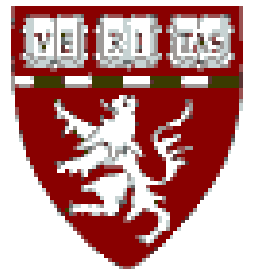


# An Update on the Treatment of Bipolar Depression

Andrew A. Nierenberg, MD



*Thomas P. Hackett, MD Endowed Chair in Psychiatry / Massachusetts General Hospital  
Director / Dauten Family Center for Bipolar Treatment Innovation, MGH  
Co-Director / Center for Clinical Research Education, Division of Clinical Research, MGH  
Professor of Psychiatry / Harvard Medical School*



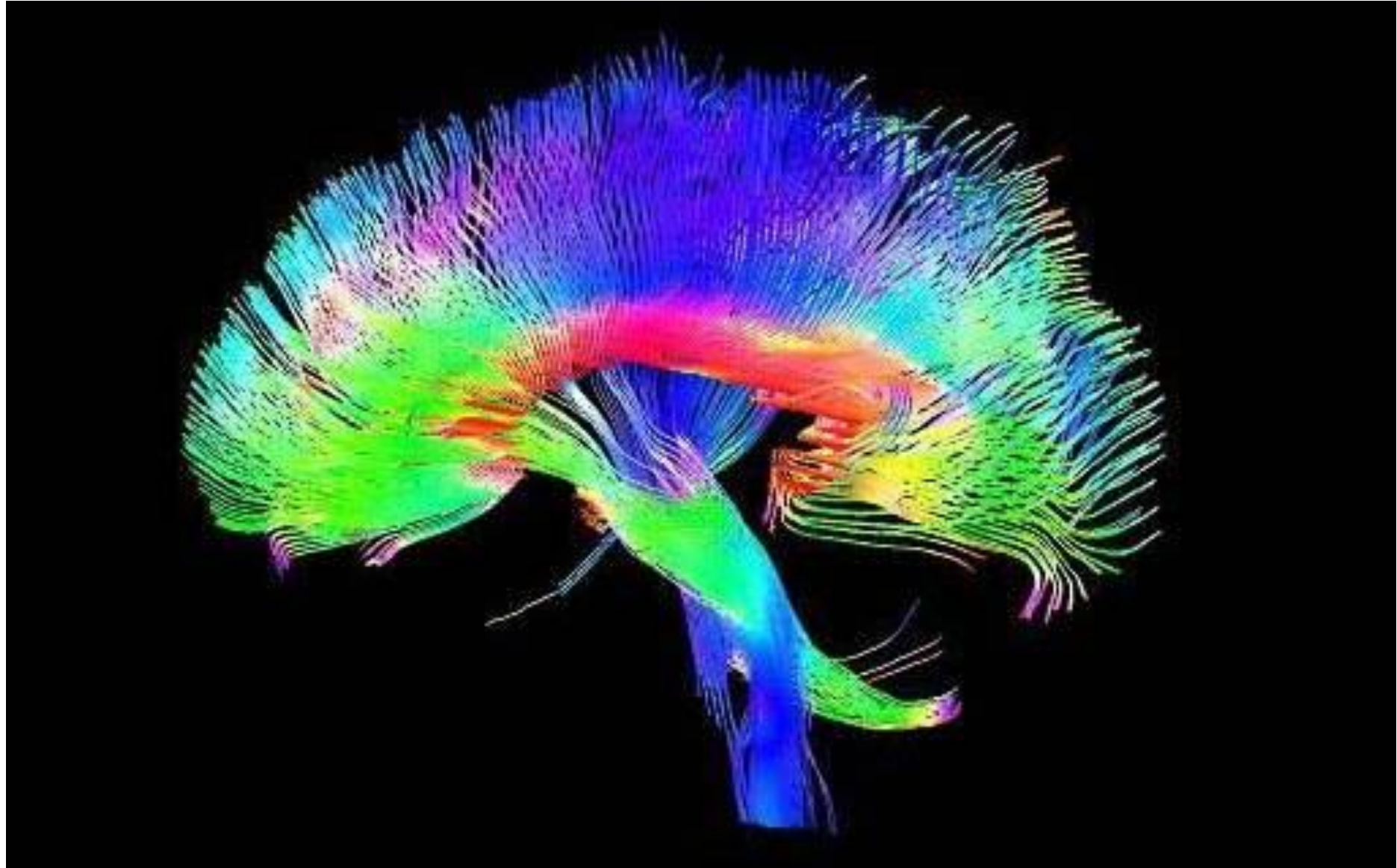
# 3 Acts...

