# ~~PHARMACEUTICAL~~ COMBINATIONS OF BETA – 3 ADRENERGIC RECEPTOR AGONISTS AND MUSCARINIC RECEPTOR ANTAGONISTS FOR TREATING OVERACTIVE BLADDER

## CROSS-REFERENCE TO RELATED APPLICATIONS

The present application claims the benefit of priority under 35 U.S.C. §119(e) of U.S. Provisional Application No. 61/370,171, filed on August 3, 2010, the entire disclosure of which is incorporated herein by reference.

## FIELD OF THE INVENTION

The present invention relates to pharmaceutical combinations and methods for their use. In particular, the invention relates to pharmaceutical combinations comprising a beta-3 adrenergic receptor agonist and a muscarinic acetylcholine receptor antagonist (hereinafter referred to as 'muscarinic receptor antagonist'), and to methods of using such combinations in the treatment of one or more symptoms associated with overactive bladder, for example, frequency of urgency, nocturia, and urinary incontinence.

## BACKGROUND OF THE INVENTION

The International Continence Society (ICS) has defined overactive bladder (OAB) as a symptom complex of urgency, with or without urge incontinence, accompanied by frequency and nocturia. The symptoms of overactive bladder are usually associated with involuntary contractions of the detrusor (bladder) muscle thus creating a state of bladder hyperactivity. OAB is commonly classified into subtypes including neurogenic, idiopathic, and outlet obstruction. Neurogenic OAB is attributed to coexisting neurological conditions such as Parkinson's disease, multiple sclerosis, spinal cord injury or stroke. The underlying pathophysiology is the interruption of the otherwise orderly control of micturition, resulting in the symptom complex described above. The cause of idiopathic OAB is not as well defined; alterations in signalling within the bladder have been implicated. Finally, OAB may be associated with anatomical changes in the lower urinary tract, for example, in patients with bladder outlet obstruction, which may be the result of an enlarged prostate gland.

Overall, the incidence of OAB increases with age. The ratio of men to women affected depends on the age group, but in general women tend to be more affected than men. OAB represents a significant quality of life burden to patients.