol lowering properties of two artichoke extracts. Fitoterapia 1977;48:153-8.

Nityanand S, Srivastava JS, Asthana OP. Clinical trials with gugulipid. A new hypolipidaemic agent. J Assoc Physicians India 1989;37:323-8.

Press R, et al. The effect of Chromium picolinate on serum cholesterol and apolipoprotein fractions in human subjects. Western J Med. Jan 1990:152(1):41-45.

Saha AK, et al. Malonyl-CoA regulation in skeletal muscle: its link to cell citrate and the glucose-fatty acid cycle. Am J Physiol 1997;272:E641-8.

Wiseman H. Dietary influences on membrane function: Importance in protection against oxidative damage and disease. Nutr Biochem 1996;7:2-15.

Copyright © Transformation



Transformation Enzyme Corporation 16203 Park Row Dr Ste 160 Houston, TX 77084 1-800-777-1474 TransformationEnzymes.com moreinfo@tecenzymes.com

\*This statement has not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.