- Brain
- Bipolar disorder
- Treatments

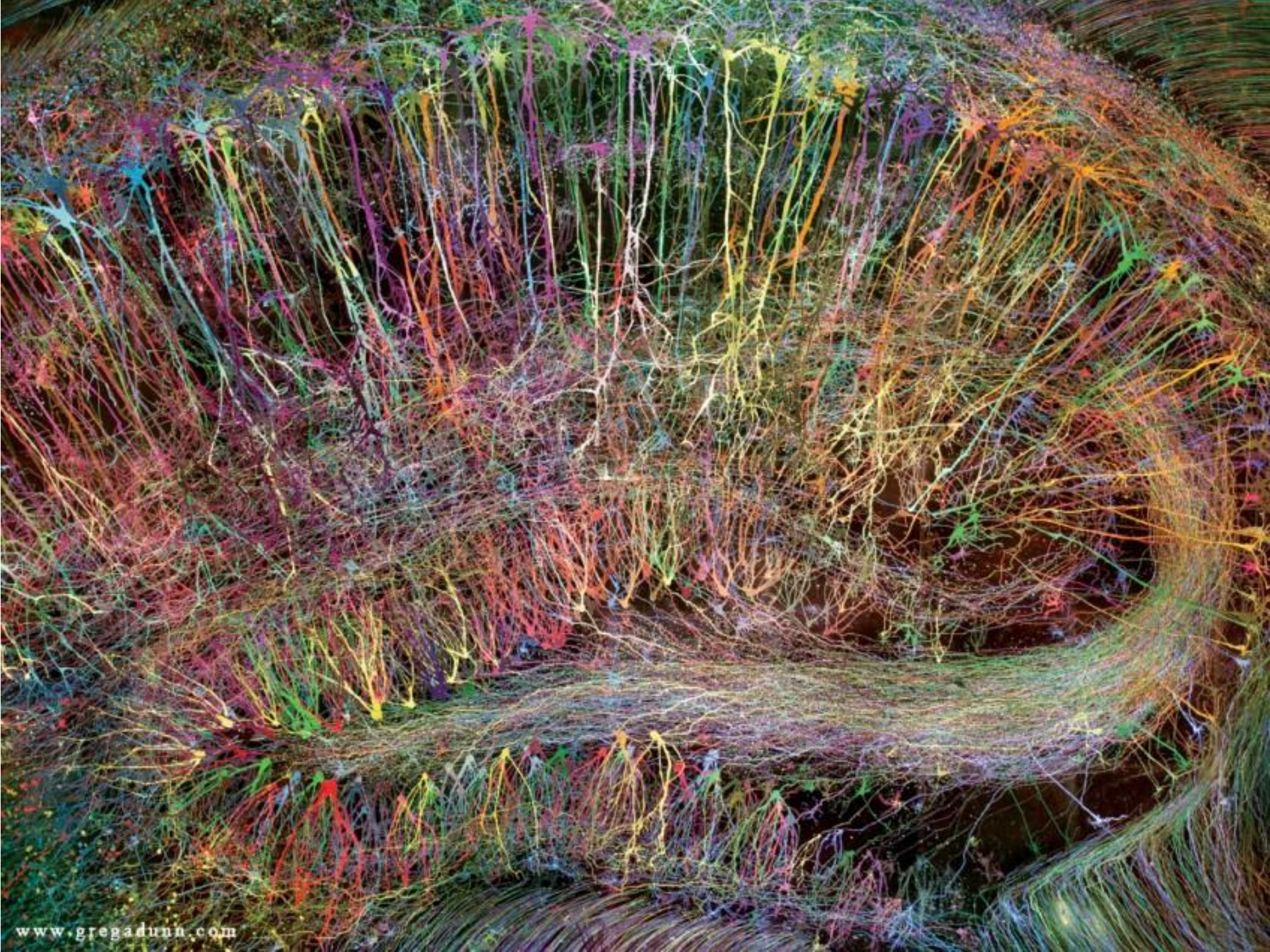
# Act 1: The Brain

“...from the brain, and from the brain only, arise our pleasures, joy, laughter and jests, as well as our sorrows, pains, griefs, and tears.”

