

CONVEGNO NAZIONALE

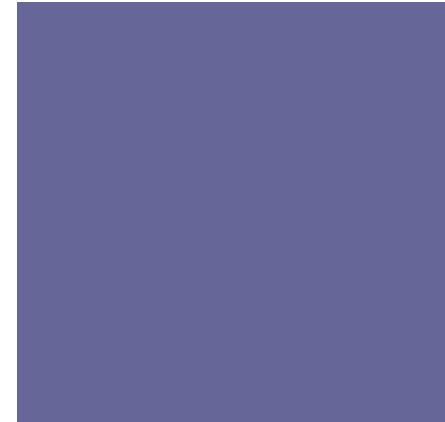
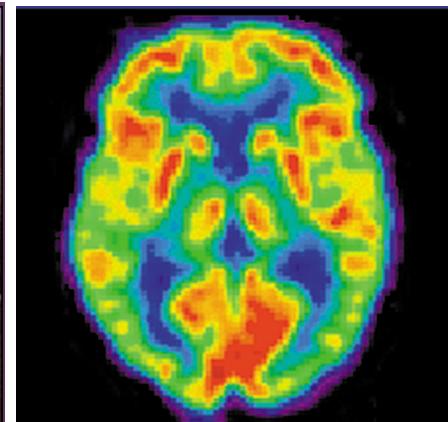
*Let's stop HIV*

Nuove prospettive  
e popolazioni speciali



# La mappa della nuova tossicodipendenza

Felice A. Nava



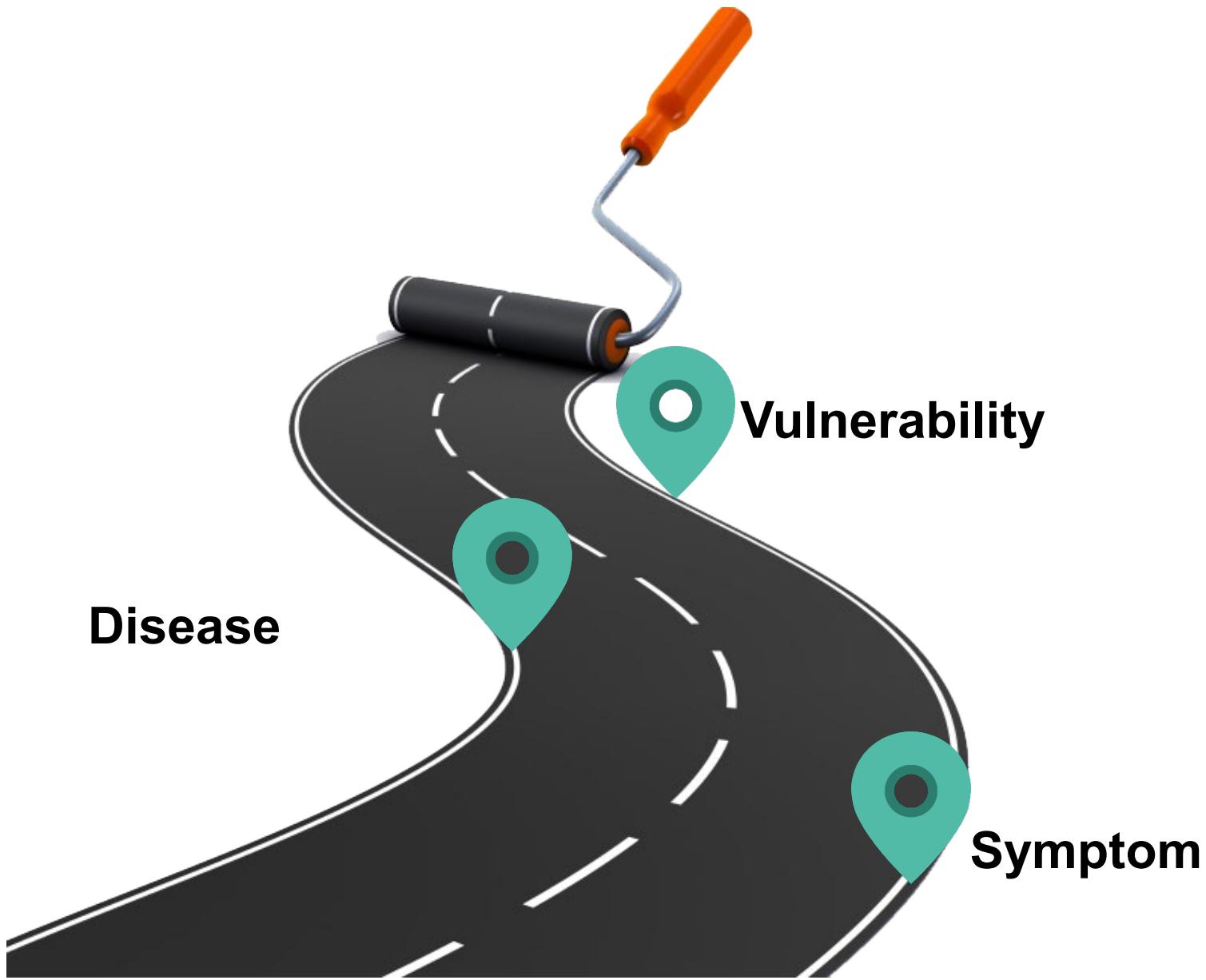
**Felice Nava, MD, PhD**  
Director Penitentiary Medicine and Drug Abuse  
Unit, Public Health Service, Padova  
Director Italian Society of Addiction Medicine  
(FeDerSerD)

