



## Pro-G-Yam-500®

Stock #4949-3 (2 oz. tube)

Pro-G-Yam-500 is a fragrance-free moisturizing cream containing natural progesterone, herbal extracts and botanical oils. Pro-G-Yam-500 is designed to supplement a woman's natural progesterone levels and may help relieve symptoms associated with a progesterone deficiency. Pro-G-Yam-500 also provides important nutrients to help counteract the effects of aging on a woman's body. Pro-G-Yam-500 contains the following active ingredients:

**Progesterone** helps maintain a woman's hormonal balance and buffers the negative effects of elevated estrogen levels. During a woman's menstrual cycle, progesterone levels drop drastically, allowing estrogen levels to rise unchecked, which can lead to a variety of PMS symptoms. Progesterone production is also greatly reduced during menopause, often causing uncomfortable symptoms such as depression, hot flashes, insomnia, mood swings and vaginal dryness. A review of the scientific literature indicates that progesterone can relieve menopausal symptoms. In addition, progesterone plays a role in skeletal homeostasis and may help reduce the risk of osteoporosis. A preliminary two-year study found that topical application of progesterone cream provided bone-sparing effects in postmenopausal women. Furthermore, progesterone may help slow the post-menopausal aging process of women's skin. A double-blind, randomized study found that topical application of progesterone cream increased the elasticity and firmness of the skin of both peri- and postmenopausal women, specifically producing a greater reduction in wrinkle counts and wrinkle depth.<sup>1-10</sup>

**Macadamia ternifolia oil** - Macadamia oil is highly regarded for its cosmetic benefits for the skin and its antioxidant and antimicrobial effects. Macadamia oil is used to hydrate dry and rough skin and reduce the appearance of fine lines. Macadamia oil contains a high amount of palmitoleic acid, a monounsaturated fatty acid found in young skin that is significantly reduced in older skin.<sup>11-15</sup>

**Dioscorea villosa** (Wild yam) has traditionally been used as an antispasmodic and anti-inflammatory agent, particularly to soothe ovarian and uterine pain and dysmenorrhea (severe uterine pain during menstruation), as well as relieve hot flashes and other menopausal symptoms. Wild yam contains the steroidal saponin diosgenin, which acts as a weak phytoestrogen and has been shown to increase progesterone activity in the saliva. In addition, diosgenin has been shown to relieve anxiety, as well as prevent bone loss in animal studies.<sup>16-26</sup>

**Glycine soja** (Soybean) contains compounds referred to as phytoestrogens, due to their ability to bind to estrogen receptors. Although the estrogenic effect of soy phytoestrogens is minimal compared to estrogen (only about 2% as strong at best), this weak activity actually enables soy phytoestrogens to have a balancing action on the effects of estrogen—if estrogen levels are low, the weak estrogenic activity of soy phytoestrogens produces an increase in estrogen effects; if estrogen levels are high, the estrogen receptor-binding activity of soy phytoestrogens enables them to compete with estrogen at binding sites, thus decreasing the effects of estrogen. This activity may help explain soy's use for relieving hot flashes. In addition, soy appears to help prevent bone loss, particularly in women in later menopause. Furthermore, topical application of soy provides natural antioxidant protection to the skin, which may provide anti-aging benefits.<sup>27-34</sup>

**Citrus grandis oil** (Chinese grapefruit) - Grapefruit oil tones and tightens the skin and helps eliminate water retention. In addition, grapefruit oil's pleasant citrus aroma provides a mild antidepressant effect that is also used to enhance mental clarity and awareness and relieve nervous exhaustion.<sup>35-38</sup>

**Citrus aurantium bergamia oil** (Bergamot) - Bergamot oil is often used to relieve stress and tension and relax muscle spasms. Bergamot oil is also employed as a gentle antidepressant, providing an uplifting effect that is beneficial for states of depression and weepiness associated with PMS.<sup>39-41</sup>

