

## Matt Bianchi, MD PhD

## Young Clinician Award 2010

## Investigator Profile



## Education

- MD, University of Michigan, 2004
- PhD, Neuroscience, University of Michigan, 2004
- BA, Brandeis University, 1996

## Clinical/Professional Appointment

- Instructor, Neurology Department, Sleep Division, Massachusetts General Hospital

## Recent Honors and Awards

- 2005, Preliminary Medicine Intern of the Year, St. Joseph Mercy Hospital
- 2004, MD with Distinction in Research, University of Michigan

## Impact on Care

- Insomnia is the most common sleep-related complaint, with a lifetime prevalence of >50% of adults, with ~10% reporting chronic insomnia. The clinical impact and cost of treating disrupted sleep remains a major public health concern.
- There is a critical need for objective home monitoring for initial diagnosis and for ongoing feedback-driven treatment strategies.
- Aim is to phenotype insomnia based on comprehensive and longitudinal assessment of subjective and objective sleep metrics.
- A platform will be developed to predict treatment response based on objective insomnia phenotypes.
- The clinical ease and wide applicability of home sleep monitoring will facilitate translation into a diversity of populations spanning primary care and specialty clinics.

## Abstract

This proposal addresses the critical need for objective home monitoring for initial diagnosis and for ongoing feedback-driven treatment strategies.

Specifically, this proposal will take a multi-faceted approach including:

1. objective insomnia phenotyping
2. identification of sleeping misperception contributions
3. longitudinal monitoring and therapy adjustments
4. providing a rational approach to hypnotic and behavioral interventions

In order to accomplish this, 3 devices (based on movement, EEG, or autonomic signals) will be jointly used with subjective diaries in adult insomniac patients undergoing a variety of behavioral, over-the-counter and prescription interventions. The unobtrusive devices minimize the critical confounding issue that the very act of monitoring sleep disturbs sleep - an all too frequent complaint of patients experiencing the challenge of sleeping "normally" during laboratory polysomnography. We are also developing a novel respiration-based long-term monitor.