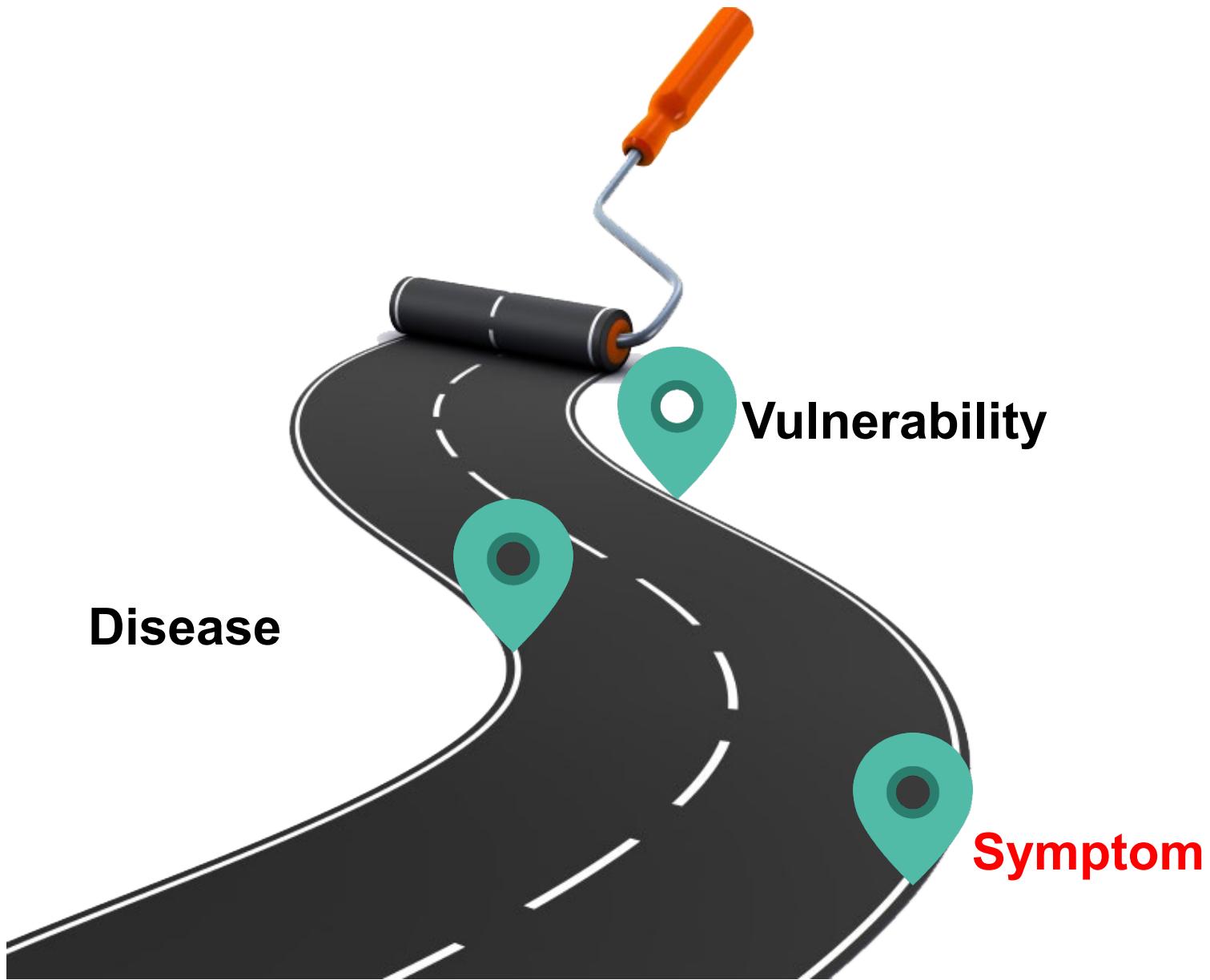
# The Map of the New Addiction

## Rimini, 3 April 2019

# As you become addict...





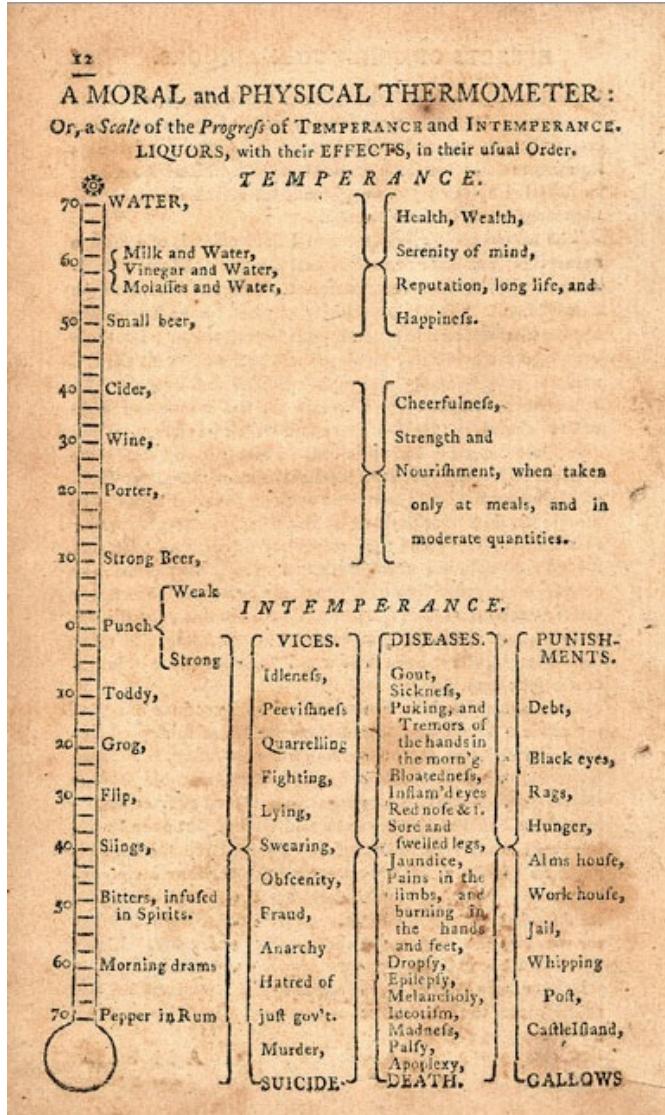


# Addiction as Symptom

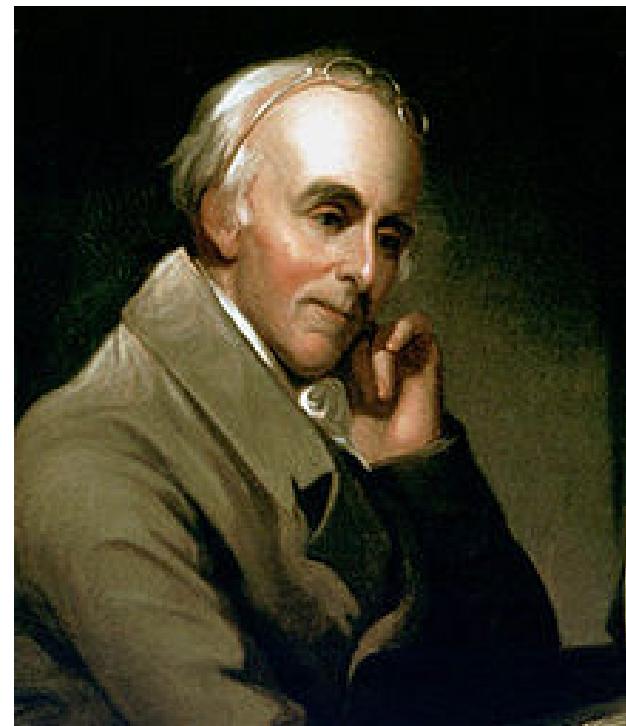
- Loss of control;
- Craving;
- Use despite negative consequences



# The Beginning of the History...

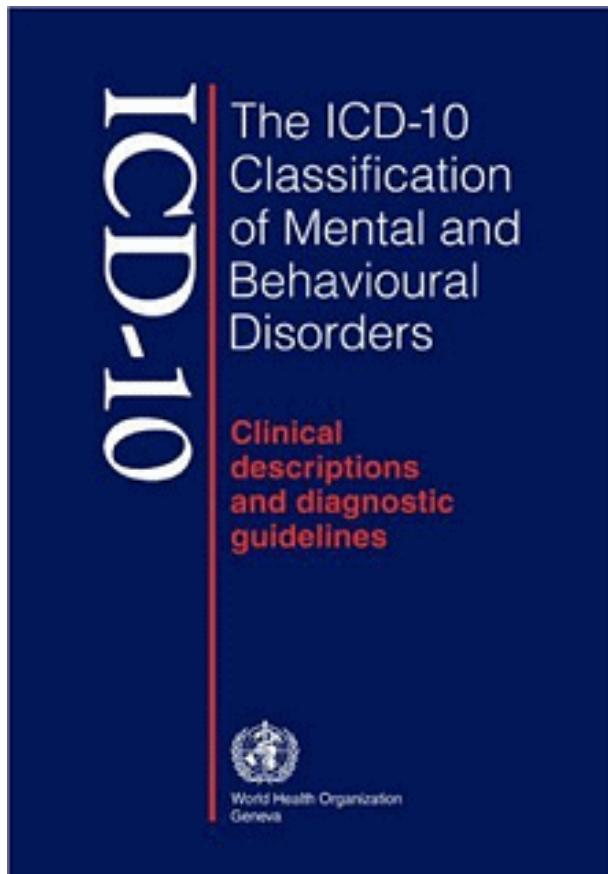


Benjamin Rush the father of the model of the alcoholism as disease



(1746-1813)

# ICD: the Appearance of the Drug Related Disorders



<b>WHO: Criteria (1964)</b>	Physical Dependence Psychological Dependence
<b>ICD 8 (1967)</b>	Personality Disorders Nevrosis
<b>ICD 9 (1975)</b>	Abuse/Dipendence
<b>ICD 10 (2007)</b>	Tolerance, Abstinence, Craving

# DSM: The Categorial System



<b>DSM I (1952)</b>	3 Diagnostic Categories: - Organic syndrome - Functional disorders - Mental retard
<b>DSM II (1968)</b>	11 Diagnostic Categories
<b>DSM III (1984) DSM III R (1987) DSM IV (1994) DSM IV TR (2000)</b>	Atheoretic, Descriptive, Categorical