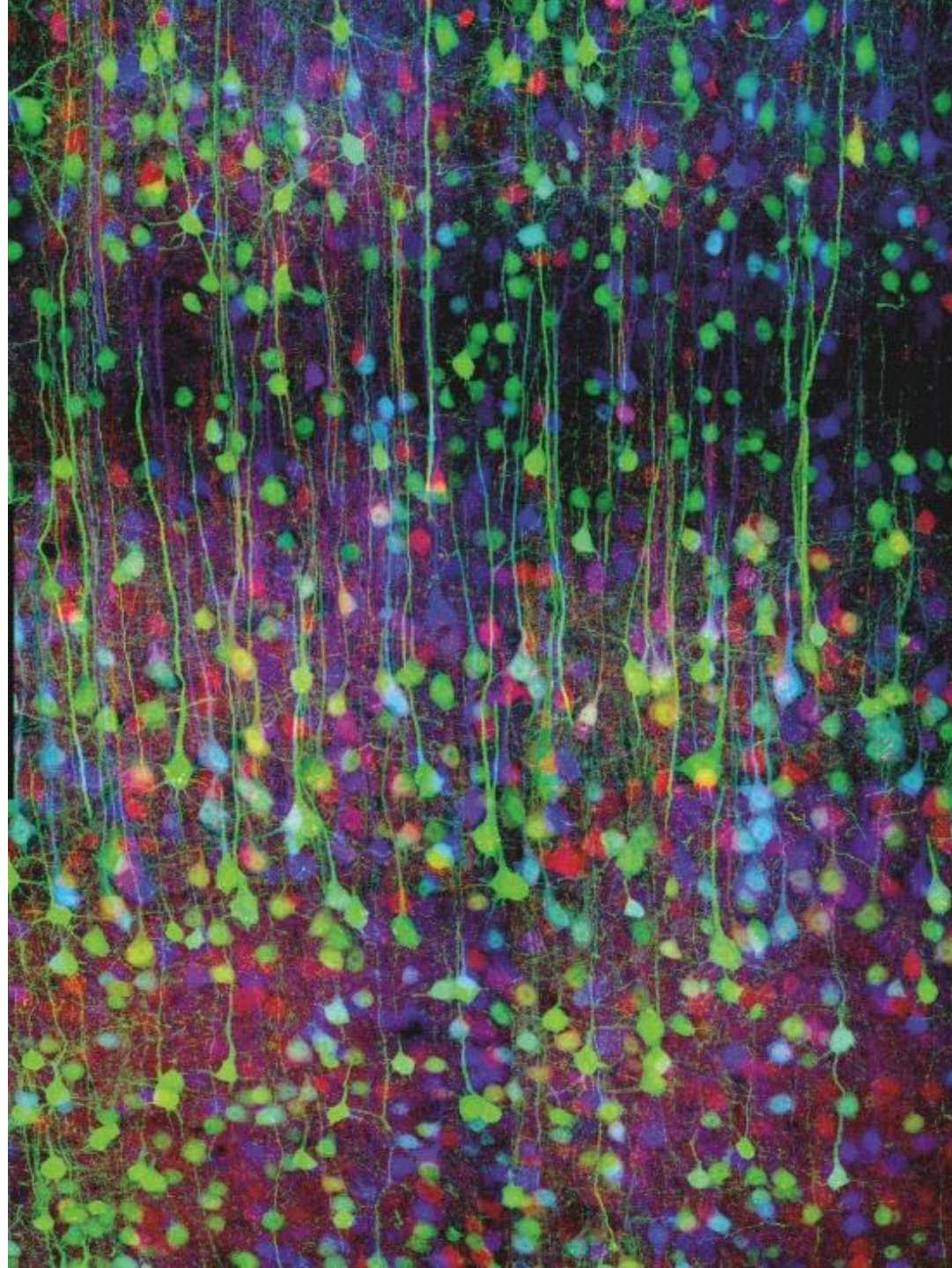
Hippocrates Circa 400 BCE











<https://where.ca/british-columbia/vancouver/the-beautiful-brain-art-by-a-nobel-prize-winning-neuroscientist/>

# Act II: Bipolar Disorder



# Bipolar Disorder Fast Facts

- Among top 10 causes of disability worldwide
- 50% with onset before the age of 25
- Costs \$151 billion per year
- Prevalence about 4.5%

