# Biological Activities for Extracts of Erva Tostão (*Boerhaavia diffusa*)

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<tr>
<th>Plant part - origin</th>
<th>Activity tested for</th>
<th>Type extract</th>
<th>Test model</th>
<th>Dosage</th>
<th>Result</th>
<th>Notes / organism tested</th>
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<tbody>
<tr>
<td>Entire plant India</td>
<td>Toxicity assessment (Quantitative)</td>
<td>ETOH - H2O (1:1) Ext</td>
<td>IP Mouse</td>
<td>1.0 gm/kg</td>
<td>Maximum tolerated dose</td>
<td>A03335</td>
<td></td>
</tr>
<tr>
<td>Entire plant India</td>
<td>Toxic effect (General)</td>
<td>ETOH - H2O (1:1) Ext</td>
<td>Intragastric Mouse</td>
<td>2000 mg/kg</td>
<td>Inactive</td>
<td>M26677</td>
<td></td>
</tr>
<tr>
<td>Root India</td>
<td>Toxicity Assessment (Quantitative)</td>
<td>ETOH - H2O (1:1) Ext</td>
<td>IP Mouse</td>
<td>1.0 gm/kg</td>
<td>Maximum tolerated dose.</td>
<td>A03335</td>
<td></td>
</tr>
<tr>
<td>Leaf Brazil</td>
<td>Toxicity (General)</td>
<td>Decoction</td>
<td>Oral Mice</td>
<td>5000 mg/kg</td>
<td>Inactive</td>
<td>AJ1003</td>
<td></td>
</tr>
<tr>
<td>Leaf Juice Brazil</td>
<td>Toxicity (General)</td>
<td>Juice Ext</td>
<td>Oral Mice</td>
<td>5000 mg/kg</td>
<td>Inactive</td>
<td>AJ1003</td>
<td></td>
</tr>
<tr>
<td>Root Nigeria</td>
<td>Toxicity Assessment (Quantitative)</td>
<td>H2O Ext</td>
<td>IP Mouse</td>
<td>LD50: 298.0 mg/kg</td>
<td></td>
<td>K11896</td>
<td></td>
</tr>
<tr>
<td>Root India</td>
<td>Uterine Stimulant Effect</td>
<td>ETOH - H2O (1:1) Ext</td>
<td>Rat Female</td>
<td>Not stated</td>
<td>Inactive</td>
<td>Uterus (estrogenic)</td>
<td>A03335</td>
</tr>
<tr>
<td>Entire plant India</td>
<td>Uterine Stimulant Effect</td>
<td>ETOH-H2O (1:1) Ext</td>
<td>Rat Female</td>
<td>Not stated</td>
<td>Inactive</td>
<td>Uterus (estrog)</td>
<td>A03335</td>
</tr>
<tr>
<td>Root India</td>
<td>Embryotoxic Effect</td>
<td>ETOH (70% ) Ext</td>
<td>Intragastric Rat (pregnant)</td>
<td>250.0 mg/kg</td>
<td>Inactive</td>
<td>M31122</td>
<td></td>
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<tr>
<td>Root India</td>
<td>Teratogenic Activity</td>
<td>ETOH (70%) Ext</td>
<td>Intragastric Rat (pregnant)</td>
<td>250.0 mg/kg</td>
<td>Inactive</td>
<td>M31122</td>
<td></td>
</tr>
<tr>
<td>Entire plant India</td>
<td>Barbiturate Inhibition</td>
<td>ETOH - H2O (1:1) Ext</td>
<td>Intragastric Mouse</td>
<td>500.0 mg/kg</td>
<td>Active</td>
<td>Barbiturate sleeping time decreased.</td>
<td>M26677</td>
</tr>
<tr>
<td>Leaf Brazil</td>
<td>Barbiturate Potentiation</td>
<td>Decoction</td>
<td>IP Mice</td>
<td>1000 mg/kg</td>
<td>Inactive</td>
<td>Did not alter sleeping time.</td>
<td>AJ1003</td>
</tr>
<tr>
<td>Leaf Juice Brazil</td>
<td>Barbiturate Potentiation</td>
<td>Juice Ext</td>
<td>IP Mice</td>
<td>1000 mg/kg</td>
<td>Inactive</td>
<td>Did not alter sleeping time.</td>
<td>AJ1003</td>
</tr>
<tr>
<td>Root India</td>
<td>Hypotensive Activity</td>
<td>H2O Ext</td>
<td>IV Dog</td>
<td>0.02 ml/kg</td>
<td>Active</td>
<td>T15202</td>
<td></td>
</tr>
</tbody>
</table>