# DSM III-R (1987): the Era of the Symptom

## Substance-Related Disorders

- Compulsion
- Loss of control
- Drug seeking behaviour



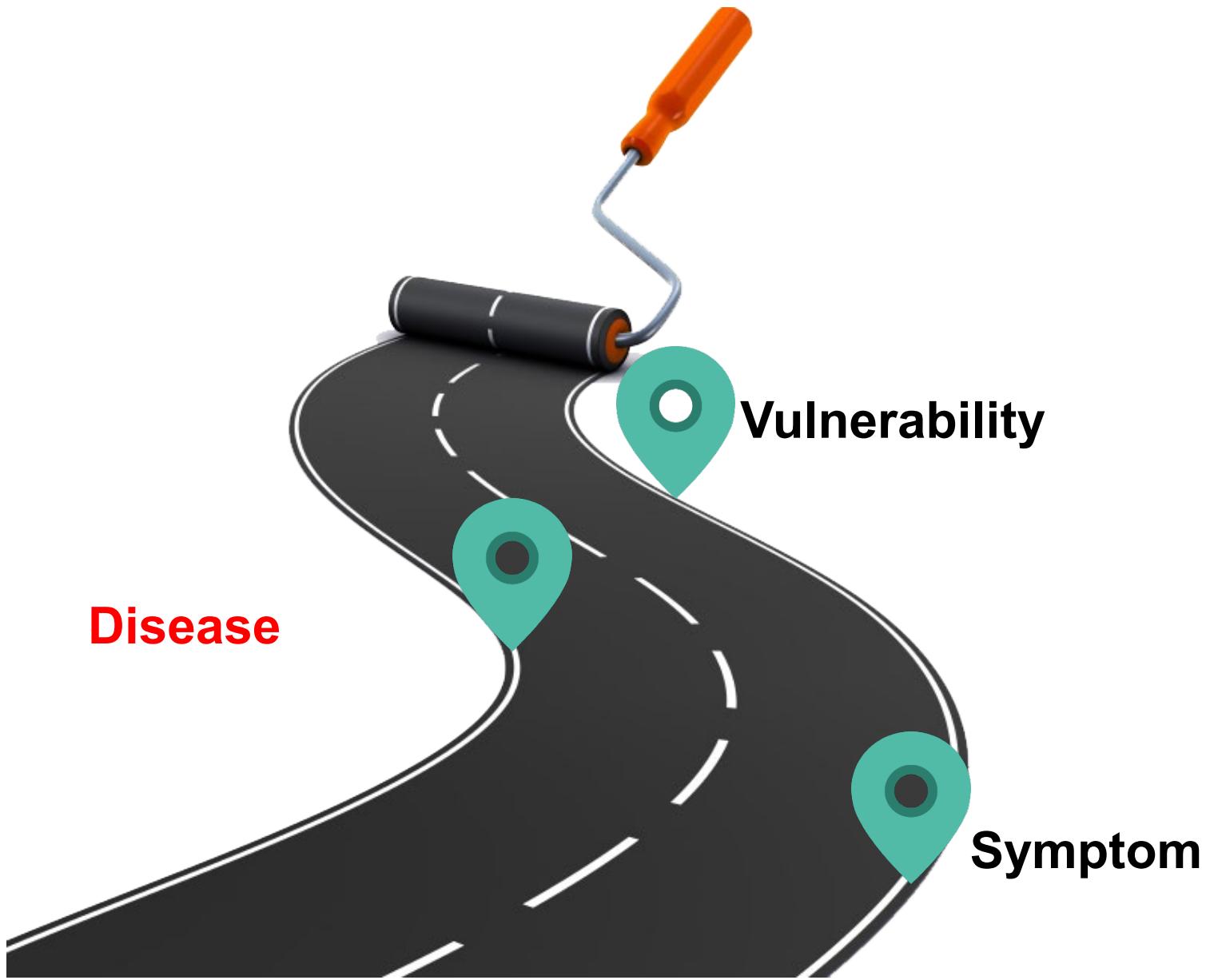
# DSM IV (1994): The Beginning of the Pathogenetic Era

Abuse

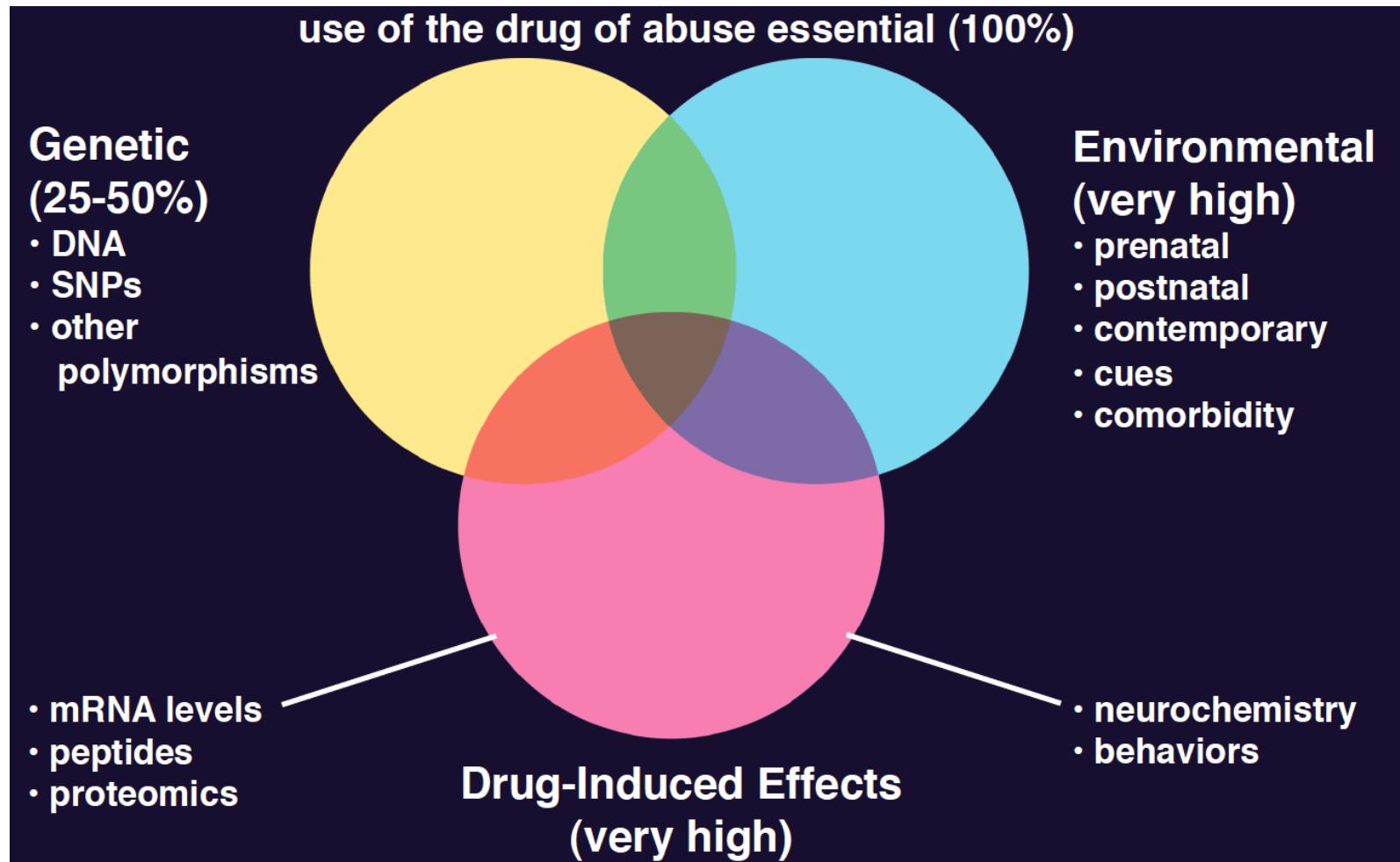


Dependence



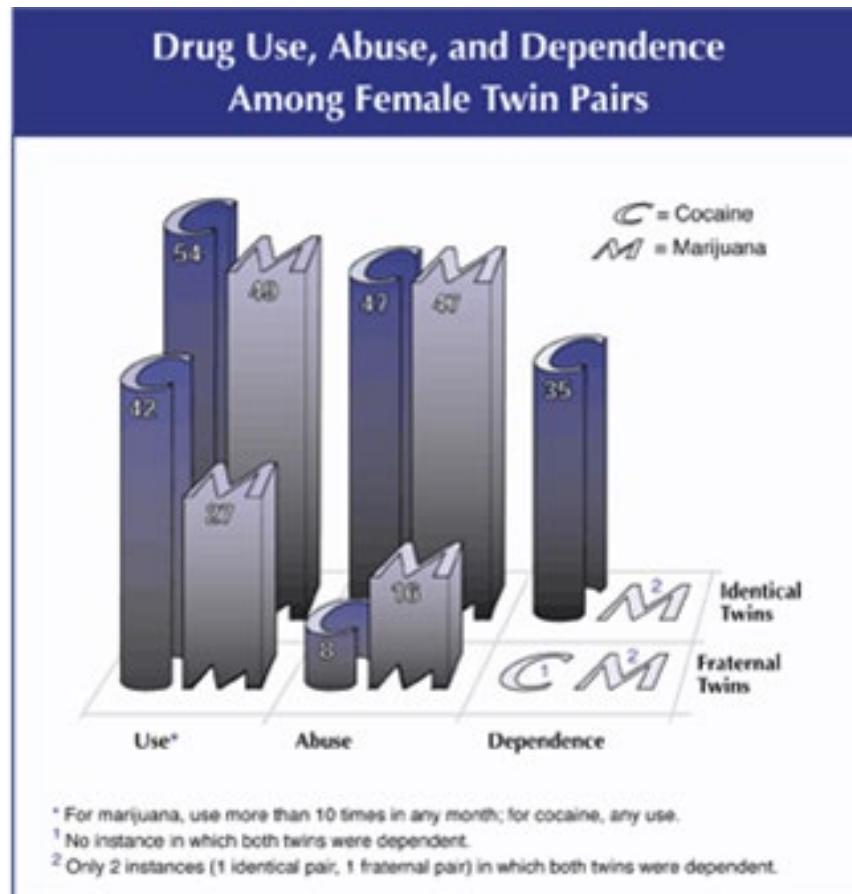


# Vulnerability & Disease



Neurobiology of addictive behaviours and its relationship to methadone maintenance. Stimmel B., Kreek M.J. Mt. Sinai J. Med. 2000 67:375-380.

