4. Herbal Magic's claims regarding the efficacy of WM2000 are supported by clinical evidence.

Attached you will find the following papers, which provide clinical evidence for the efficacy of the ingredients in WM2000

a. "The effect of (-)-hydroxycitrate on energy intake and satiety in overweight humans" by MS Westerterp-Plantenga and EMR Kovacs published in the *International Journal of Obesity* in 2002

   This study reviewed 24 subjects in a randomized placebo-controlled trial to determine the effects of HCA on energy intake. The authors found decreased energy intake with HCA treated subjects compared to placebo and concluded "the fact that the main energy reduction took place between meals might indicate that HCA works by increasing fat oxidation (inhibiting malonyl-CoA synthesis, thus stimulating carnitine palmitoyl transferase activity) since fat is oxidized after protein and carbohydrate, thus later in the intermeal interval. During this interval satiety might be sustained by increased fat oxidation and ketone body formation"

b. "Effects of a natural extract of (-)-hydroxycitric acid (HCA-SX) and a combination of HCA-SX plus niacin-bound chromium and *Gymnema sylvestre* extract on weight loss" by HG Preuss et al published in *Diabetes, Obesity and Metabolism* 2004

   A randomized placebo-controlled trial on 60 moderately obese subjects found that the group consuming HCA or a combination of HCA, chromium and *Gymnema* had an improved body weight and a BMI decrease. Food intake, total cholesterol and lipid levels were also reduced in the treatment group. This study reported that HCA is known to reduce appetite, inhibit fat synthesis and decrease body weight without stimulating the central nervous system.

c. "Efficacy of Slim339 in reducing body weight of overweight and obese human subjects" by E Toromanyan et al published in *Phytotherapy Research* 2007

   A double-blind randomized placebo-controlled study of combination of *Garcinia cambogia* with calcium pantothenate found weight loss improvements in the treatment group versus placebo concluding it to be a potential therapy for obesity.

d. "Transcriptome of primary adipocytes from obese women in response to a novel hydroxycitric acid-based dietary supplement" by S. Roy et al published in *DNA and Cell Biology* 2007

   Researchers were able to determine the genomic impact of HCA consumption on weight loss by finding that HCA resulted in significant down-regulation of 348 and induction of

366-fat and obesity-related genes. HCA induced transactivation of hypoxia inducible factor (HIF), a novel approach in the management of obesity.

e. "Plant-derived triterpenoid sweetness inhibitors" by R. Suttisri et al published in *Journal of Ethnopharmacology* 1995

Researchers report that *Gymnema* has anti-sweet qualities leaving one unable to detect sweet indicating these properties have been extensively studied in humans. *Gymnema,* they indicate, may also delay glucose absorption in the blood.

f. "A systematic review of the efficacy and safety of herbal medicines used in the treatment of obesity" by Shirin Hasani-Ranjbar et al published in the *World Journal of Gastroenterology* in July 2009

The authors here clearly emphasize that obesity is increasing worldwide and that treatment should involve both lifestyle interventions and/or pharmacological therapy. However, they note that pharmacological treatment and surgical interventions are not always appropriate since "drug treatment of obesity despite short-term benefits, is often associated with rebound weight gain after the cessation of drug use, side effects from the medication and the potential for drug abuse", In their review, the authors critically assessed a total of 77 studies of which 19 were human studies for herbal supplements in obesity. They found that "a variety of herbal supplements had beneficial effects on obesity".

g. "Effects of (-)-hydroxycitric acid on appetite variables" by RD Mattes and L Bormann published in *Physiology and Behavior* 2000

12 week trial following 89 mildly overweight females found a greater reduction in weight in the group treated with HCA.

h. "Bioefficacy of a novel calcium-potassium salt of (-)-hydroxycitric acid" by BW Downs et al published in *Mutation Research* 2005

HCA has been shown to increase serotonin availability, reduce appetite, increase fat oxidation, improve blood lipid levels, reduce body weight, and modulate a number of obesity regulatory genes without affecting the mitochondrial and nuclear proteins required for normal biochemical and physiological functions.

i. "Effects of *Garcinia cambogia* (hydroxycitric acid) on visceral fat accumulation: A double-blind, randomized, placebo-controlled trial" by K Hayamizu, et al. *Current Therapeutic Research* 2003

A randomized, placebo-controlled study of 44 subjects placed on *Garcinia cambogia* or placebo were assessed at 16 weeks with the treatment group having a significantly reduced visceral, subcutaneous and total fat areas compared to placebo.

j. "Safety and mechanism of appetite suppression by a novel hydroxycitric acid extract (HCA-SX)" by SE Ohia published in *Molecular and Cellular Biochemistry* 2002.

In this study, *in vivo* toxicological studies demonstrate that HCA-SX is a safe, natural supplement under the conditions it was tested. Furthermore, HCA-SX can inhibit 5-HT uptake in isolated rat brain coritical slices in a manner similar to that of SSRIs, and thus may prove beneficial in controlling appetite, as well as treatment of depression, insomnia, migraine headaches and other serotonin-deficient conditions.

k. "Iodine effects on the thyroid gland: biochemical and clinical aspects" by KD Burman and L Wartofsky published in *Reviews in Endocrine & Metabolic Disorders* 2000

Iodine is a critical element involved in thyroid gland function and thyroid hormone synthesis and secretion. (Thyroid hormones are involved in metabolism)

l. "Effects of a Stimulant-Free Dietary Supplement on Body Weight and Fat Loss in Obese Adults: A Six-week exploratory study" by DE Woodgate and JA Conquer published in *Current Therapeutic Research* 2003

24 subjects randomly assigned to a combination supplement including *Gymnema sylvestre* or placebo. Researchers found that the treatment group demonstrated significant body weight and fat loss.

m. "The Influence of Active Components of *Eleutherococcus senticosus* on cellular defence and physical fitness in man" by S Szolomicki et al published in *Phytotherapy Research* 2000

Researchers found that active components of *Eleutherococcus senticosus* affected cellular defence and physical fitness, as well as lipid metabolism.

n. "Beneficial effects of *Zingiber officinale* on goldthioglucose induced obesity" by R. Goyal and S. Kadnur published in *Fitoterapia* 2006

Study examined the impact of *Zingiber officinale* in mice and found that 8 week treatment resulted in a significant reduction in body weight, glucose, insulin and lipid level compared to control group. Study indicates that *Zingiber officinale* improves insulin sensitivity.

o. "Small differences in thyroid function may be important for body mass index and the occurrence of obesity in the population" by N Knudsen et al published in *The Journal of Clinical Endocrinology & Metabolism* 2005

Research indicates that thyroid function is linked to weight gain with serum TSH having a positive correlation with increased weight and the occurrence of obesity.

p. "Thyroid function" by JR Arthur and GJ Beckett published in *British Medical Bulletin* 1999

Iodine plays a key role in thyroid hormone synthesis and functioning. Thyroid hormone metabolism is maintained as a result of key minerals including iodine.