



COLLEGE OF WILLIAM AND MARY TECHNOLOGY TRANSFER OFFICE

TITLE (AND CASE NUMBER) OF INVENTION:

(WM-1318) TREATMENT FOR FEAR OF MEDICAL PROCEDURES

INVENTORS: Jason McDevitt

APPLICATIONS: Pharmaceuticals

SUMMARY:

When you're anxious about pain, the pain is amplified. This is not psychological mumbo-jumbo, but rather a neurobiological phenomenon manifested by tangible physiological changes. The drug proglumide blocks this process, a process which is not targeted by any existing pharmaceuticals.

We have developed a patented method for treatment of fear of medical procedures, including surgery, dental phobia, and childbirth, by administering proglumide prior to commencement of the medical procedure. Proglumide is not an analgesic, but instead reduces the significant component pain that is attributable to anxiety about pain. For example,

1) administering proglumide after onset of labor can reduce anxiety-related pain and thus can reduce the need for analgesic medications for many women. These analgesic medications (e.g., opioids, epidurals), while reasonably safe, correlate with increased costs and a much higher incidence of complications (e.g., C-sections, instrument-assisted deliveries).

2) anxiety about surgical pain contributes to pain levels and correlates closely with post-surgical development of chronic pain. Administration of proglumide prior to surgery (e.g., knee replacements) is potentially a large market.

Proglumide is an old and safe anti-ulcer drug used around the world, although never approved in the U.S. so there are no concerns about generic substitution. It is fairly ineffective and not widely used anymore, although proglumide is still manufactured and the API could be obtained inexpensively. Proglumide acts as a cholecystokinin antagonist, blocking both the CCK_A and CCK_B subtypes. Cholecystokinin (CCK) is widely distributed in the central nervous system, and its levels increase to counteract endogenous and exogenous opioids.

Proglumide potentiates opioid administration, and by blocking CCK, it enhances the effect of the body's natural endorphins. Accordingly, proglumide augments the body's natural response to pain, and crucially for the targeted indications, proglumide also blocks the placebo effect (for more information about proglumide and placebo, see [link](#)).

PATENT STATUS: United States Patent No. [8,680,145](#) (issued March 25, 2014)

CONTACT INFORMATION: Jason McDevitt (757-221-1751); jason.mcdevitt@wm.edu