# Genes & Addiction (1)



Kendler et al., 1998

# Genes & Addiction (2)





Virginia Kelley, was married five times, twice to the same man

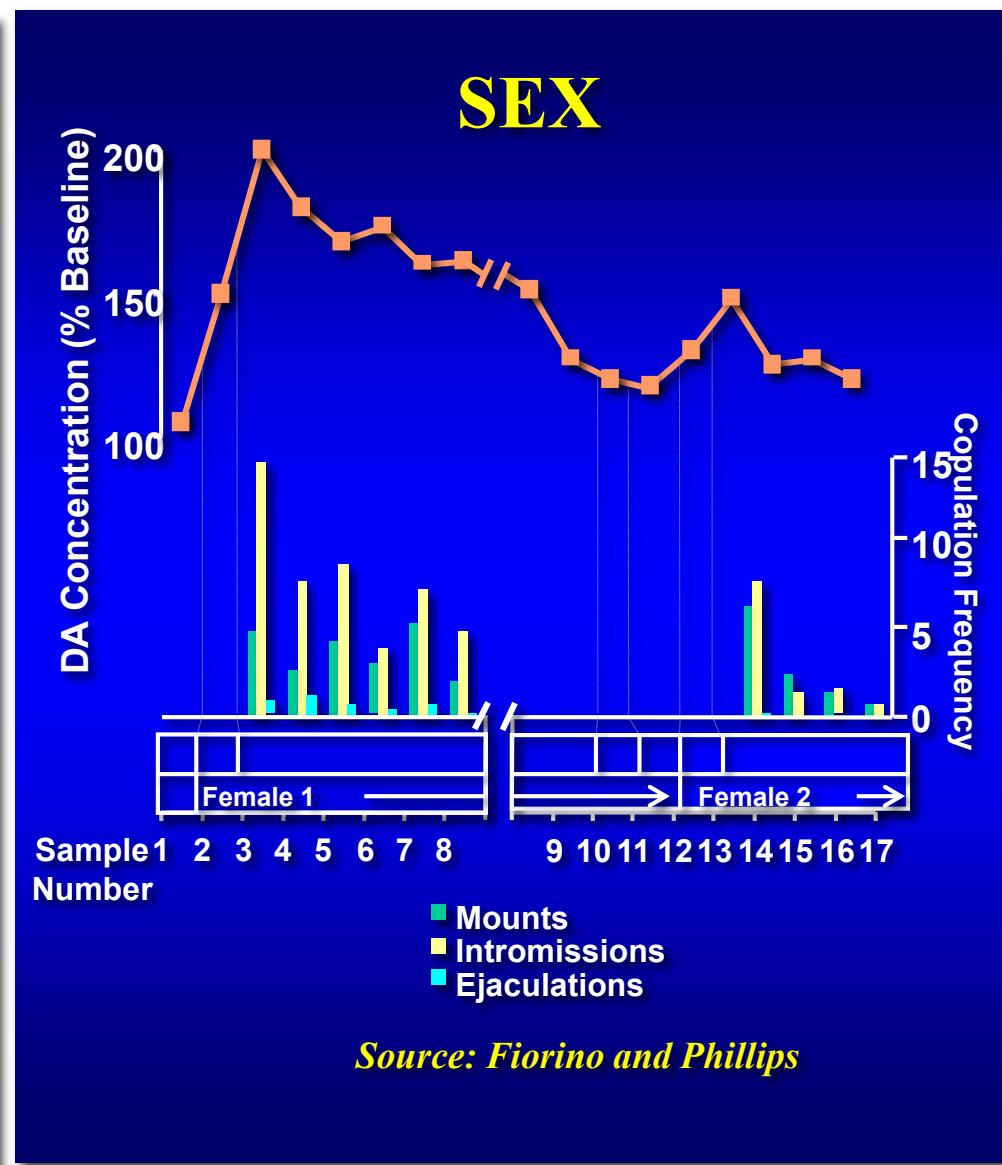
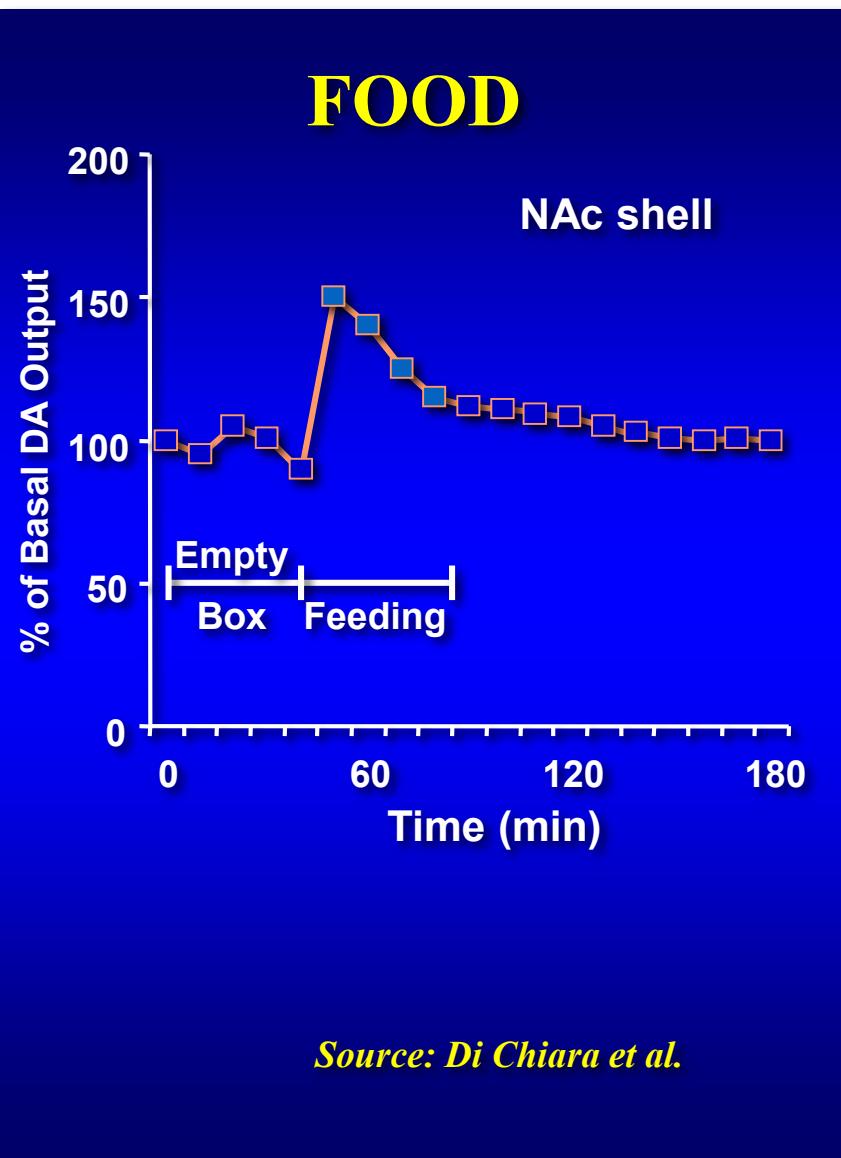


Bill Clinton

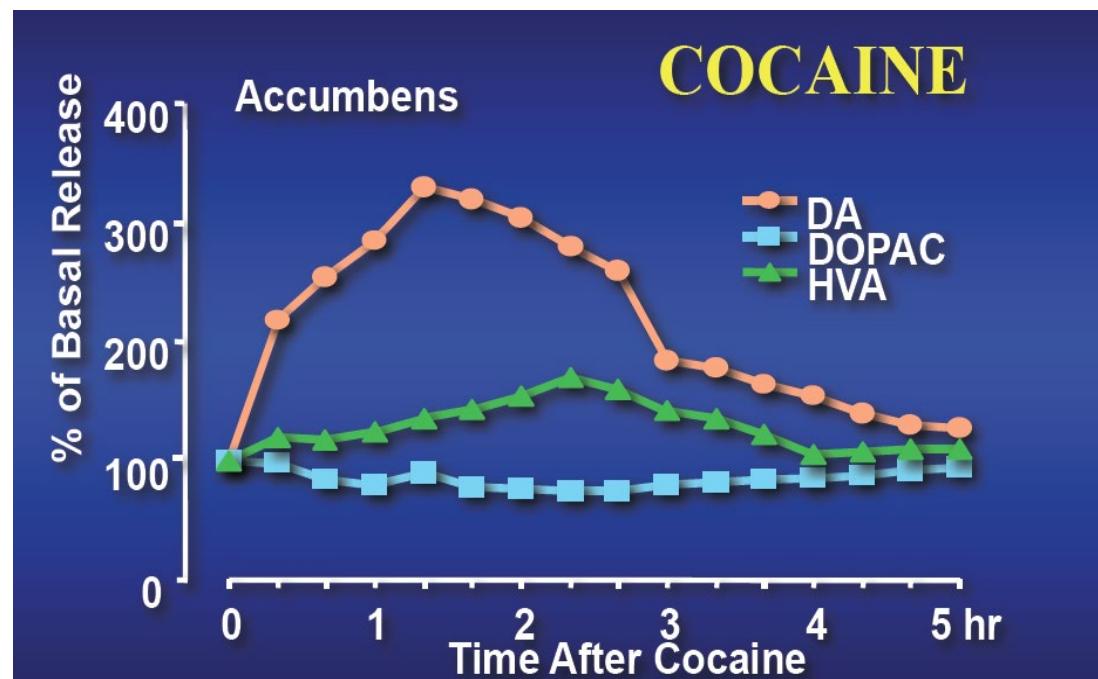
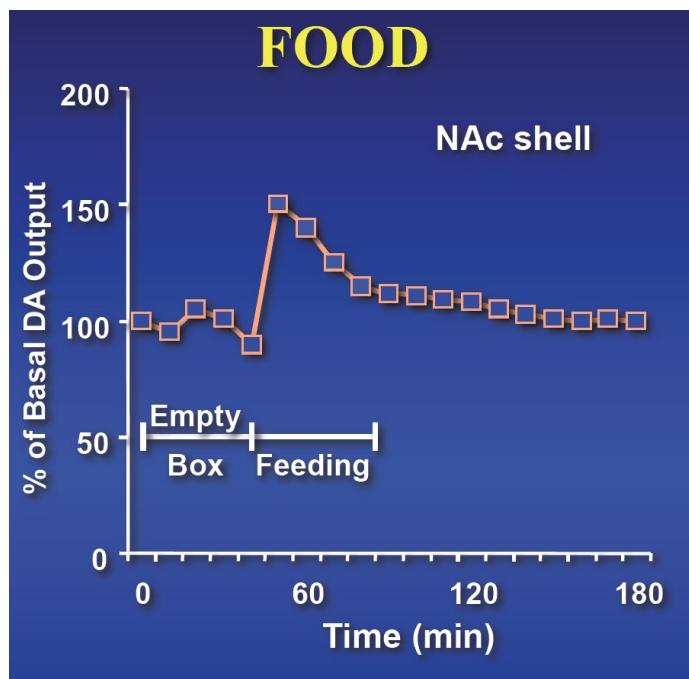


