

Autoimmunity Research Foundation  
A metagenomic understanding of chronic disease  
THOUSAND OAKS, CA, USA

# Bipolar disorders and autoimmune disease share a similar etiology.

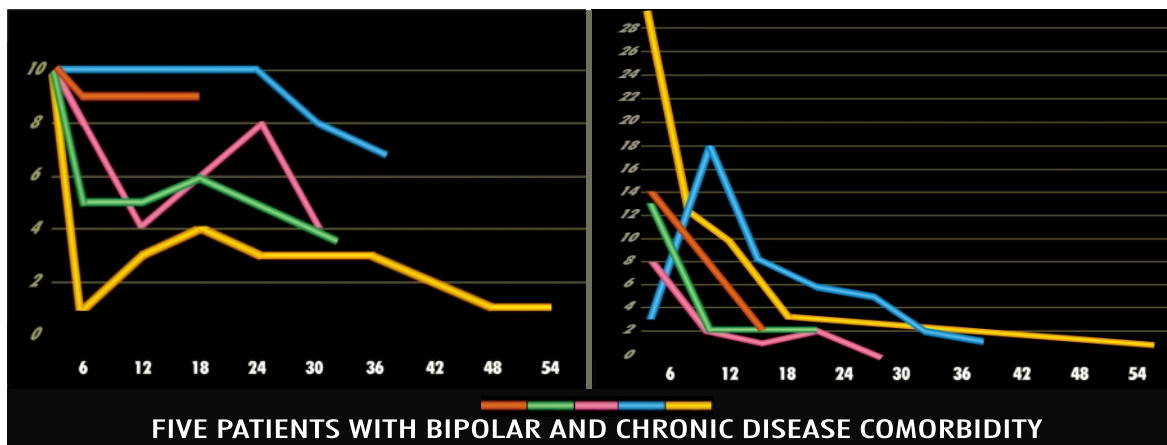
Authors: Chris Benediktsson, Executive Vice President, Autoimmunity Research Foundation,  
Trevor Marshall, President, Autoimmunity Research Foundation,  
Janet Raty, Research Team, Autoimmunity Research Foundation.  
email contact: ccben@pacbell.net

Since the mid 1800s we have known that some infectious agents can cause dramatic personality changes, for example in diseases such as syphilis, rabies, toxoplasmosis and neurologic Lyme disease. Treatments were dominated for many years by psychological theorizing, much of it Freudian; biological approaches were essentially limited to genetics.

Recently both persistent viruses and antibodies to pathogens have been detected in samples from patients with bipolar [BP] disease.<sup>1</sup> "Autoantibodies" to brain proteins, nuclear material, and brain lipids, among others, have been detected in both schizophrenic and BP populations<sup>2</sup> Higher levels of interleukin (IL1, IL 2, IL 1 RA), CD 4, CD 8 and Th1 and Th2 cytokines have been found in BP patients before, during and after medical treatment, strongly suggesting that BP disorders and autoimmune disease share a similar etiology.<sup>3</sup> Cytokine profiles in acutely ill BP patients show separate patterns (P<0.05) for BP mania, BP depression and normal controls.<sup>4</sup>

Since 2002, we have been conducting an observational study of an immunostimulation therapy for chronic inflammatory disease using a VDR agonist with pulsed, low-dose antibiotics. Many study subjects initially reported comorbid symptoms of cognitive impairment, including brain fog and major depression, consistent with advanced chronic disease.

Five patients with a noted prior diagnoses of BP spectrum disorder reported significant improvement in BP symptoms during treatment. Intriguingly, all five autoimmune patients featured here saw a reversal of manic symptoms before a resolution of depression and other symptoms of comorbid autoimmune disease.



PATIENT-REPORTED BIPOLAR SYMPTOM RESOLUTION IN 6 MONTH INCREMENTS

PATIENT-REPORTED MANIC SYMPTOM FREQUENCY IN 6 MONTH INCREMENTS

Early resolution of manic symptoms and patient-reported reduction in bipolar symptoms during immunostimulation therapy suggests a shared pathogenesis with chronic disease. More study is needed.

1. Kayser, M.S. et. al. Psychiatric Presentations of Autoimmune Encephalopathies, Psychiatric Times 2010 27(3): p 1-8.

2. Jones, A.L., et al., Immune dysregulation and self-reactivity in schizophrenia: do some cases of schizophrenia have an autoimmune basis? Immunol Cell Biol, 2005. 83(1): p. 9-17.

3. Liu, H.C., et al., Immunologic variables in acute mania of bipolar disorder. J Neuroimmunol, 2004. 150(1-2): p. 116-22.

4. O'Brien, S.M., et al., Cytokine profiles in bipolar affective disorder: focus on acutely ill patients. J Affect Disord, 2006. 90(2-3): p. 263-7.

comorbid condition	mean rate of comorbidity	prevalence in USA population
Diabetes (type II)	10%	7.8%
Hypothyroidism	9%	3.7%
Alcoholism/substance abuse	56.1%	10%
Migrane	15.2%	11%
Multiple Sclerosis	0.28 (200%)	0.14%
Asthma (severe)	35%	7%

Krishnan, K.R., et al., Psychiatric and Medical Comorbidities of Bipolar Disorder Psychosomatic Medicine, 2005. 67(1-8)



**A** Bipolar comorbidity: headache, myalgia, lower back pain, fatigue, social phobia.

"...Depressive days are less than a week and I have many good days. It is much easier to hang in there when you know the depressive cycle will be less than a week instead of 5-10 months. I'm very happy and looking forward to the future.... At the two-year anniversary of starting therapy, I'm grateful to be on recovery instead of taking psycho meds and every natural remedy."

**B** Bipolar comorbidity: Lyme, arrhythmia, vertigo, fatigue, gastric/intestinal and sleep disorder, myalgia, joint pain, eczema.

"I think a typical therapeutic [lithium] dose is 300 mg twice a day; I take 300 mg three times in TWO WEEKS. I was taking 600 mg a week when I started [immunostimulation therapy], so I've further decreased [lithium dosing] since then."

**C** Bipolar I since childhood, comorbidities: FM/CFS, Chronic Late State Disseminated Borrelia (Lyme) and Babesia. Radicular neuropathy, tachycardia and angina, nausea, malaise, kidney infections and stones, anxiety, sleep disorder, back and hip pain.

"I am Bipolar-I, the strongest form of Manic/Depression. I am off all meds for this now, no Lithium, no Depakote, and I am doing fine. My manic episodes have decreased very significantly, and the very deep depression of BP-I has not manifested at all. I am operating much closer to 'norm'."

**D** Bipolar comorbidity: CFS/ME/FM, general malaise, insomnia.

"My brain function started returning, cognitive skills started returning after a couple of months... when I started [immunostimulative therapy], I still really couldn't read, [but now I am at] college level again. I can add numbers in my head. I can work out math equations and I used to teach math. My vocabulary recall is back. Short-term memory, concentration, I mean they have improved beyond what I had thought capable."

**E** Bipolar comorbidity: Hypervitaminosis D, Neuropathy, CFS, MCS, Guillain-Barre, tinnitus.

"HUGE change. No longer on any psych meds, symptoms only surface in excessive sunlight or antibiotic use."