GI = Gastric Intubation   IG = Intragastric   NG = Nasogastric   IP = Intraperitoneally   IV = Intravenously   SC = Subcutaneously   IM = Intramuscular

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<tr>
<th>Plant part - origin</th>
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<tbody>
<tr>
<td>Root India</td>
<td>Hypotensive Activity</td>
<td>MEOH Ext</td>
<td>IV Dog</td>
<td>0.02 ml/kg</td>
<td>Active</td>
<td>Effect blocked by atropine, but not by propranolol or mepyramine. Reported biological activity is highly dose-dependent.</td>
<td>T12052</td>
</tr>
<tr>
<td>Root India</td>
<td>Myocardial Depressant Activity</td>
<td>MEOH Ext</td>
<td>Frog Heart</td>
<td>0.1 ml</td>
<td>Active</td>
<td>Effect blocked by atropine. Reported biological activity is highly dose-dependent.</td>
<td>T12052</td>
</tr>
<tr>
<td>Root India</td>
<td>Cardiotonic Activity</td>
<td>ETOH-H2O (1:1) Ext</td>
<td>Perfusion Guinea Pig</td>
<td>Not stated</td>
<td>Active</td>
<td>Heart</td>
<td>A03335</td>
</tr>
<tr>
<td>Entire plant India</td>
<td>Anticoagulant activity</td>
<td>ETOH-H2O (1:1) Ext</td>
<td>Intragastric Rat</td>
<td>500.0 mg/kg</td>
<td>Active</td>
<td>Prothrombin time decreased. Dose was given daily for 5 days. Vs. ccl4-induced hepatotoxicity.</td>
<td>M26677</td>
</tr>
<tr>
<td>Not stated India</td>
<td>Hemostatic Activity</td>
<td>Not stated</td>
<td>Vaginal Monkey</td>
<td>Not stated</td>
<td>Active</td>
<td>Aids in Arresting IUDC-induced Bleeding</td>
<td>T01268</td>
</tr>
<tr>
<td>Root India</td>
<td>Antihemorrhagic Activity</td>
<td>Not stated</td>
<td>Monkey</td>
<td>Not stated</td>
<td>Active</td>
<td>Reduced duration of menstrual flow (124%), menstrual iron loss (120.8%) and uterine tissue plasminogen activator (272%) in IUD-fitted monkeys</td>
<td>AJ1006</td>
</tr>
<tr>
<td>Root India</td>
<td>Antihemorrhagic Activity</td>
<td>Not stated</td>
<td>Monkey</td>
<td>Not stated</td>
<td>Active</td>
<td>Reduced stromal edema, inflammation, tortuosity of glands and increased deposition of fibrin and platelets in the vessel lumen of the endometrium of monkeys fitted with IUD's.</td>
<td>AJ1007</td>
</tr>
<tr>
<td>Root India</td>
<td>Angiotensin-Converting Enzyme Inhibition</td>
<td>Acetone Ext</td>
<td>Not stated</td>
<td>25.0 mcl</td>
<td>Weak Activity</td>
<td>3.0% Inhibition</td>
<td>K26414</td>
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<tr>
<td>Root India</td>
<td>Angiotensin-Converting Enzyme Inhibition</td>
<td>ETOH (95%) Ext</td>
<td>Not stated</td>
<td>25.0 mcl</td>
<td>Weak Activity</td>
<td>5.0% Inhibition</td>
<td>K26414</td>
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<tr>
<td>Root India</td>
<td>Angiotensin-Converting Enzyme Inhibition</td>
<td>H2O Ext</td>
<td>Not stated</td>
<td>25.0 mcl</td>
<td>Active</td>
<td>40% Inhibition</td>
<td>K26414</td>
</tr>
<tr>
<td>Root Nepal</td>
<td>Adrenergic Receptor Blocker (alpha-2)</td>
<td>MEOH Ext</td>
<td>Not stated</td>
<td>Not stated</td>
<td>Active</td>
<td></td>
<td>H05892</td>
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<tr>
<td>Root India</td>
<td>Antiproliferative Activity</td>
<td>ETOH Ext</td>
<td>Not stated</td>
<td>Not stated</td>
<td>Active</td>
<td></td>