Roger Clinton

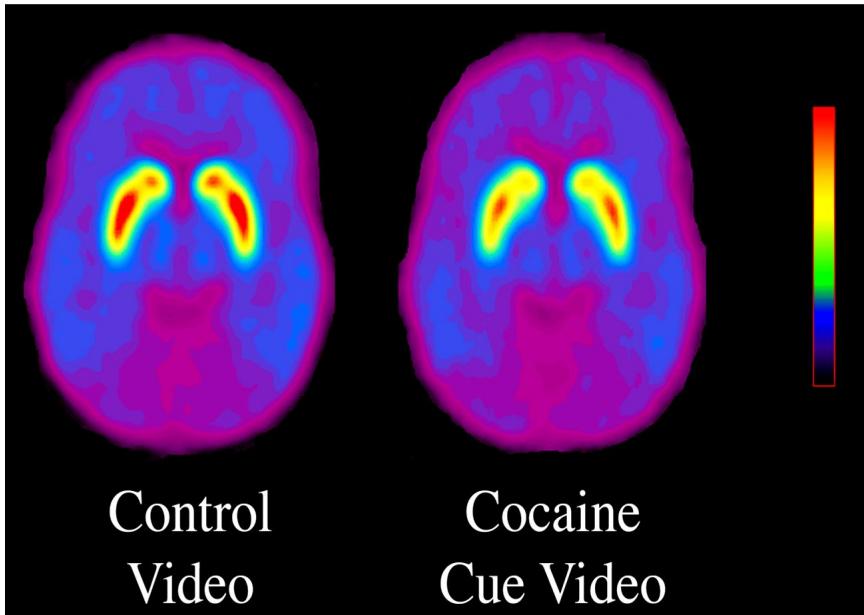
# Natural Stimuli and Incentive Reward



# Drug Abuse as Surrogate of Natural Stimuli



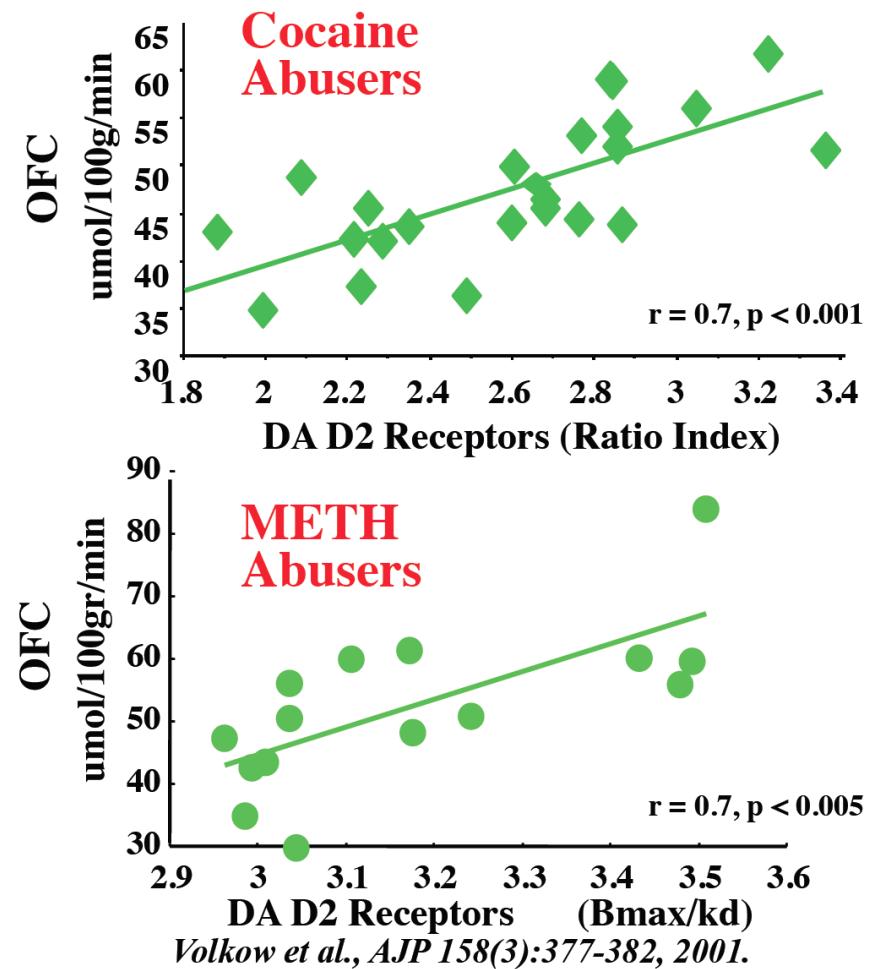
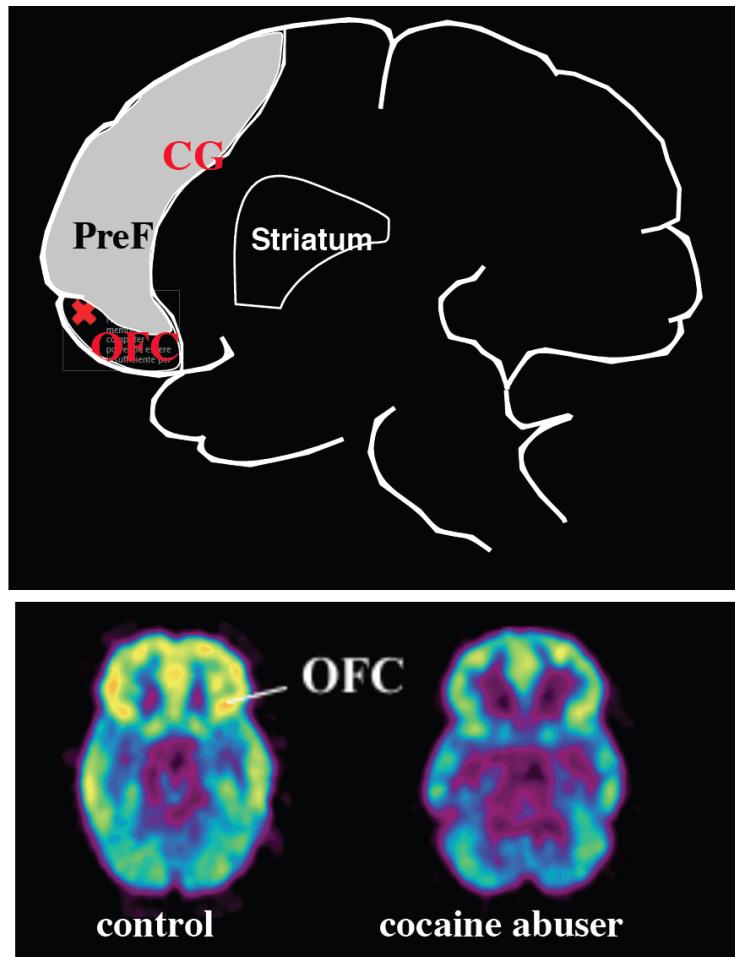
# The Memory od the Drug...



