CLINICAL TRIAL OF PROGESTERONE FOR INTRACTABLE, CENTRAL PAIN
By Forest Tennant M.D., Dr. P.H., Veract Intractable Pain Clinic, West Covina, CA

OBJECTIVE
To determine if progesterone is clinically beneficial in intractable, central pain patients who are maintained on opioids and other sympathetic agents.

BACKGROUND
Chronic pain patients who initially have peripheral pain and later develop central pain and require opioid therapy are now recognized as a major public health issue. Recent studies have determined that central pain results from microglial cell activation with resulting neuroinflammation, cellular destruction, hormonal and immunologic abnormalities, and profound impairment of physiologic and mental functions. At this time only symptomatic and palliative therapy with neurophatic agents, opioids, stimulants, and anti-depressants are available to treat this condition.

Progesterone and its metabolites have recently been termed “neurosteroids.” Low serum levels are associated with increased pain levels, and progesterone has been shown, in animal studies, to have neuroprotective and neurogenic properties. Although progesterone is currently being investigated for other neurologic conditions, it has not yet been tested in central pain patients.

SUBJECTS
Thirty-four (34) adults with severe central, intractable pain who met the diagnostic criteria in Table One were selected for oral or topical medroxyprogesterone (MDPG). Ages ranged from 29 to 69 years. There were 13 (38.2%) males and 23 (67.5%) females. All had been maintained on opioids for periods ranging from 3 to 25 years. All subjects also took one or more of the following ancillary medications: bedtime sedative, neurophatic agent, stimulant, anti-inflammatory agent, antidepressant, anti-anxiety agent.

METHODS
The concentration of topical MDPG was 20 mg per 1 ounce of base cream, and the oral starting dosage was 10 mg twice a day (20 mg). Patients receiving topical MDPG were instructed to apply it to the skin over their painful areas one or more times daily. Patients receiving oral tablets could raise their dosage up to 40 mg a day if they believed they were benefitting from it. At the end of 60 days patients stopped MDPG if they did not believe they were benefitting from it or if they had experienced a side-effect. Those who perceived benefits were allowed to continue administration. In January 2012, all subjects who had ever been given MDPG were given a written questionnaire inquiring as to whether they believed MDPG was of benefit, and if so, what benefits they perceived from it.

RESULTS
At the end of 60 days of administration, 22 of the 34 (64.7%) subjects believed that they had received benefits from MDPG and desired to continue it. The 12 subjects who did not continue either received no benefit or experienced the side-effect of menstrual bleeding. The latter were three pre-menopausal women. Fourteen (14) subjects (6 male, 8 females) have now taken MDPG for periods ranging from 3 to 14 months. Three (3) use MDPG topically and the others (11) use 20 to 50 mg orally a day. Perceived benefits are substantial and include less pain, fewer opioids, and improved mental, social, and physiologic functions. (See Table Two)

DISCUSSION
This pilot study indicates that progesterone has neurogenic and anabolic properties in central pain patients. Findings here corroborate those in animals. MDPG was selected as a convenient, commercial preparation, but there may be more optimal progesterone agents or administration systems than those employed here.

CONCLUSION
Central, intractable pain is now recognized as a significant public health problem. Only opioids and other symptomatic and palliative treatment agents are currently available. Progesterone has neurogenic and anabolic effects in the central nervous system and findings in this pilot study were very positive in some patients. Further clinical trials are clearly indicated.

REFERENCES