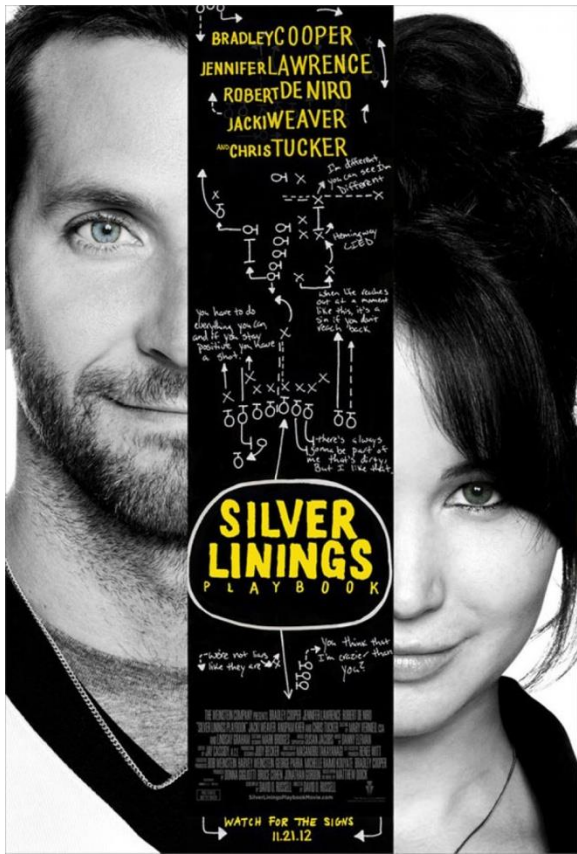


# Bipolar Disorder Fast Facts



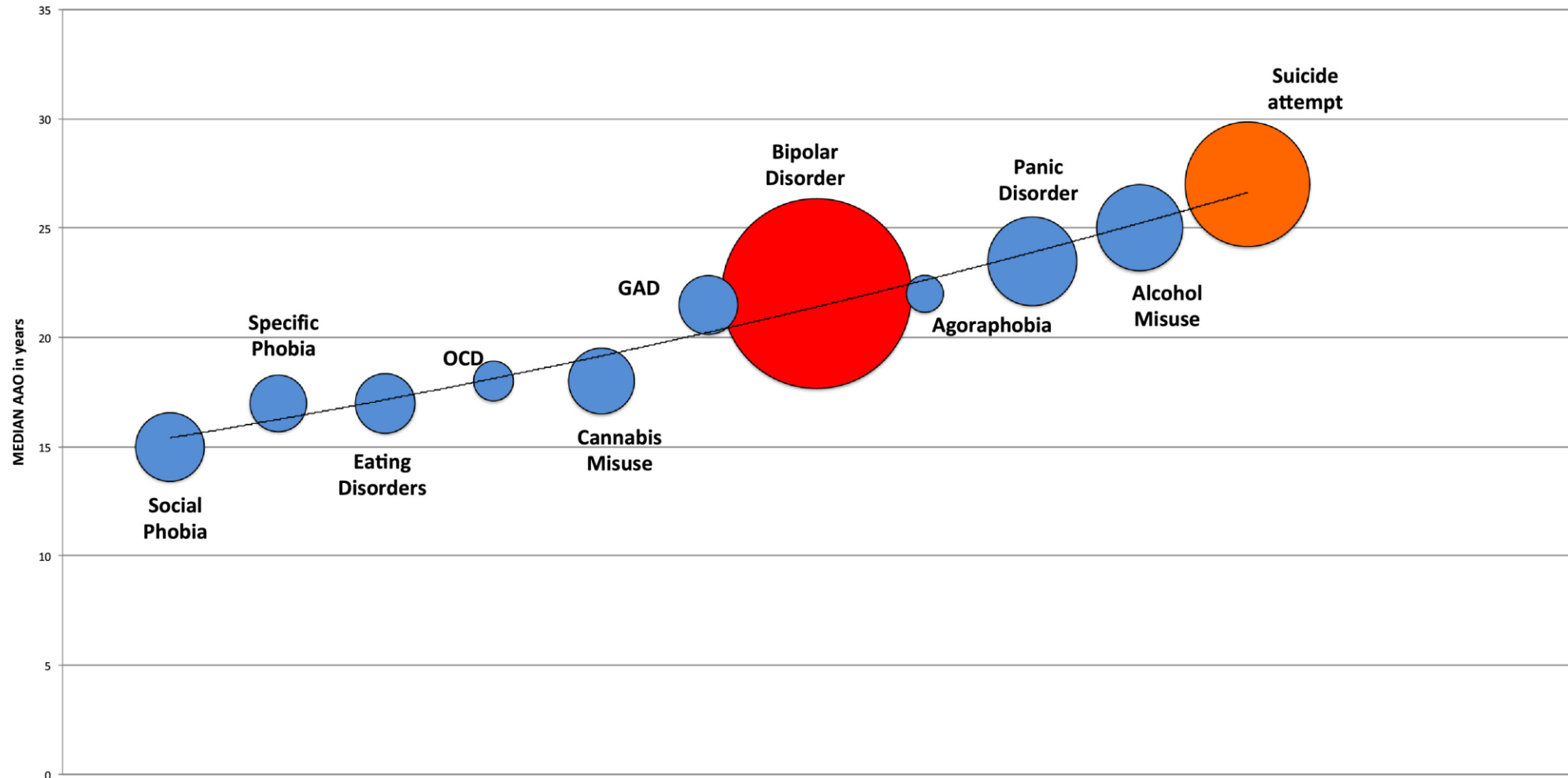
- Types
  - Type I with manic episodes
  - Type II with hypomanic episodes
- 90% have other problems
  - *Substance use disorders*
  - *Anxiety disorders*
- 1.5 to 2.1 times more likely to have chronic physical conditions