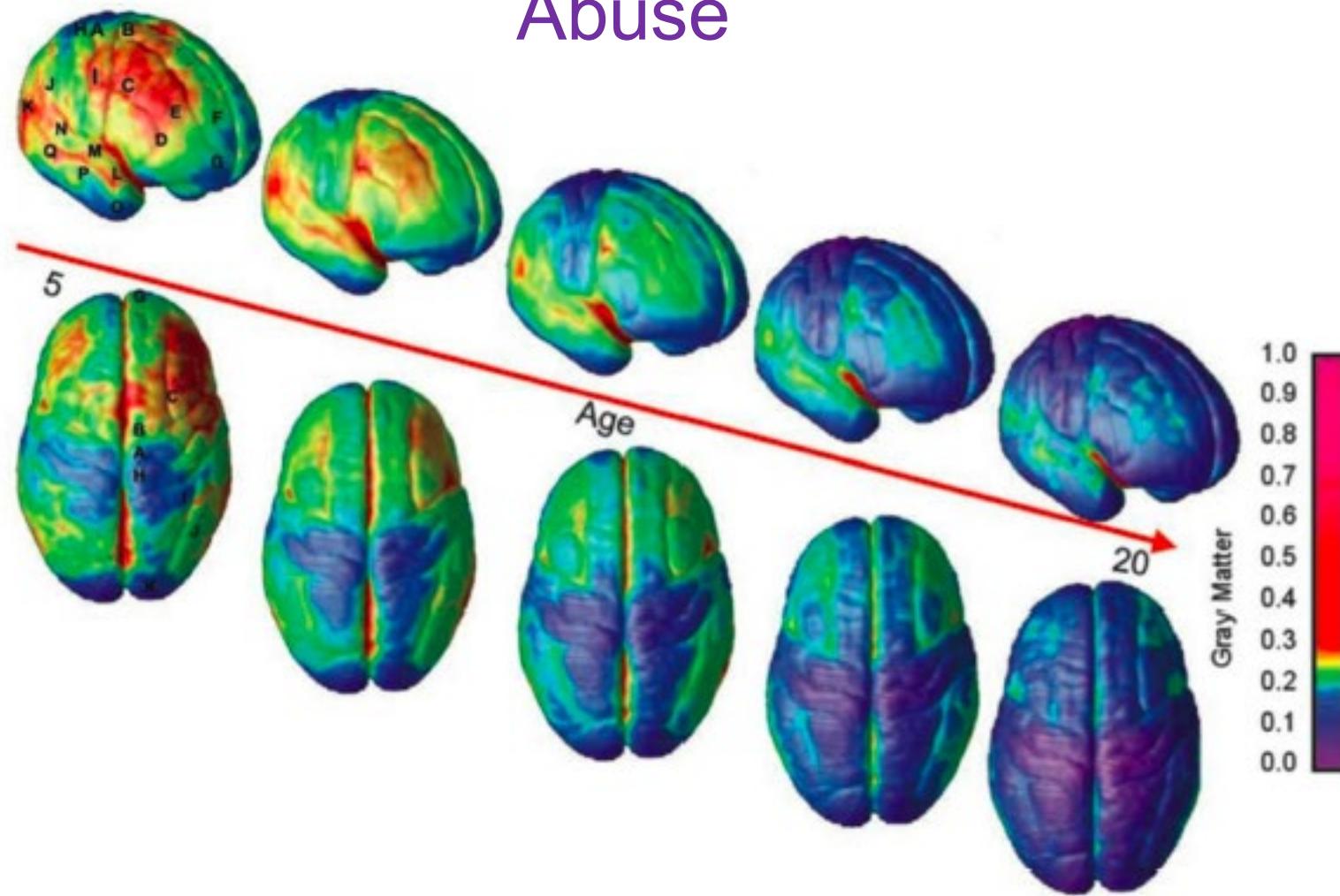
The relapse is due to:

1. drug
2. cue
3. stress

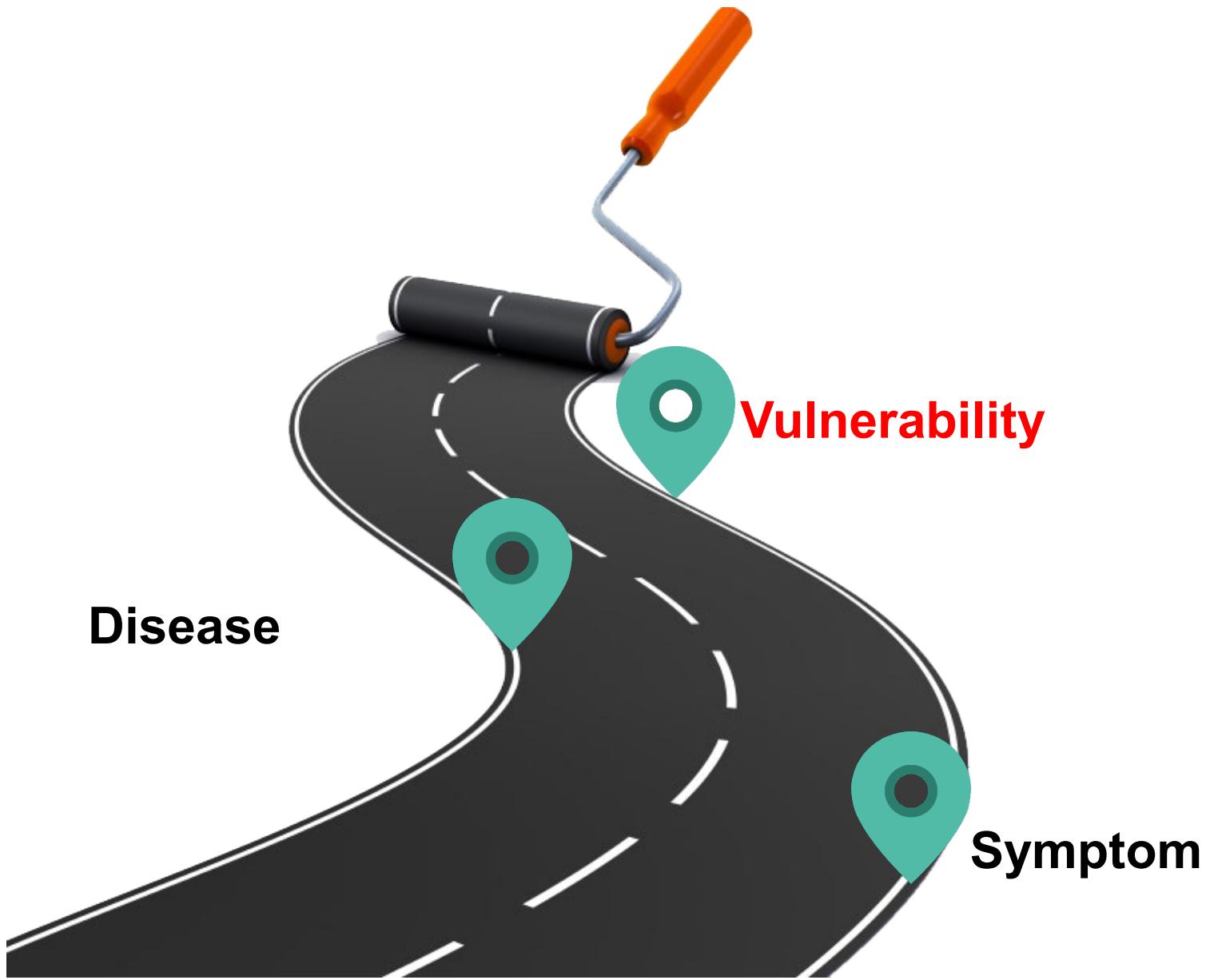
# The Chronic Drug Use and the Hypofrontality



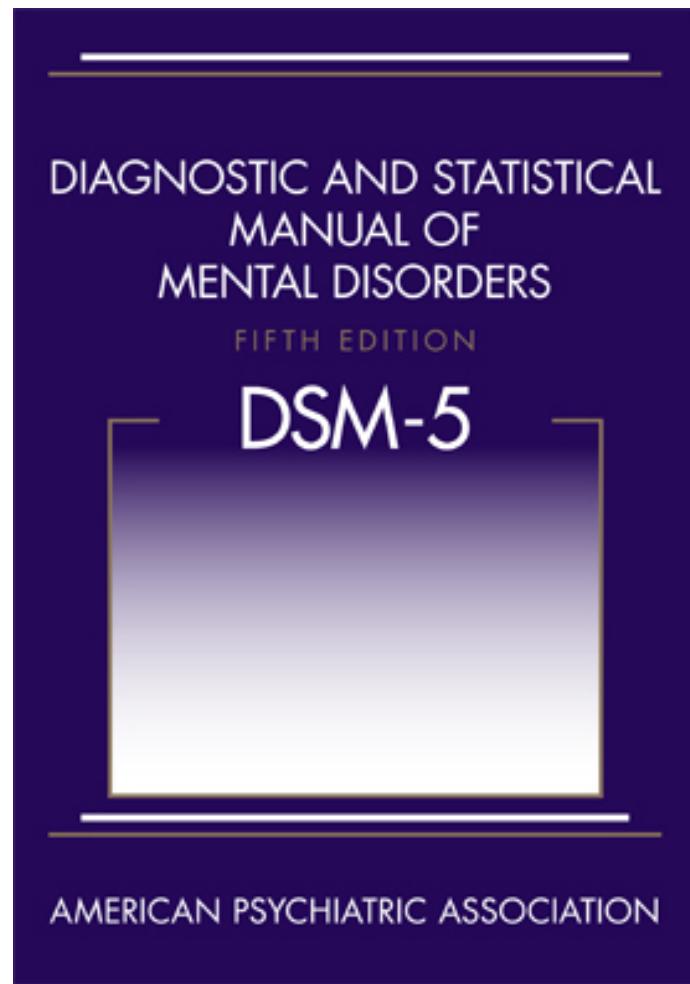
# Brain Adolescent as Primary Target of Drug Abuse



