neutrophil count (ANC) < 0.50 × 109 per L. Benign ethnic neutropenia (BEN) is a condition found in members of African or Middle Eastern descent that is characterized by ANC $< 1.50 \times 109$ per L in the absence of other causes. Filgrastim is a granulocyte colonystimulating factor (G-CSF) that has shown efficacy in reducing the duration of agranulocytosis in some patients who develop clozapine-induced agranulocytosis. It is currently unknown whether filgrastim is beneficial in the treatment of neutropenia due to BEN. We here, for first the time report a case of a patient with BEN who developed agranulocytosis both during the first clozapine trial for schizophrenia and during the rechallenge, despite early stabilization with filgrastim treatment, which highlights the failure of filgrastim in treating BEN.

FUNDING ACKNOWLEDGEMENTS: No funding.

163 Treatment of Odor-Induced Anxiogenesis With **Odor-Induced Anxiolysis**

Muktiben M. Patel¹; Nigam D. Patel, MB²; Angela Rekhi, MD^3 ; and Alan R. Hirsch, MD^4

- ¹ Aureus University School of Medicine, Aruba, West Indies
- ² Nanjing Medical University, Nanjing, China

ABSTRACT: Study Objective: To understand the effects of odor on anxiety.

INTRODUCTION: Reduction of odor-induced anxiety through a presentation of an odor has not heretofore been described.

METHOD: Case report: A 69-year-old right-handed male with a five year history of generalized anxiety disorder, presented with a one and a half month history of hypersensitivity to odors of multiple synthetic chemicals manifest by the perception that these odors were more intense and unpleasant inducing nausea, abdominal cramping, coughing, a need to "get away from the smell", and panic with intense anxiety. These symptoms would occur whenever he was exposed to these smells, 20 to 25 times a day, and would persist for 10 to 15 minutes after the exposure. When odors induced the above symptoms, exposure to the aroma of cinnamon immediately alleviated these symptoms. He now continues using cinnamon odor whenever the odor induced anxiety and associated symptoms arise. This remedy has been effective over the course of treatment, for almost two years.

RESULTS: Abnormalities on examination: Three per second titubation. Archimedean Spiral Test: Saw tooth pattern with macrographia. Anxious, circumstantial, overly inclusive. Unable to determine how to put on shoe covers. Impaired voluntary upward gave, but intact vertical doll's eyes. Left torticollis. Bilateral finger to nose dysmetria. Low amplitude, high frequency tremor on extension of both upper extremities. Areflexic. Olfactory Testing: hyposmic. MRI of brain with and without infusion: mild generalized volume loss.

CONCLUSIONS: There are myriad mechanisms whereby odor may have reduced the odor-induced anxiety. Since aroma induced anxiogeneis is usually confined to a specific odor, it does not preclude other odors from acting in an anxiolytic manner. The combination of exposure simultaneously of anxiolytic and anxiogenic odors may have acted to increase the threshold of the anxiety producing odor, inhibiting perception of the anxiogenic odor and thus precipitation of anxiety. The two odors could have combined in an additive fashion, changing the olfactory characteristics of the anxiety provoking odor such that it no longer was perceived as the same odor and thus no anxiety. The anxiolytic/ anxiogenic odor mixture could have overwhelmed the anxiogenic odor, thus creating the perception of only anxiolytic odor. On a central basis, the anxiolysis and anxiogenesis may have been induced to occur coincidently with anxiolysis superseding anxiogenesis. Alternatively, the odors may have acted as a distractor, changing the focus of attention from anxiogenic odor to a different odor which does not have the same anxiety provoking effect. Maybe because the patient already has demonstrated a heightened odor emotion linkage, he may be more susceptible to any other odor emotion effects. Trial of odors in those with odor induced anxiety warrants consideration.

FUNDING ACKNOWLEDGEMENTS: No funding.

170

Prospective Evaluation of the Economic Utility of Combinatorial Pharmacogenomics in Generalized Anxiety Disorder and Major Depressive Disorder

Nathan Roe, PhD1; Catherine Passariello, PhD1; Lisa Brown, PhD^1 ; James Li, MS^1 ; Michael Jablonski, PhD^1 ; and Bryan M Dechairo, PhD¹

ABSTRACT: Mental illness is one of the leading causes of disability, with direct and indirect costs posing a significant financial burden. Previously, a large prospective economic utility study (n > 13,000) showed that the GeneSight® test, a psychiatric pharmacogenomic

³ Aureus University School of Medicine, Aruba, West

⁴ Smell & Taste Treatment and Research Foundation, Chicago, IL

¹ Assurex Health, Mason, OH