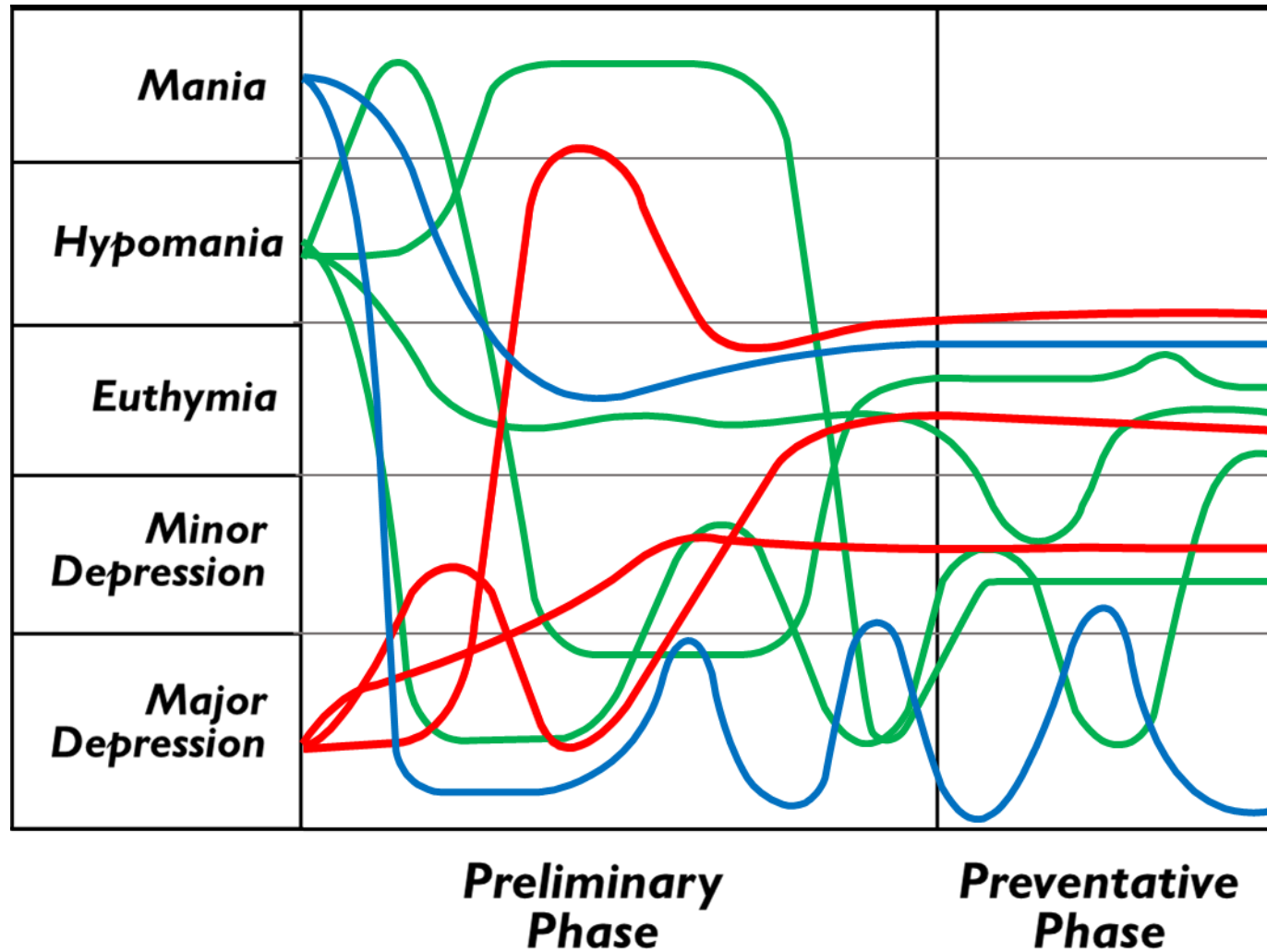




# Bipolar and age of onset of comorbid conditions



*Response, Remission, Recovery, Relapse, Recurrence:*  
 Phases of Treatment of Bipolar Disorder



