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Primary Research Interest:	Other
Description of Research:	<p>The study is designed so as to test the efficacy of 2 compounds that inhibit the receptors for the peptide neurotransmitter, neuropeptide Y (NPY) using biopsies from healthy controls and patients with IBD. Hence, the experiments are designed to compare neuropeptide Y (NPY) receptor expression (NPYY1 & Y2) in the biopsies obtained from IBD patients by real time polymerase chain reaction. Most importantly, we will measure the TNF release from human IBD biopsies (by enzyme linked immunosorbent assay, ELISA) after treatment with NPYY1 and NPYY2 antagonists BIBP-3222 and BIIE-0224 respectively for 24 h. The receptor antagonists will be tested at various concentrations ranging from 10-100 micromol, and the minimum dose needed to lower the TNF release by 50% (LD50) will be determined.</p>
Relevance to VA:	<p>A large percentage of the Veteran population suffer from gastrointestinal (GI) pathologies resulting from stress. The most common GI complaints include inflammatory bowel disease, irritable bowel syndrome, ulcers etc. These GI pathologies involve huge medical expenditure and hospital visits and above all the adversely affects the quality of life of veterans. The current medications that are available (based on TNF inhibition) are very expensive and also have many undesirable side effects in that they increase chances of other infections, and also over time, patients develop resistance and do not respond to these medications. Furthermore, if left untreated, the intestinal inflammation can lead to development of more dangerous tumors and in due course lead to colon cancer. Hence assessing the impact of the new test compounds (NPY antagonists) proposed in the study will have a huge beneficial effect on the veteran population in that better, less expensive drugs with relatively fewer side effects will be made available.</p>