**Cananga odorata oil** (Ylang ylang) - Ylang ylang oil's moisturizing qualities have a rejuvenative effect on the skin. Ylang ylang has also been shown to provide a calming, relaxing effect following topical application, which helps support the use of ylang ylang for relieving stress and depression.<sup>35,36,38,42</sup>

**Cimicifuga racemosa** (Black cohosh) - The German Commission E has approved black cohosh as a natural treatment for menopause. Even the American Medical Association (AMA), which publishes the *Journal of Women's Health*, featured a review article confirming black cohosh's safety and effectiveness as a natural remedy for menopausal symptoms, especially in cases where hormone replacement therapy is contraindicated. Black cohosh has also been shown to significantly reduce anxiety and depression in both peri- and post-menopausal women. In addition, black cohosh may offer benefit in the treatment of PMS symptoms, particularly in reducing anxiety, mood swings and tension.<sup>1,17,18,43-49</sup>

***Caulophyllum thalictroides*** (Blue cohosh) is predominantly known for its use in female health issues. Blue cohosh has been extensively used to balance a woman's menstrual cycle and relieve dysmenorrhea and symptoms of PMS, including menstrual cramps. Blue cohosh also provides diuretic and antispasmodic properties, as well as anti-inflammatory and antimicrobial activity.<sup>17,40,50-56</sup>

***Glycyrrhiza glabra*** (Licorice) has demonstrated estrogen receptor-binding activity, as well as the ability to suppress the breakdown of progesterone. Thus, by affecting the estrogen-progesterone ratio, licorice root may help decrease symptoms associated with PMS and menopause. In addition, licorice has demonstrated effective antioxidant effects in topical formulas designed to protect the skin against free radical damage.<sup>1,57-61</sup>

***Aloe barbadensis*** (Aloe vera) has been shown to be an effective ingredient for improving skin hydration and, as a result, is used in moisturizing formulas for the treatment of dry skin. Aloe vera also improves skin permeation, which can help improve the absorption of other substances into the skin. In addition, aloe vera contains salicylic acids, which provide anti-inflammatory activity and also help heal wounds. According to one study, aloe vera's anti-inflammatory effects were found to be comparable and in some cases even superior to 1% hydrocortisone.<sup>59,62-68</sup>

***Panax ginseng*** has many well-documented anti-stress properties and is used in Traditional Chinese Medicine to "calm the spirit" and treat symptoms such as heart palpitations associated with anxiety, forgetfulness, insomnia and restlessness. A randomized, controlled trial confirmed that ginseng improved anxiety and mood in postmenopausal women. Plus, ginseng also exhibits significant anti-fatigue effects. Furthermore, ginseng has been shown to promote collagen production in human skin cells and may be an effective wrinkle-reducing agent in topical applications.<sup>49,69-71</sup>

***Ginkgo biloba*** has been shown to be effective against some symptoms of PMS, including breast pain and tenderness. Ginkgo has also demonstrated beneficial effects on mood, including anti-depressive and anxiolytic (ability to reduce anxiety, agitation or tension) effects. Plus, ginkgo provides skin-protective benefits, including enhanced cell oxygenation and skin circulation, as well as antioxidant protection against free radical damage. Free radical damage is widely accepted as the leading cause of skin aging.<sup>17,19,43,53,72-76</sup>

**Tocopheryl acetate** (Vitamin E) - Vitamin E is the main fat-soluble antioxidant in the skin. Vitamin E provides beneficial effects on skin health, including relieving dry, itchy skin conditions and aiding in the healing of wounds. Topical application of vitamin E can help restore the antioxidant defense barrier of the skin. In addition, some anti-aging benefits may be seen by applying vitamin E topically to wrinkles and prematurely-aged skin, since vitamin E helps prevent free radical damage, which is widely accepted as the leading cause of skin aging.<sup>76,77-81</sup>

Pro-G-Yam-500 contains 500mg of progesterone per ounce.