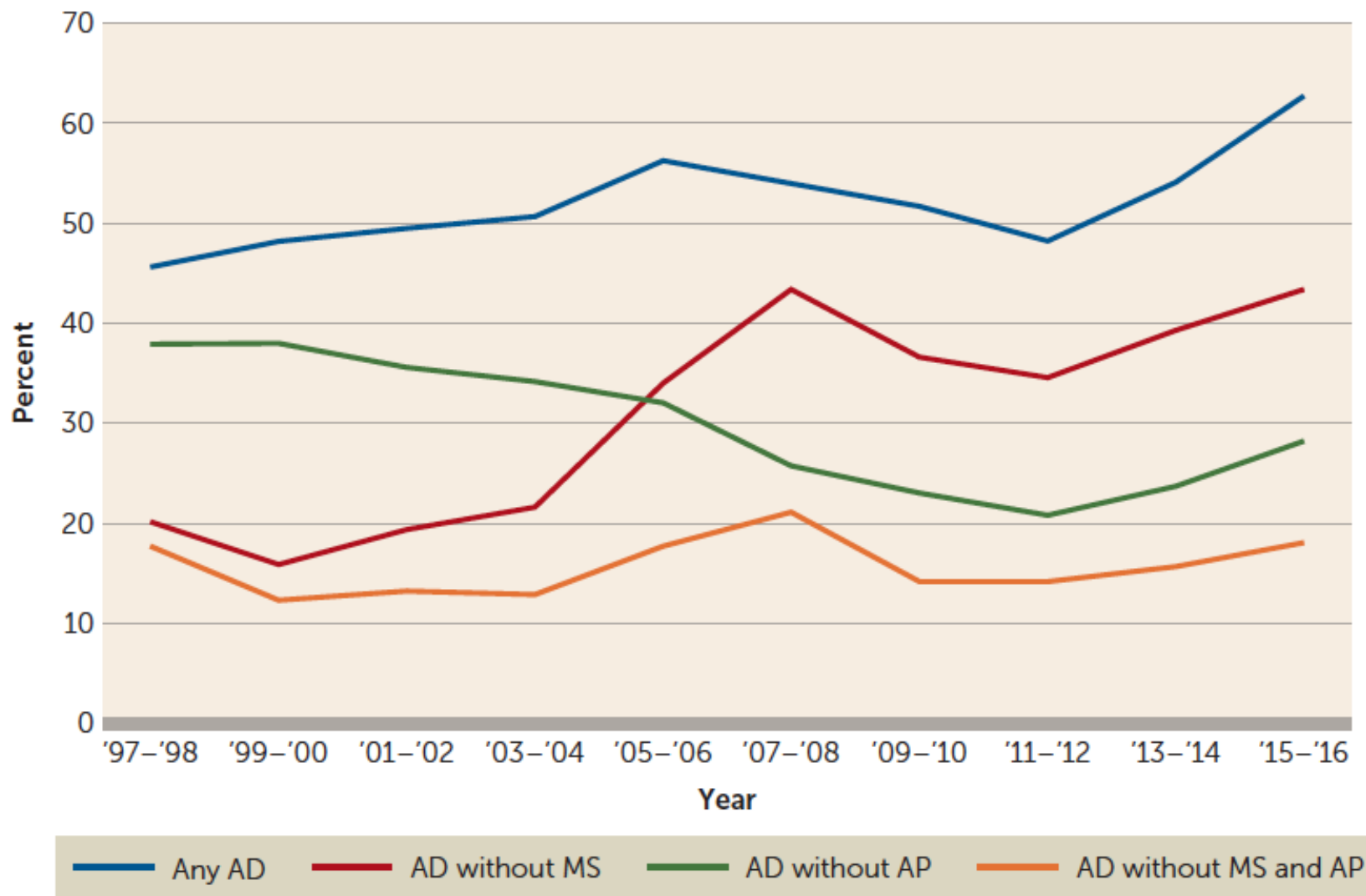


**WARNING  
DEPRESSION  
AHEAD**



# Act III: Treatments

FIGURE 2. Prescribing trends for antidepressants in the treatment of bipolar disorder in office-based visits to psychiatrists, 1997–2016<sup>a</sup>



<sup>a</sup> Data are from the National Ambulatory Medical Care Survey, 1997–2016. AD=antidepressant; AP=antipsychotic; MS=lithium and antiepileptic mood stabilizers.