<td>AJ1001</td>
</tr>
<tr>
<td>Root India</td>
<td>Antiphage Activity</td>
<td>H2O Ext</td>
<td>Intraportal</td>
<td>Not stated</td>
<td>Inactive</td>
<td>Bacteriophage M-12 vs. plaque formation</td>
<td>M16847</td>
</tr>
<tr>
<td>Root India</td>
<td>Antiphage Activity</td>
<td>H2O Ext</td>
<td>Intraportal</td>
<td>Not stated</td>
<td>Inactive</td>
<td>Bacteriophage PP-7 vs. plaque formation</td>
<td>M16847</td>
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<tr>
<td>Root India</td>
<td>Antiphage Activity</td>
<td>H2O Ext</td>
<td>Intraportal</td>
<td>Not stated</td>
<td>Weak Activity</td>
<td>Bacteriophage Q-beta vs. plaque formation</td>
<td>M16847</td>
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<tr>
<td>Root India</td>
<td>Cholinesterase Inhibition</td>
<td>H2O Ext</td>
<td>Not stated</td>
<td>Not stated</td>
<td>Active</td>
<td></td>
<td>T15202</td>
</tr>
<tr>
<td>Not stated India</td>
<td>Diuretic Activity</td>
<td>Powder * Oral</td>
<td>Human Adult</td>
<td>1.5 gm/lb</td>
<td>Inactive</td>
<td>Forty patients with nephrotic syndrome were treated with fresh powdered drug for one month. The extract increased serum protein levels, reduced urinary protein excretion and increased the level of immunoglobulins and lowered immunecomplex.</td>
<td>K29697</td>
</tr>
<tr>
<td>Entire plant India</td>
<td>Diuretic activity</td>
<td>Not stated</td>
<td>Toad (Thermobia domes)</td>
<td>Variable</td>
<td>Active</td>
<td>Depressed tubular excretion of phenol. Inhibited succinic dehydrogenase in kidney, but had a stimulatory effect with lower doses. It depressed kidney tissue slice respiration, but had no effect on kidney phosphatase. It stimulated the activity of kidney D-amino oxidase.</td>
<td>A11491</td>
</tr>
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<td>Plant part - origin</td>
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<td>-------------------------------------------------------------------------------------------</td>
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<tr>
<td>Aerial parts India</td>
<td>Diuretic activity</td>
<td>ETOH</td>
<td>Oral Rat</td>
<td>0.4 ml/kg</td>
<td>Weak activity</td>
<td>Activity was increased when the dosage was halved and combined with <em>Phyllanthus niruri</em> extract</td>
<td>J12663</td>
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<tr>
<td>Not stated India</td>
<td>Diuretic Activity</td>
<td>Powder</td>
<td>Intragastric Rat (Male)</td>
<td>1.0 ml</td>
<td>Active</td>
<td>Kidney</td>
<td>K29697</td>
</tr>
<tr>
<td>Root India</td>
<td>Diuretic Activity</td>
<td>ETOH (95%) Ext</td>
<td>IP Rat</td>
<td>300.0 mg/kg</td>
<td>Active</td>
<td>Increased 24 Hr Urine output 100%</td>
<td>J08439</td>
</tr>
<tr>
<td>Stem India</td>
<td>Diuretic Activity</td>
<td>ETOH (95%) Ext</td>
<td>IP Rat</td>
<td>300.0 mg/kg</td>
<td>Inactive</td>
<td>Increased 24 Hr Urine output 15%</td>
<td>J08439</td>
</tr>
<tr>
<td>Entire plant India</td>
<td>Antidiuretic activity</td>
<td>ETOH (95%) Ext</td>
<td>IP Rat</td>
<td>300.0 mg/kg</td>
<td>Active</td>
<td>Decreased 24 hr urine output by 30%</td>
<td>J08439</td>
</tr>
<tr>
<td>Flower + leaf India</td>
