



Getwele Natureceuticals

Nutritional Therapy: Missing Piece of effective management of Alcohol/Drug Abuse

Concept Paper Summary

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SMAASH Your Substance Dependence

A recalcitrant problem

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Relapse to Substance Use Disorder – A Recalcitrant Problem

- **Preambles**

- **Relapse to drug seeking after abstinence is a major challenge in managing drug addiction.**
- **Abstinent drug users remain at risk for relapse even after extended periods of abstinence when there is exposure to drug associated cues (e.g stress, and settings in which individuals get high. Can happen as incarcerated citizens come out of jail/prison)**
- **Intense craving after release from jail/prison has also been shown by research as a contributing factor**

Relapse to Substance Use Disorder – A Recalcitrant Problem

As a result, following consequences occur:

- **Persistent craving, Burn out feeling by Individuals from multiple treatments and revolving door situation from incarceration**
- **Motivation to continue seeking recovery from treatment/rehabilitation is lost or diminished**
- **Pre-release group recovery support while individual is in any form of structured program (jail/prison included) is essential to identify immediate need, motivate and give hope that individual will not be left alone**

Problem Statement

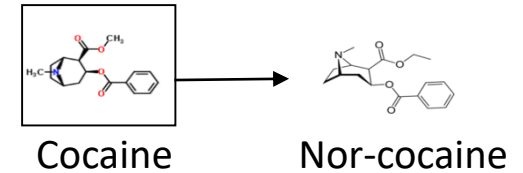
Persistent craving drives relapse

Reasons for craving (drug seeking)

1. Previous reward experiences



2. Drug Metabolites can cause craving



3. Addictive medications may lead to craving & relapse



4. Nutritional Deficiency/Lack of nutrient can lead to deficient brain chemicals



Brain Reward System – Recall of previous experience

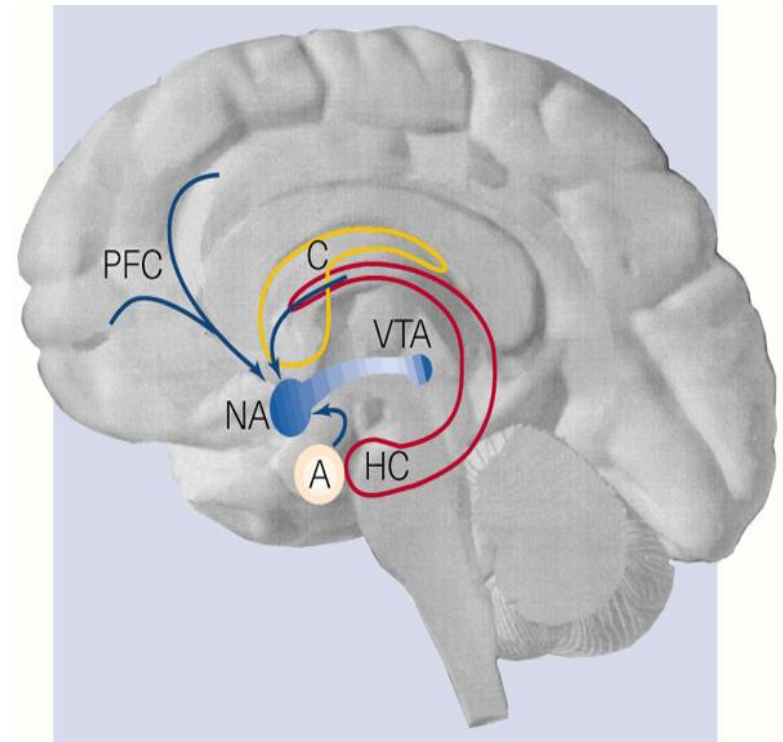
Brain Reward System

1. Recall of previous experience
2. Depletion in brain chemicals & lack of nutrients

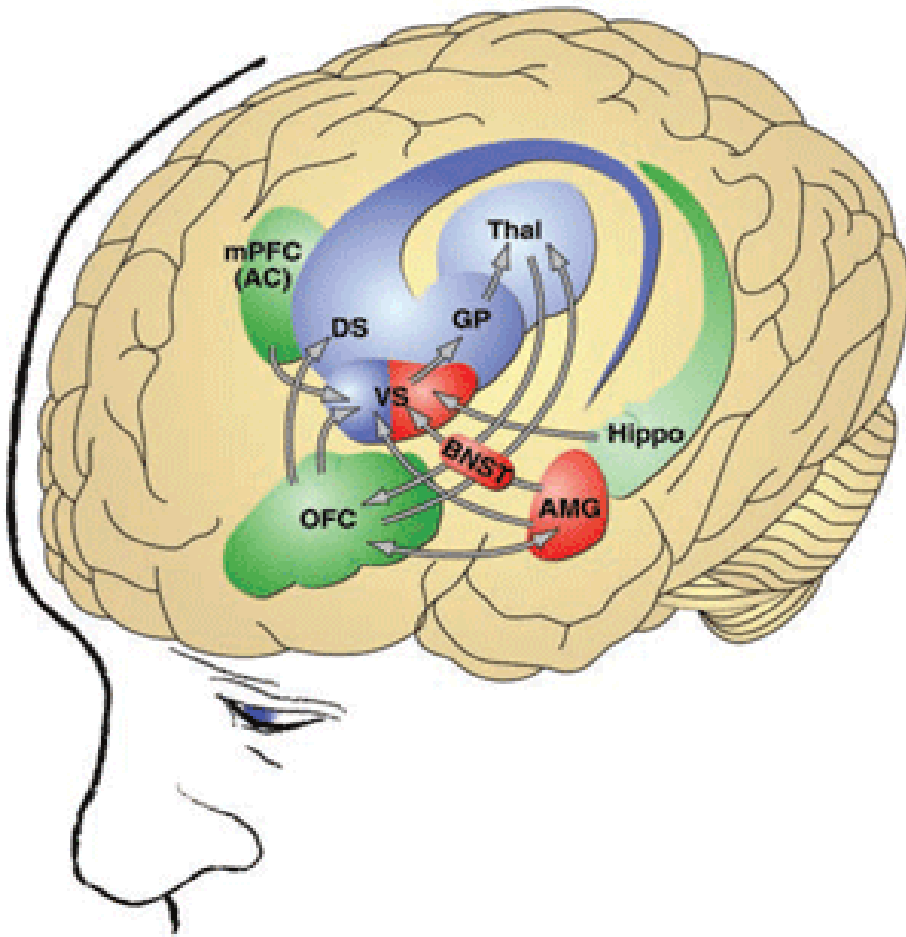
Drugs of Abuse activate the Mesolimbic Accumbens Reward System