# FDA Approved

- Olanzapine/Fluoxetine Combination (OFC)
  - Zyprexa/Prozac
- Quetiapine - Seroquel
- Lurasidone – Latuda
- Cariprazine – Vraylar



# FDA Approved Bipolar Depression Treatments

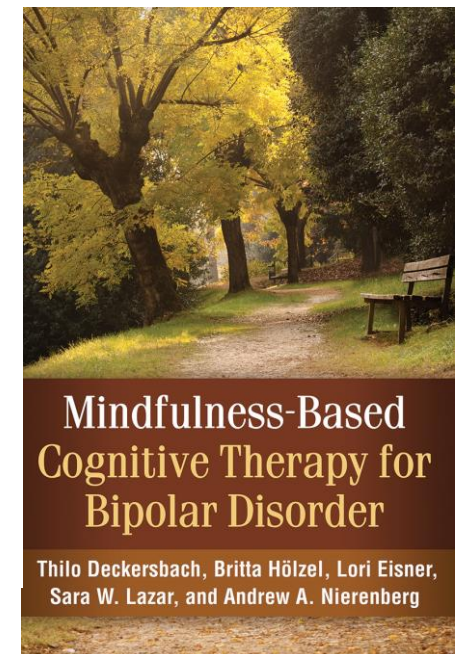
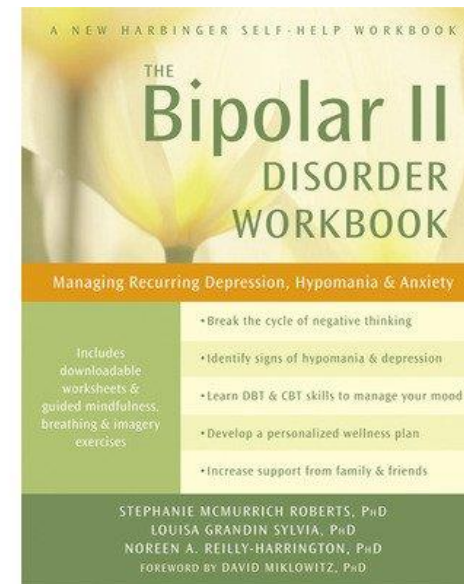
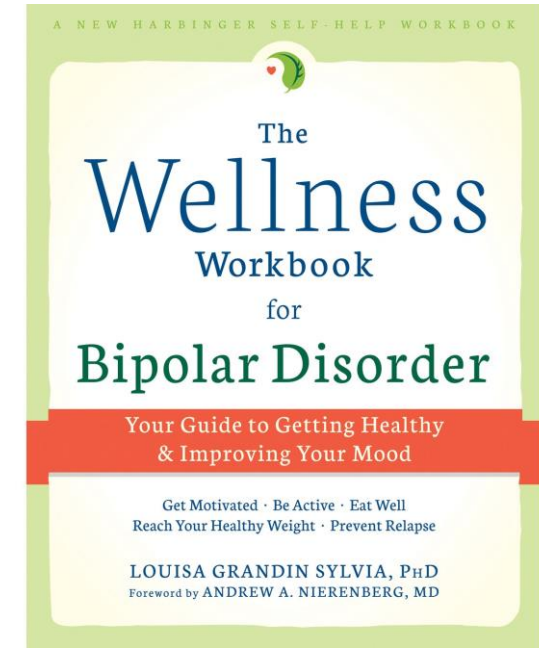
	Response	Weight Gain	Sedation
Olanzapine/Fluoxetine	56%	19%	21%
Quetiapine	59%	8%	56%
Lurasidone	52%	2%	10%
Cariprazine	46%	3%	6%

# Not FDA Approved

- Antidepressants with or without antipsychotics
- Lamotrigine
- Electroconvulsive therapy
- Repetitive transcranial magnetic stimulation (rTMS)

# Psychotherapy

- Cognitive behavioral therapy (CBT)
- Family focused therapy
- Mindfulness based cognitive therapy (MBCT)
- Unified protocol for emotional regulation
- Dialectical behavioral therapy (DBT)
- Lifestyle interventions



# Potential new treatments

- Ketamine
- Pramipexole
- Pioglitazone
- Bezafibrate
- Minocycline
- N-acetylcysteine
- Nicotinamide riboside
- Candisartan



# Hope

- Better understanding of BD with larger genetic studies
- Neurons and brain organoids made from skin biopsies
- Big data from electronic medical records
- Bipolar Global Cohort Collaborative
- Philanthropic support