<td>Antidiuretic activity</td>
<td>ETOH (95%) Ext</td>
<td>IP Rat</td>
<td>300 mg/kg</td>
<td>Active</td>
<td>Decreased 24 hr urine output by 50%</td>
<td>J08439</td>
</tr>
<tr>
<td>Entire plant India</td>
<td>Diuretic activity</td>
<td>Pet ether Ext</td>
<td>Oral Rat</td>
<td>ED50 = 250 mg/kg</td>
<td>Active</td>
<td></td>
<td>J05221</td>
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<tr>
<td>Root India</td>
<td>Hepatoprotective Activity</td>
<td>H2O Ext</td>
<td>Rat</td>
<td>2 ml/kg</td>
<td>Active</td>
<td>In thioacetamide intoxicated rats the extract protected serum parameters GOT, GPT, ACP and ALP.</td>
<td>AJ1010</td>
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<tr>
<td>Entire plant India</td>
<td>Antihepatotoxic activity</td>
<td>ETOH - H2O (1:1) ext</td>
<td>Intragastric Mouse</td>
<td>500.0 mg/kg</td>
<td>Active</td>
<td>vs. CCL4-induced hepatotoxicity. Reversed increases in glutamate pyruvate transaminase, glutamate oxylate transaminase and bilirubin.</td>
<td>M26677</td>
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<tr>
<td>Entire plant India</td>
<td>Glutamate-oxalo-acetate-transaminase inhibition</td>
<td>ETOH - H2O (1:1) Ext</td>
<td>Intragastric Rat</td>
<td>500.0 mg/kg</td>
<td>Active</td>
<td>vs. CCL4-induced hepatotoxicity.</td>
<td>M26677</td>
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<td>Entire plant India</td>
<td>Glutamate-pyruvate-transaminase inhibition</td>
<td>ETOH - H2O (1:1) Ext</td>
<td>Intragastric Mouse</td>
<td>500.0 mg/kg</td>
<td>Active</td>
<td>vs. CCL4-induced hepatotoxicity.</td>
<td>M26677</td>
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<tr>
<td>Entire plant India</td>
<td>Glutamate-pyruvate-transaminase inhibition</td>
<td>ETOH - H2O (1:1) Ext</td>
<td>Intragastric Rat</td>
<td>500.0 mg/kg</td>
<td>Active</td>
<td>vs. CCL4-induced hepatotoxicity.</td>
<td>M26677</td>
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<tr>
<td>Entire plant India</td>
<td>Hepatotonic Activity</td>
<td>ETOH - H2O (1:1) Ext</td>
<td>Intragastric Rat</td>
<td>500.0 mg/kg</td>
<td>Active</td>
<td>vs. CCL4-induced hepatotoxicity. Plasma bilirubin decreased.</td>
<td>M26677</td>
</tr>
<tr>
<td>Not stated India</td>
<td>Antihepatotoxic Activity</td>
<td>Not stated</td>
<td>IP Rat</td>
<td>Not stated</td>
<td>Active</td>
<td>vs. mercuric chloride induced hepatotoxicity. Liver showed an increased mitotic index and acceleration of tubular repair.</td>
<td>K07546</td>
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<td>Leaf Nigeria</td>
<td>Anticonvulsant Activity</td>
<td>ETOH (70%) Ext</td>
<td>IP Mouse</td>
<td>2.0 gm/kg</td>
<td>Active</td>
<td>vs. metrazole-induced convulsions.</td>
<td>T06510</td>
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<tr>
<td>Leaf Nigeria</td>
<td>Anticonvulsant Activity</td>
<td>ETOH (70%) Ext</td>
<td>IP Mouse</td>
<td>Variable</td>
<td>Inactive</td>
<td>vs. strychnine-induced convulsions</td>
<td>T06510</td>
</tr>
<tr>
<td>Root Nigeria</td>
<td>Anticonvulsant Activity</td>
<td>MEOH Ext</td>
<td>IP Mouse</td>
<td>1.5 gm/kg</td>
<td>Active</td>
<td>vs metrazol-induced convulsions</td>