#### References:

- <sup>1</sup>Pizzorno, J & Murray, M. *A Textbook of Natural Medicine, 2nd ed.* London: Churchill Livingstone, 1999.
- <sup>2</sup>Schüssler, P., et. al. "In summary progesterone demonstrated a distinct sleep promoting effect by reduction of time of wake without impairing cognitive functions during daytime." *Psychoneuroendocrinology*; 2008, 33(8):1124-1131.
- <sup>3</sup>Nelson, H.D. "Menopause." *Lancet*; 2008, 371(9614):760-770.
- <sup>4</sup>Haimov-Kochman, R., et. al. "Hot flashes revisited: pharmacological and herbal options for hot flashes management. What does the evidence tell us?" *Acta Obstetrica Gynecologica Scandinavica*; 2005, 84(10):972-979.
- <sup>5</sup>Stephenson, K., et. al. "Topical progesterone cream does not increase thrombotic and inflammatory factors in postmenopausal women." *Blood*; 2004, 104: Abstract 5318.
- <sup>6</sup>Balasz, J. "Sex steroids and bone: current perspectives." *Human Reproduction Update*; 2003, 9(3):207-222.
- <sup>7</sup>Lydeking-Olsen, E., et. al. "Soy milk or progesterone for prevention of bone loss--a 2 year randomized, placebo-controlled trial." *European Journal of Nutrition*; 2004, 43(4):246-257.
- <sup>8</sup>Brincat, M.P., et. al. "The skin, carotid and intervertebral disc: making the connection!" *Climacteric*; 2007, 10 Suppl 2:83-87.
- <sup>9</sup>Calleja-Agius, J., et. al. "Skin ageing." *Menopause International*; 2007, 13(2):60-64.
- <sup>10</sup>Holzer, G., et. al. "Effects and side-effects of 2% progesterone cream on the skin of peri- and postmenopausal women: results from a double-blind, vehicle-controlled, randomized study." *The British Journal of Dermatology*; 2005, 153(3):626-634.
- <sup>11</sup>Akhtar, N., Yazan, Y. "Formulation and in-vivo evaluation of a cosmetic multiple emulsion containing vitamin C and wheat protein." *Pakistan Journal of Pharmaceutical Sciences*; 2008, 21(1):45-50.
- <sup>12</sup>Quinn, L.A., Tang, H.H. "Antioxidant properties of phenolic compounds in macadamia nuts." *Journal of the American Oil Chemists' Society*; 1996, 73(11): 1585-1588.
- <sup>13</sup>Wille, J.J., Kydonieus, A. "Palmitoleic acid isomer (C16:1delta6) in human skin sebum is effective against gram-positive bacteria." *Skin Pharmacology and Applied Skin Physiology*; 2003, 16(3):176-187.
- <sup>14</sup>Akhtar, N., et. al. "Evaluation of basic properties of macadamia nut oil." *The Gomal University Journal of Research*; 2006, 22:21-27.
- <sup>15</sup>Hayashi, N., et. al. "Effect of sunlight exposure and aging on skin surface lipids and urate." *Experimental Dermatology*; 2003, 12 Suppl 2:13-17.
- <sup>16</sup>Liu, J., et. al. "Evaluation of estrogenic activity of plant extracts for the potential treatment of menopausal symptoms." *Journal of*