Gotay et al., 2004, PNAS, 101: 8174-8179

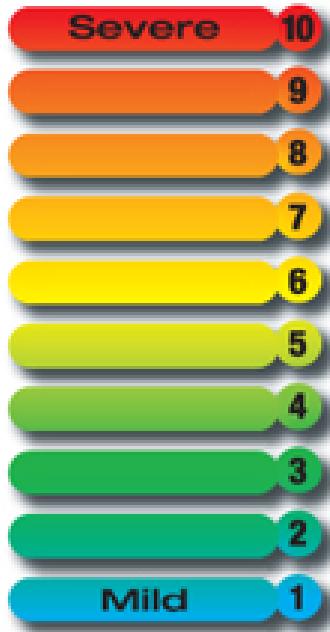


# DSM-5®: The Prospective



# DSM-5®: Severity Criteria

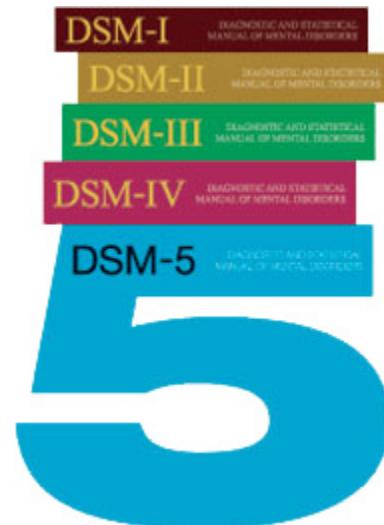
## Substance Use Disorder



Mild: 2-3/11

Moderate: 4-5/11

Severe: 6/11



# DSM-5®: Etiopathogenetic Perspective

- New Terminology: “**Substance Related and Addictive Disorders**”
- Behavioural Addictions: “**Gambling Disorder**”
- **No more the term “Abuse”**
- Same DSM-III-R criteria (no legal problem)
- Added “**craving**”
- Tolerance and withdrawal ignored if the patient is treated for the pain, anxiety, depression, ect. (dependence = “**compulsive drug-seeking**”)
- **Severity** (based on the number of the symptoms)

# Neurobiology of Attachment

The neurobiological of the relationship



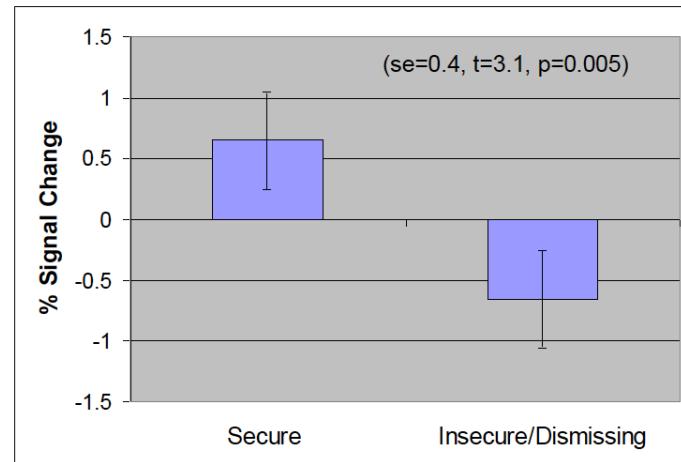
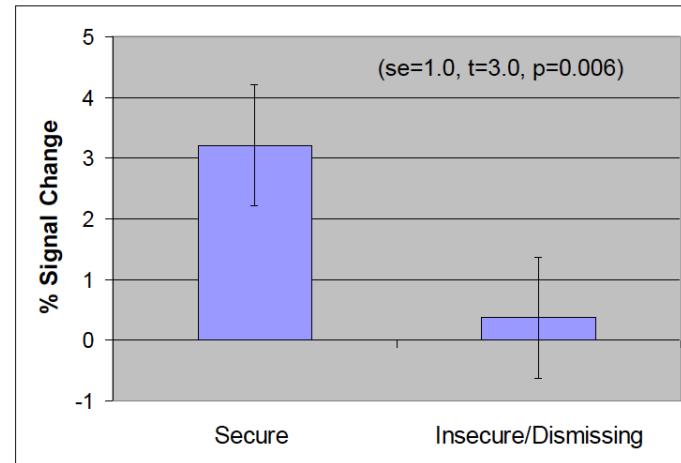
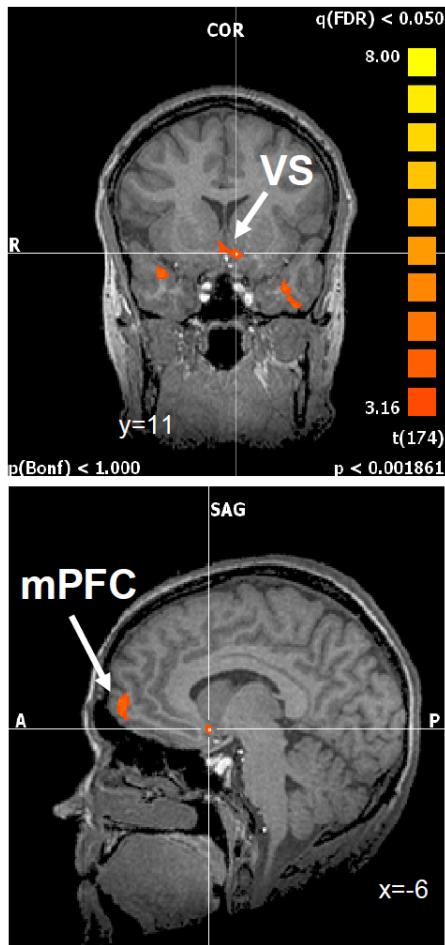
(Schore, 2001; 2002; Siegel, 2001)