<td>N02475</td>
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<tr>
<td>Root Nigeria</td>
<td>Anticonvulsant Activity</td>
<td>H2O Ext</td>
<td>IP Mouse</td>
<td>ED50: 126 mg/kg</td>
<td>Active</td>
<td>vs. electroshock-induced convulsions</td>
<td>K11896</td>
</tr>
<tr>
<td>Root Nigeria</td>
<td>Anticonvulsant Activity</td>
<td>H2O Ext</td>
<td>IP Mouse</td>
<td>ED50: 251 mg/kg</td>
<td>Weak Activity</td>
<td>vs. pentylenetetrazole-induced convulsions</td>
<td>K11896</td>
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<tr>
<td>Root India</td>
<td>Skeletal Muscle Stimulant Activity</td>
<td>MEOH Ext</td>
<td>Frog</td>
<td>0.25 ml</td>
<td>Active</td>
<td>Muscle (Rectus abdominus)</td>
<td>T12052</td>
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<tr>
<td>Root India</td>
<td>Smooth Muscle Stimulant Activity</td>
<td>MEOH Ext</td>
<td>Guinea Pig ileum</td>
<td>0.05 ml</td>
<td>Active</td>
<td>Effect blocked by atropine.</td>
<td>T12052</td>
</tr>
<tr>
<td>Root India</td>
<td>Antispasmodic Activity</td>
<td>ETOH - H2O (1:1) Ext</td>
<td>Guinea Pig ileum</td>
<td>Not stated</td>
<td>Active</td>
<td>vs. ACH- and histamine-induced spasms.</td>
<td>A03335</td>
</tr>
<tr>
<td>Entire plant India</td>
<td>Antispasmodic Activity</td>
<td>ETOH - H2O (1:1) Ext</td>
<td>Guinea Pig ileum</td>
<td>Not stated</td>
<td>Active</td>
<td>vs. ACH- and histamine-induced spasms.</td>
<td>A03335</td>
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<tr>
<td>Root India</td>
<td>Spasmogenic Activity</td>
<td>H2O Ext</td>
<td>Frog</td>
<td>Not stated</td>
<td>Active</td>
<td>Muscle (Rectus abdominus)</td>
<td>T15202</td>
</tr>
<tr>
<td>Root India</td>
<td>Spasmogenic Activity</td>
<td>H2O Ext</td>
<td>Guinea Pig</td>
<td>Not stated</td>
<td>Active</td>
<td>Ileum</td>
<td>T15202</td>
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<tr>
<td>Leaf + root + seed India</td>
<td>Anti-inflammatory Activity</td>
<td>Not stated</td>
<td>Oral Human Adult</td>
<td>Variable</td>
<td>Active</td>
<td></td>
<td>T06320</td>
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<tr>
<td>Plant part - origin</td>
<td>Activity tested for</td>
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<td>----------------------------------------------------------------------------------------</td>
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<tr>
<td>Entire plant India</td>
<td>Anti-inflammatory Activity</td>
<td>ETOH (95%) Ext</td>
<td>IP Rat</td>
<td>300.0 mg/kg</td>
<td>Active</td>
<td>vs carrageenin-induced pedal edema. Paw volume decreased 44%</td>
<td>J08439</td>
</tr>
<tr>
<td>Flower + leaf India</td>
<td>Anti-inflammatory Activity</td>
<td>ETOH (95%) Ext</td>
<td>IP Rat</td>
<td>300 mg/kg</td>
<td>Active</td>
<td>vs carrageenin-induced pedal edema. Paw volume decreased 52%</td>
<td>J08439</td>
</tr>
<tr>
<td>Root India</td>
<td>Anti-inflammatory Activity</td>
<td>ETOH (95%) Ext</td>
<td>IP Rat</td>
<td>300.0 mg/kg</td>
<td>Active</td>
<td>vs. carrageenin-induced pedal edema decreased paw volume 52%</td>
<td>J08439</td>
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<tr>
<td>Stem India</td>