- Agricultural and Food Chemistry*; 2001, 49(5):2472-2479.
- <sup>17</sup>Fetrow, C. & Avila, J. *Professional's Handbook of Complementary & Alternative Medicines*. Springhouse, 1999.
- <sup>18</sup>*Herbal Medicine: Expanded Commission E Monographs*. Integrative Medicine Communications, 2000.
- <sup>19</sup>Lininger Jr, S., et. al. *The Natural Pharmacy, 2nd Ed*. Rocklin, CA: Prima Publishing, 1999.
- <sup>20</sup>Mills, S. & Bone, K. *Principles and Practice of Phytotherapy*. London: Churchill Livingstone, 2000.
- <sup>21</sup>*PDR for Herbal Medicines, 2nd edition*. Montvale, NJ: Medical Economics Company, 2000.
- <sup>22</sup>Carroll, D.G. "Nonhormonal therapies for hot flashes in menopause." *American Family Physician*; 2006, 73(3):457-464.
- <sup>23</sup>Park, M.K., et. al. "Estrogen activities and the cellular effects of natural progesterone from wild yam extract in mcf-7 human breast cancer cells." *The American Journal of Chinese Medicine*; 2009, 37(1):159-167.
- <sup>24</sup>Benghuzzi, H., et. al. "The effects of sustained delivery of diosgenin on the adrenal gland of female rats." *Biomedical Sciences Instrumentation*; 2003, 39:335-340.
- <sup>25</sup>Ho, Y.J., et. al. "Psychoimmunological effects of dioscorea in ovariectomized rats: role of anxiety level." *Annals of General Psychiatry*; 2007, 6:21.
- <sup>26</sup>Yen, M.L., et. al. "Diosgenin induces hypoxia-inducible factor-1 activation and angiogenesis through estrogen receptor-related phosphatidylinositol 3-kinase/Akt and p38 mitogen-activated protein kinase pathways in osteoblasts." *Molecular Pharmacology*; 2005, 68(4):1061-1073.
- <sup>27</sup>Ishimi, Y. "Soybean isoflavones in bone health." *Forum of Nutrition*; 2009, 61:104-116.
- <sup>28</sup>Song, W.O., et. al. "Soy isoflavones as safe functional ingredients." *Journal of Medicinal Food*; 2007, 10(4):571-580.
- <sup>29</sup>Kurzer, M.S. "Soy consumption for reduction of menopausal symptoms." *Inflammopharmacology*; 2008, 16(5):227-229.
- <sup>30</sup>Chen, Y.M., et. al. "Beneficial effect of soy isoflavones on bone mineral content was modified by years since menopause, body weight, and calcium intake: a double-blind, randomized, controlled trial." *Menopause*; 2004, 11(3):246-254.
- <sup>31</sup>Berson, D.S. "Natural antioxidants." *Journal of Drugs in Dermatology*; 2008, 7(7 Suppl):s7-12.
- <sup>32</sup>Baumann, L. "Botanical ingredients in cosmeceuticals." *Journal of Drugs in Dermatology*; 2007, 6(11):1084-1088.
- <sup>33</sup>Hsu, S. "Green tea and the skin." *Journal of the American Academy of Dermatology*; 2005, 52(6):1049-1059.
- <sup>34</sup>Südel, K.M., et. al. "Novel aspects of intrinsic and extrinsic aging of human skin: beneficial effects of soy extract." *Photochemistry and Photobiology*; 2005, 81(3):581-587.
- <sup>35</sup>Damian, P. and Damian, K. *Aromatherapy: Scent and Psyche*. Rochester, VT: Healing Arts Press, 1995.
- <sup>36</sup>Wildwood, C. *The Encyclopedia of Aromatherapy*. Rochester, VT: Healing Arts Press, 1996.
- <sup>37</sup>Lawless, J. *The Encyclopaedia of Essential Oils*. Rockport, MA: Element Books, 1992.
- <sup>38</sup>Schiller, C. and Schiller, D. *Aromatherapy Oils: A Complete Guide*. NY, NY: Sterling Publishing Co., 1996.
- <sup>39</sup>Buckle RGN, J. *Clinical Aromatherapy in Nursing*. San Diego, CA: Singular Publishing Group Inc., 1997.
- <sup>40</sup>Bown, Deni. *Encyclopedia of Herbs & Their Uses*. NY, NY: Dorling Kindersley Inc., 1995.