# Attachment & Addiction

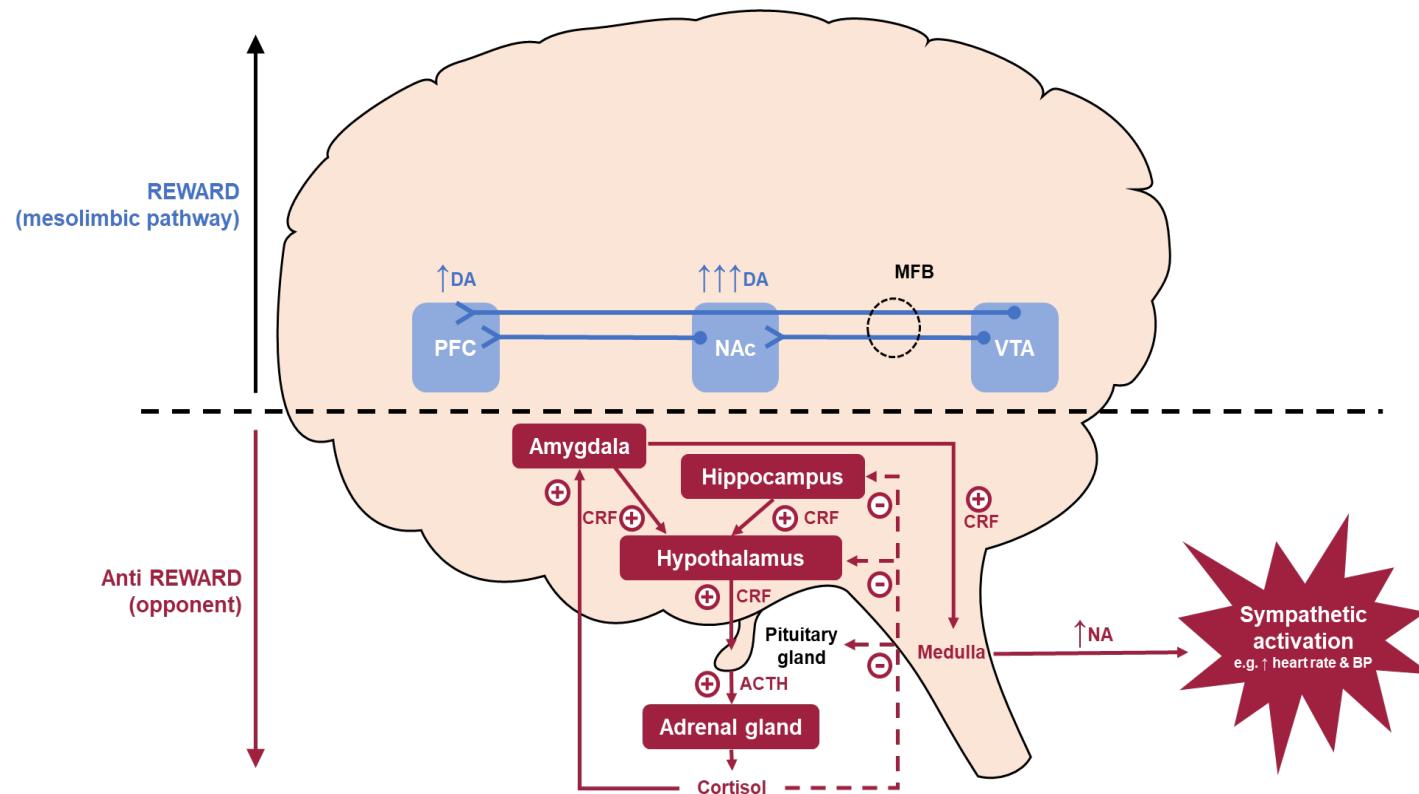
Bilateral  
Ventral  
Striatum



R Medial  
PFC



# Stress & Addiction

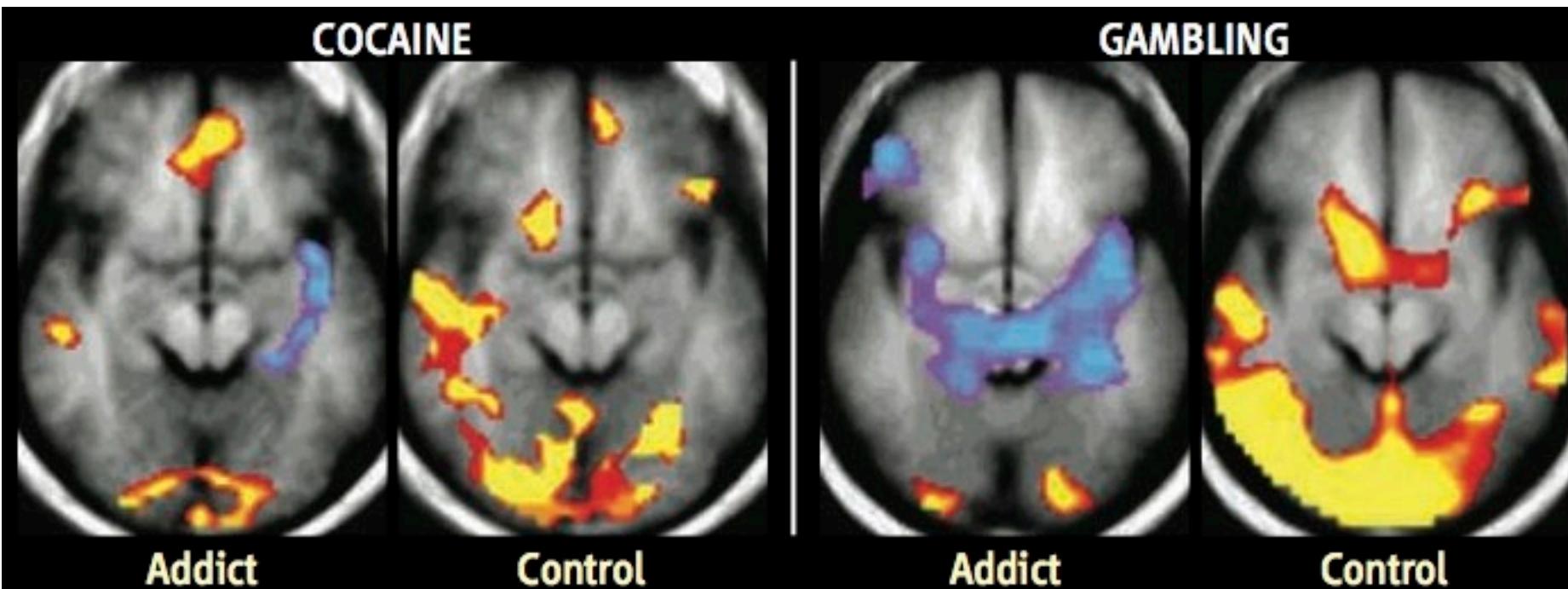


# Craving: the Bridge between *Drug Related and Behavioral Addictions*

- Dysphoric craving: after use stop (long lasting)
- Episodic craving:
  - cue
  - withdrawal
  - drug
  - stress



# Neurobiological Common Route

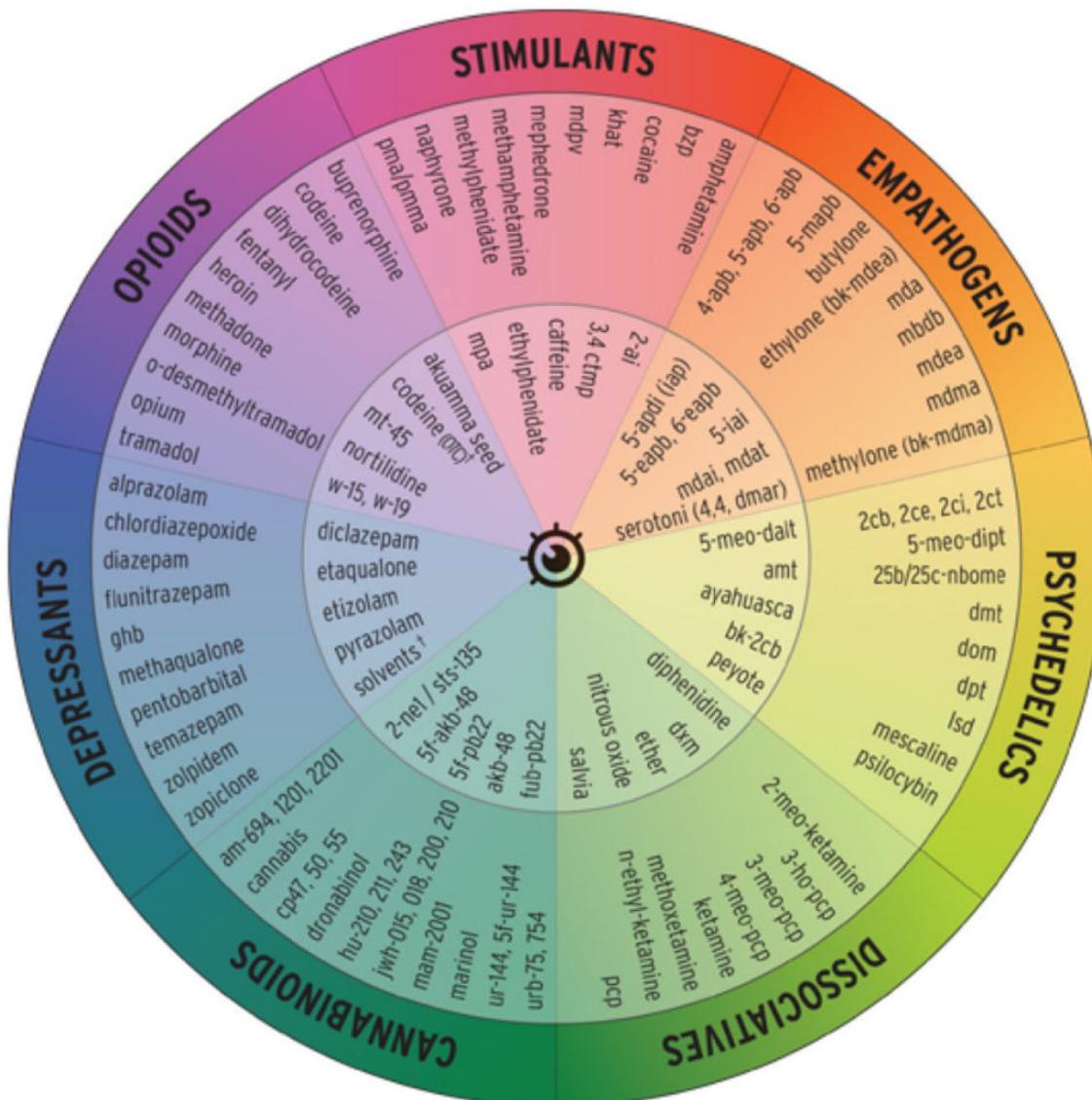


**Hooked.** Brains of pathological gamblers watching a gambling video resemble those of cocaine addicts watching a cocaine video, with relatively less activation in regions implicated in judgment and motivation. Differences may reflect the toxic effects of cocaine exposure.

- “*...it is likely that the future drugs of abuse will be synthetics rather than plant products. They will be synthesized from readily available chemicals, will be very potent, and often very selective in their action. In addition, they will be marketed very cleverly.*”

*Gary Henderson, Journal of Forensic Science 1988*

# Class of NPS



# Take Home Messages

**Addiction:** is a chronic multifacorial relapsing disease

**Pathological behaviour:**

- Loss of craving;
- Craving;
- Use despite negative consequences

**Neurobiology:** Learning and memory disease with significant changes in the reward system



REGIONE DEL VENETO



ULSS 6  
EUGANEA



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