<td>Anti-inflammatory Activity</td>
<td>ETOH (95%) Ext</td>
<td>IP Rat</td>
<td>300.0 mg/kg</td>
<td>Weak Activity</td>
<td>vs. carrageenin-induced pedal edema paw volume decreased 16%</td>
<td>J08439</td>
</tr>
<tr>
<td>Leaf Brazil</td>
<td>Anti-inflammatory Effect</td>
<td>Decoction</td>
<td>Oral Mouse</td>
<td>Not stated</td>
<td>Inactive</td>
<td>No effect on carrageenan-induced paw edema. P &gt; 0.05</td>
<td>AJ1003</td>
</tr>
<tr>
<td>Leaf Brazil</td>
<td>Analgesic Effect</td>
<td>Decoction</td>
<td>Oral Mouse</td>
<td>1000 mg/kg</td>
<td>Active</td>
<td>vs. acetic acid-induced writhing. demonstrated 47% inhibition. Thermal hot-plate writhing test.</td>
<td>AJ1003</td>
</tr>
<tr>
<td>Leaf Juice Brazil</td>
<td>Analgesic Effect</td>
<td>Juice Ext</td>
<td>Oral Mouse</td>
<td>1000 mg/kg</td>
<td>Strong Activity</td>
<td>vs. acetic acid-induced writhing demonstrated 50% inhibition. Thermal hot-plate writhing test.</td>
<td>AJ1003</td>
</tr>
<tr>
<td>Twig India</td>
<td>Antipyretic Activity</td>
<td>Not stated</td>
<td>Intragastric Rat</td>
<td>Not stated</td>
<td>Weak Activity</td>
<td>Vs.pyrexia Induced by Subcutaneous Injection of Yeast</td>
<td>A14888</td>
</tr>
<tr>
<td>Not stated India</td>
<td>Immunostimulatory Effect</td>
<td>Alkaloid Fraction</td>
<td>Mice</td>
<td>25-100 mg/kg</td>
<td>Active</td>
<td>Inhibited SRBC-induced delayed hypersensitivity reactions during post-immunization drug treatment. An increase in antibody titre was observed during pre- and post-immunization treatment.</td>
<td>AJ1004</td>
</tr>
</tbody>
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<tbody>
<tr>
<td>Root India</td>
<td>Immunosuppressive Activity</td>
<td>ETOH Ext</td>
<td>In vitro</td>
<td>Not stated</td>
<td>Active</td>
<td>Inhibited human NK cell cytotoxicity, production of NO in mouse macrophage cells, IL-2 and TNF-alpha in human PBMCs. No effect on IFN-gamma, cell surface markers CD16, CD25 and HLA-DR.</td>
<td>AJ1001</td>
</tr>
<tr>
<td>Not stated India</td>
<td>Blastogenic Activity</td>
<td>Alkaloid Fraction</td>
<td>Mice</td>
<td>25-100 mg/kg</td>
<td>Inactive</td>
<td>No blastogenic response of murine splenocytes to Concanavalin A and lipopolysaccharide.</td>
<td>AJ1004</td>
</tr>
<tr>
<td>Not stated India</td>
<td>Mitogenic Activity</td>
<td>Alkaloid Fraction</td>
<td>Mice</td>
<td>25-100 mg/kg</td>
<td>Inactive</td>
<td>No blastogenic response of murine splenocytes to Concanavalin A and lipopolysaccharide.</td>
<td>AJ1004</td>
</tr>
<tr>
<td>Entire plant India</td>
<td>Cytotoxic activity</td>
<td>ETOH - H2O (1:1) Ext</td>
<td>Cell culture</td>
<td>ED50: &gt; 20.0 mcg/ml</td>
<td>Inactive</td>
<td>Ca-9kb</td>
<td>A03335</td>
</tr>
<tr>
<td>Root India</td>
<td>Cytotoxic Activity</td>
<td>ETOH - H2O (1:1) Ext</td>
<td>Cell Culture</td>
<td>ED50: &gt; 20.0 mcg/ml</td>
<td>Inactive</td>
<td>Ca-9kb</td>
<td>A03335</td>
</tr>
<tr>
<td>Root Nepal</td>
<td>Cytotoxic Activity</td>
<td>Ether Ext</td>
<td>Cell Culture</td>
<td>Not stated</td>
<td>Active</td>
<td>HeLa-S3 Cells</td>
<td>H05892</td>
</tr>
<tr>
<td>Root India</td>
<td>Antiproliferative Activity</td>
<td>ETOH Ext</td>
<td>Cell culture</td>