- <sup>41</sup>Chevallier, A. *The Encyclopedia of Medicinal Plants*. NY, NY: Dorling Kindersley, 1996.
- <sup>42</sup>Hongratanaworakit, T., Buchbauer, G. "Relaxing effect of ylang ylang oil on humans after transdermal absorption." *Phytotherapy Research*; 2006, 20(9):758-763.
- <sup>43</sup>Murray ND, M.T. *The Healing Power of Herbs*. Rocklin, CA: Prima Publishing, 1995.
- <sup>44</sup>Menopause: Herbs That Can Ease the Transition." *Herbs For Health*; 1996, 1(2):29-33.
- <sup>45</sup>Black Cohosh Gives Relief For Menopause." *Alternative Medicine Digest*; 1996, Vol. 13.
- <sup>46</sup>Natural herb shown in clinical trials to relieve menopausal symptoms." *Reuters*; July 10, 1998.
- <sup>47</sup>Dennehy, C.E. "The use of herbs and dietary supplements in gynecology: an evidence-based review." *Journal of Midwifery and Women's Health*; 2006, 51(6):402-409.
- <sup>48</sup>Low Dog, T. "Menopause: a review of botanical dietary supplements." *The American Journal of Medicine*; 2005, 118 Suppl 12B:98-108.
- <sup>49</sup>Geller, S.E., Studee, L. "Botanical and dietary supplements for mood and anxiety in menopausal women." *Menopause*; 2007, 14(3 Pt 1):541-549.
- <sup>50</sup>Hutchens, A.R. *Indian Herbology of North America*. Boston, MA: Shambhala Publications, 1991.
- <sup>51</sup>Pedersen, M. *Nutritional Herbology*. Warsaw, IN: Wendell E. Whitman Company, 1994.
- <sup>52</sup>Tyler PhD, V. E. *The Honest Herbal*. Binghamton, NY: The Haworth Press, Inc., 1993.
- <sup>53</sup>Weiner, M., Weiner, J. *Herbs That Heal: Prescription For Herbal Healing*. Quantum Books, 1994.
- <sup>54</sup>Dupler, D. "Blue Cohosh." *Encyclopedia of Alternative Medicine*; 2001. <[http://findarticles.com/p/articles/mi\\_g2603/is\\_0002/ai\\_2603000215/?tag=content;col1](http://findarticles.com/p/articles/mi_g2603/is_0002/ai_2603000215/?tag=content;col1)>. Accessed June 2009.
- <sup>55</sup>Ali, Z., Khan, I.A. "Alkaloids and saponins from blue cohosh." *Phytochemistry*; 2008, 69(4):1037-1042.
- <sup>56</sup>Madgula, V.L., et. al. "Alkaloids and saponins as cytochrome P450 inhibitors from blue cohosh (*Caulophyllum thalictroides*) in an in vitro assay." *Planta Medica*; 2009, 75(4):329-332.
- <sup>57</sup>Liu J, et. al. "Evaluation of estrogenic activity of plant extracts for the potential treatment of menopausal symptoms." *Journal of Agricultural and Food Chemistry*; 2001, 49(5):2472-9.
- <sup>58</sup>Fitzpatrick RD, A. & Frank PhD, L. "An Integrative Approach to Female Sexual Dysfunction." *International Journal of Integrative Medicine*; 2001, 3(2): 8-15.
- <sup>59</sup>Presser PharmD, A. *Pharmacist's Guide to Medicinal Herbs*. Petaluma, CA: Smart Publications, 2000.
- <sup>60</sup>Zava, D.T., et. al. "Estrogen and progestin bioactivity of foods, herbs, and spices." *Proceedings of the Society for Experimental Biology and Medicine*; 1998, 217(3):369-378.
- <sup>61</sup>Di Mambro, V.M., Fonseca, M.J. "Assays of physical stability and antioxidant activity of a topical formulation added with different plant extracts." *Journal of Pharmaceutical and Biomedical Analysis*; 2005, 37(2):287-295.
- <sup>62</sup>Devi RN, L. "Aloe vera (*Aloe barbadensis*)." *American Botanical Council*, 1998. <<http://herbalgram.org/herbclip/review.asp?i=41499>>. Accessed June 2006.
- <sup>63</sup>Vogler, B.K. & Ernst, E. "Aloe vera: a systematic review of its clinical effectiveness." *British Journal of General Practice*; 1999,

