SUMMARY of SENSORIL® CLINICAL TRIALS
Prepared by Bruce Abedon, PhD
Director of Scientific Affairs, NutraGenesis

SEVEN (7) PUBLISHED STUDIES

1  2008 Clinical Trial – Stress Study

<table>
<thead>
<tr>
<th>Design</th>
<th># of Subjects</th>
<th>Duration</th>
<th>Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Randomized, double-blind, placebo-controlled parallel study</td>
<td>98 healthy subjects with mild to moderate stress</td>
<td>60 days</td>
<td>125 mg once daily 125 mg twice daily 250 mg twice daily Placebo</td>
</tr>
</tbody>
</table>

Methods: Researchers evaluated a series of objective and subjective variables
Results:
- Significant reduction in cortisol and C-reactive protein, and significant increase in DHEA at all doses
- Significant reduction in fasting blood sugar, cholesterol, and triglycerides at the 125 mg twice daily dose and 250 mg twice daily dose
- Significant reduction in stress, anxiety, irritability, inability to concentrate, forgetfulness, sleeplessness, fatigue, and other subjective indicators of stress at all doses

2  2013 Bipolar Study – Cognitive Dysfunction in Bipolar Disorder

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<tbody>
<tr>
<td>Randomized, double-blind, placebo-controlled parallel study</td>
<td>53 subjects with diagnosed bipolar disorder who were symptom-free during the study period</td>
<td>8 weeks</td>
<td>250 mg twice daily Placebo</td>
</tr>
</tbody>
</table>

Methods: Researchers conducted a series of validated cognitive function tests
Results:
- Cognitive testing evaluated executive functioning, processing and psychomotor speed, attention, and memory based on Set Shifting, Strategic Target Detection, Auditory Digit Span, Word List Memory, Finger Tapping, and Flanker tests
- Consumption of Sensoril® resulted in significantly greater working memory, reaction time, and cognitive capacity
### 2013 Pain Study – Hot Air Pain Model


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<tbody>
<tr>
<td>Randomized, double-blind, placebo-controlled crossover study</td>
<td>12 healthy subjects</td>
<td>1 day followed by a 14 day washout period followed by 1 day crossover</td>
<td>1000 mg taken once placebo</td>
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</table>

**Methods:** Researchers used a hot air model to measure resistance to pain

**Results:**
- Significant increase in resistance to pain 3 hours after consumption of Sensoril®
- This study provides further evidence that Sensoril® is fast acting and experiential

### 2013 Cognitive & Psychomotor Performance Study


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<tr>
<td>Randomized, double-blind, placebo-controlled crossover study</td>
<td>20 healthy subjects</td>
<td>14 days followed by a 14 day washout period followed by 14 day crossover</td>
<td>500 mg taken twice daily placebo</td>
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**Methods:** Researchers conducted a series of validated cognitive function tests

**Results:**
- Significant improvements in the following tests:
  - Reaction Time (measures attention and sensory motor performance)
  - Digital System Substitution (measures attention, response speed, integration, and visual-motor coordination)
  - Digit Vigilance Task (measures alertness, vigilance, and selective capacity)
  - Card Sorting (measures sensory, motor, integrative, and executive functions)
- This study demonstrated that daily consumption of Sensoril® led to greater working memory, reaction time, and ability to process and store information
5 2013 Mental Stress & Cardiovascular Effects Study


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<td>Randomized, double-blind, placebo-controlled crossover study</td>
<td>20 healthy subjects</td>
<td>14 days followed by 14 day washout period followed by 14 day crossover</td>
<td>500 mg taken twice daily placebo</td>
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**Methods:** Stress was induced through a mental stress test with cardiovascular effects measured

**Results:**
- Significant improvement in augmentation index (pulse pressure, arterial stiffness, and wave reflections)
- Significant reduction in blood pressure, serum cortisol, C-reactive protein, and MDA (measure of lipid peroxidation)

6 2014 Endothelial Dysfunction Study I


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<tbody>
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<td>Randomized, double-blind, placebo-controlled parallel study</td>
<td>60 subjects with Type 2 diabetes</td>
<td>12 weeks</td>
<td>250 mg twice daily 500 mg twice daily Placebo</td>
</tr>
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</table>

**Methods:** Researchers evaluated cardiovascular health benefits of each treatment based on endothelial function and other parameters, as well as biomarkers of oxidative stress.

**Results:**
- Consumption of both treatments led to significant improvements in endothelial function based on Reflective Index, as well as C-reactive protein, blood lipids, and biomarkers of oxidative stress which demonstrates Sensoril's advanced cardiovascular health benefits.
7 2014 Endothelial Function Study II (Includes a Combination with Capros®)


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<td>Randomized, double-blind, parallel study</td>
<td>30 subjects with Type 2 diabetes</td>
<td>12 weeks</td>
<td>500 mg Sensoril® twice daily or 250 mg Sensoril® + 250 mg Capros® twice daily</td>
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</table>

Methods: Researchers evaluated cardiovascular health benefits of each treatment based on endothelial function and other parameters, as well as biomarkers of oxidative stress.

Results:
- Consumption of both treatments led to significant improvements in endothelial function based on Reflective Index, as well as C-reactive protein, blood lipids, and biomarkers of oxidative stress which demonstrates Sensoril’s advanced cardiovascular health benefits.

THREE (3) UNPUBLISHED STUDIES – (Confidential details available under NDA)

1 2014 Pain Study – Mechanical Pain Model


2 2014 Cardiovascular Changes in Healthy Humans

(Rani PU, et al. Evaluation of effect of Withania somnifera (Sensoril®) on cold pressor test induced cardiovascular changes in healthy human subjects. Submitted for publication)

3 2015 Joint Health Study

(Rani PU, et al. A randomized, double-blind, placebo-controlled, parallel group study to evaluate the efficacy and tolerability of Withania somnifera 250 mg and Withania somnifera 125 mg in patients with osteoarthritis knee. Submitted for publication)