<td>Not stated</td>
<td>Active</td>
<td>Inhibited mitogenic T-cell proliferation of human peripheral blood mononuclear cells (PBMC). Inhibited the growth of mouse and human macrophage cells, mouse fibroblast cells, human embryonic kidney cells, mouse liver cells, monkey kidney cells, mouse lymphoma cells, human erythroleukemic cells and human T cells.</td>
<td>AJ1002</td>
</tr>
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<tr>
<td>Root India</td>
<td>Antiviral Activity</td>
<td>H2O Ext</td>
<td>Not stated</td>
<td>Undiluted</td>
<td>Active</td>
<td>Gomphrena mosaic virus Sunnhemp rosette virus Tobacco mosaic virus Tobacco ring spot virus</td>
<td>N02873</td>
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<tr>
<td>Aerial parts Iran</td>
<td>Antibacterial Activity</td>
<td>ETOH (80%) Ext</td>
<td>Agar plate</td>
<td>100.0 mcg/ml</td>
<td>Active</td>
<td>Active Active Active Pseudomonas aeruginosa Salmonella paratyphi A Staphylococcus aureus</td>
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<tr>
<td>Entire plant India</td>
<td>Antibacterial Activity</td>
<td>H2) Ext</td>
<td>Agar Plate</td>
<td>30-40 mg/ml</td>
<td>Active</td>
<td>Aeromonas hydrophilia Bacillus cereus.</td>
<td>AJ1012</td>
</tr>
<tr>
<td>Aerial parts Iran</td>
<td>Antibacterial Activity</td>
<td>ETOH (80%) Ext</td>
<td>Agar plate</td>
<td>100.0 mcg/ml</td>
<td>Inactive</td>
<td>Bacillus anthracis Escherichia coli Klebsiella pneumoniae Proteus vulgaris Shigella sonnei Vibrio cholera</td>
<td>T09667</td>
</tr>
<tr>
<td>Petiole Nigeria</td>
<td>Antibacterial Activity</td>
<td>H2O Ext</td>
<td>Agar Plate</td>
<td>Not stated</td>
<td>Active</td>
<td>Clostridium botulinum Corynebacterium diphtheriae Salmonella typhimurium</td>
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</tr>
<tr>
<td>Petiole Nigeria</td>
<td>Antibacterial Activity</td>
<td>ETOH (40%) Ext</td>
<td>Agar Plate</td>
<td>Not stated</td>
<td>Active</td>
<td>Clostridium botulinum Clostridium tetani</td>
<td>K16264</td>
</tr>
<tr>
<td>Petiole Nigeria</td>
<td>Antibacterial Activity</td>
<td>ETOH (40%) Ext</td>
<td>Agar Plate</td>
<td>Not stated</td>
<td>equivocal</td>
<td>Neisseria gonorrhoea</td>
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<tr>
<td>Entire plant Nigeria</td>
<td>Antibacterial activity</td>
<td>MEOH Ext</td>
<td>Agar plate</td>
<td>2.0 mg/ml</td>
<td>Inactive</td>
<td>Corynebacterium diphtheriae Neisseria species Pseudomonas aeruginosa Salmonella species Staphylococcus aureus Streptobacillus species Streptococcus species</td>
<td>M27767</td>
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<tr>
<td>Petiole Nigeria</td>
<td>Antibacterial Activity</td>
<td>ETOH (40%) Ext</td>
<td>H2O Ext</td>
<td>Not stated</td>
<td>Inactive</td>
<td>Staphylococcus aureus</td>
<td>K16264</td>
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<tr>
<td>Petiole Nigeria</td>
<td>Antibacterial Activity</td>
<td>ETOH (40%) Ext</td>
<td>Agar Plate</td>
<td>Not stated</td>
<td>Inactive</td>
<td>Salmonella typhimurium, Bacillus subtilis, Bacteroides fragilis, Bacteroides melaninogenicus, Corynebacterium diphtheriae, Escherichia coli, Klebsiella pneumoniae, Proteus vulgaris, Pseudomonas pyocyanae, Yersinia pseudotuberculosis</td>