- 49(447):823-828.
- <sup>64</sup>Yagi, A., et. al. "Radical scavenging glycoprotein inhibiting cyclooxygenase-2 and thromboxane A2 synthase from aloe vera gel." *Planta Medica*; 2003, 69(3):269-271.
- <sup>65</sup>Reynolds, T., Dweck, A.C. "Aloe vera leaf gel: a review update." *Journal of Ethnopharmacology*; 1999, 68(1-3):3-37.
- <sup>66</sup>Dal'Belo, S.E., et. al. "Moisturizing effect of cosmetic formulations containing Aloe vera extract in different concentrations assessed by skin bioengineering techniques." *Skin Research and Technology*; 2006, 12(4):241-246.
- <sup>67</sup>Cole, L., Heard, C. "Skin permeation enhancement potential of Aloe Vera and a proposed mechanism of action based upon size exclusion and pull effect." *International Journal of Pharmaceutics*; 2007, 333(1-2):10-16.
- <sup>68</sup>Reuter, J., et. al. "Investigation of the anti-inflammatory potential of Aloe vera gel (97.5%) in the ultraviolet erythema test." *Skin Pharmacology and Physiology*; 2008, 21(2):106-110.
- <sup>69</sup>Rister, R. *Japanese Herbal Medicine*. Garden City Park, NY: Avery Publishing, 1999.
- <sup>70</sup>Bensky, D. & Gamble, A. *Chinese Herbal Medicine Materia Medica, Revised Ed.* Eastland, 2003.
- <sup>71</sup>Lee J, et. al. "Panax ginseng induces human Type I collagen synthesis through activation of Smad signaling." *Journal of Ethnopharmacology*; 2007, 109(1):29-34.
- <sup>72</sup>Newall, C., et. al. *Herbal Medicines*. London, England: The Pharmaceutical Press, 1996.
- <sup>73</sup>Tamborini A, Taurelle R. [Value of standardized Ginkgo biloba extract (EGb 761) in the management of congestive symptoms of premenstrual syndrome]. *Revue Française de Gynécologie et d'Obstétrique*; 1993, 88(7-9):447-457.
- <sup>74</sup>Shah, Z.A., et. al. "Ginkgo biloba normalises stress-elevated alterations in brain catecholamines, serotonin and plasma corticosterone levels." *European Neuropsychopharmacology*; 2003, 13(5):321-325.
- <sup>75</sup>Boelsma, E., et. al. "Evidence of the regulatory effect of Ginkgo biloba extract on skin blood flow and study of its effects on urinary metabolites in healthy humans." *Planta Medica*; 2004, 70(11):1052-1057.
- <sup>76</sup>Bogdan Allemann, I., Baumann, L. "Antioxidants used in skin care formulations." *Skin Therapy Letter*; 2008, 13(7):5-9.
- <sup>77</sup>Khoosal, D., Goldman, R.D. "Vitamin E for treating children's scars. Does it help reduce scarring?" *Canadian Family Physician*; 2006, 52:855-856.
- <sup>78</sup>Richelle, M., et. al. "Skin bioavailability of dietary vitamin E, carotenoids, polyphenols, vitamin C, zinc and selenium." *The British Journal of Nutrition*; 2006, 96(2):227-238.
- <sup>79</sup>Burgess, C. "Topical vitamins." *Journal of Drugs in Dermatology*; 2008, 7(7 Suppl):s2-6.
- <sup>80</sup>Dunne, L. *Nutrition Almanac, 3rd Edition*. NY, NY: McGraw-Hill, 1990.
- <sup>81</sup>Burke, K.E. "Photodamage of the skin: protection and reversal with topical antioxidants." *Journal of Cosmetic Dermatology*; 2004, 3(3):149-155.