<td>K16264</td>
</tr>
<tr>
<td>Petiole Nigeria</td>
<td>Antibacterial Activity</td>
<td>H2O Ext</td>
<td>Not stated</td>
<td>Not stated</td>
<td>Inactive</td>
<td>Staphylococcus aureus</td>
<td>K16264</td>
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<tr>
<td>Petiole Nigeria</td>
<td>Antibacterial Activity</td>
<td>H2O Ext</td>
<td>Agar Plate</td>
<td>Not stated</td>
<td>Inactive</td>
<td>Bacillus subtilis, Bacteroides fragilis, Bacteroides melaninogenicus, Clostridium tetani, Proteus vulgaris, Escherichia coli, Klebsiella pneumoniae, Pseudomonas pyocyanae, Yersinia pseudotuberculosis</td>
<td>K16264</td>
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<tr>
<td>Not stated Nigeria</td>
<td>Antifungal Activity</td>
<td>Not stated</td>
<td>Agar Plate</td>
<td>Not stated</td>
<td>Inactive</td>
<td>Microsporum gypseum, Chrysosporium tropicum, Trichophyton terrestre</td>
<td>AJ1008</td>
</tr>
<tr>
<td>Not stated India</td>
<td>Antifungal Activity</td>
<td>Not stated</td>
<td>Agar Plate</td>
<td>Not stated</td>
<td>Weak Activity</td>
<td>Microsporum gypseum, Chrysosporium tropicum, Trichophyton terrestre</td>
<td>AJ1005</td>
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<td>Root Sri Lanka</td>
<td>Nematocidal Activity</td>
<td>Decoction</td>
<td>Not stated</td>
<td>10.0 mg/ml</td>
<td>Inactive</td>
<td>Toxocara canis</td>
<td>M26175</td>
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<tr>
<td>Leaf India</td>
<td>Antinematodal activity</td>
<td>H2O Ext</td>
<td>Not stated</td>
<td>Variable</td>
<td>Active</td>
<td>Meloidogyne incognita</td>
<td>T07251</td>
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<tr>
<td>Leaf India</td>
<td>Antiamebic Activity</td>
<td>ETOH (80%) Ext</td>
<td>Not stated</td>
<td>MIC &gt;1000 mcg/ml</td>
<td>Inactive</td>
<td>Entamoeba histolytica</td>
<td>K19310</td>
</tr>
<tr>
<td>Not stated India</td>
<td>Antiamebic Activity</td>
<td>ETOH (80%) Ext</td>
<td>Intragastric Rat</td>
<td>250.0 mg/kg</td>
<td>Weak Activity</td>
<td>Entamoeba histolytica</td>
<td>K19310</td>
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<tr>
<td>Root India</td>
<td>Antiamebic Activity</td>
<td>ETOH (80%) Ext</td>
<td>Intragastric Rat</td>
<td>500.0 mg/kg</td>
<td>Active</td>
<td>Entamoeba histolytica</td>
<td>K19310</td>
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<tr>
<td>Root India</td>
<td>Insecticide Activity</td>
<td>Butanol Ext</td>
<td>Not stated</td>
<td>Not stated</td>
<td>Active</td>
<td>Musca domestica</td>
<td>N15507</td>
</tr>
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<tr>
<td>Root Nigeria</td>
<td>Molluscicidal Activity</td>
<td>MEOH Ext</td>
<td>Not stated</td>
<td>100.0 ppm</td>
<td>Inactive</td>
<td><em>Bulinus globosus</em></td>
<td>T04176</td>
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<tr>
<td>Not stated India</td>
<td>Alpha-Amylase Inhibitory Activity</td>
<td>ETOH Ext</td>
<td>In vitro</td>
<td>Not stated</td>
<td>Inactive</td>
<td>AJ1011</td>
<td></td>
</tr>
</tbody>
</table>

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