There is initial increase in the Dopamine (DA) system with chronic/intermittent use

Later, DA decreases



Brain Reward System-Development Of Addiction

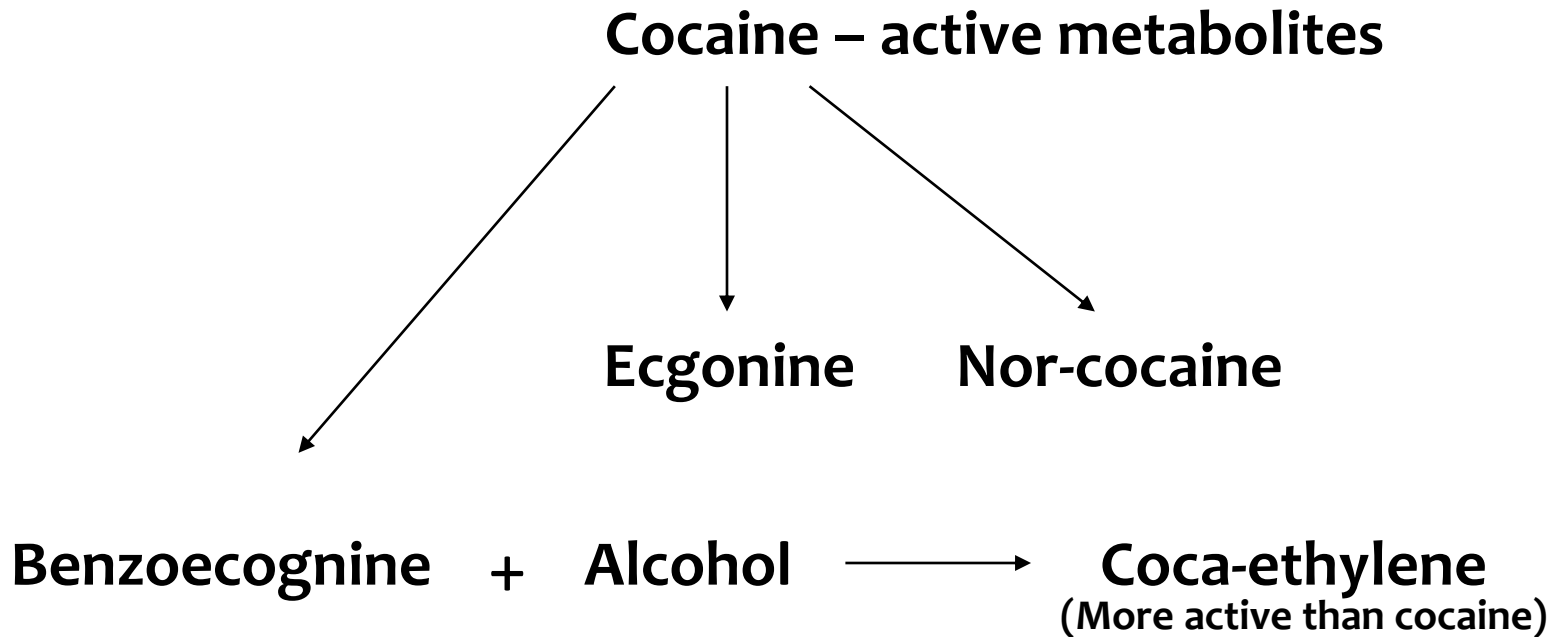


3 DA circuits are involved

- **Mesolimbic circuits:** NAc, Amygdala & Hippocampus - Drug reward, memories & conditioned response
- **Mesocortical circuits:** Cingulate Gyrus & Orbito-frontal cortex - Compulsive use & poor Inhibitory control
- **Nigrostriatal circuit:** Dorsal Striatum for habit formation

Persistent Craving & Relapse

Metabolites can cause craving (drug seeking)

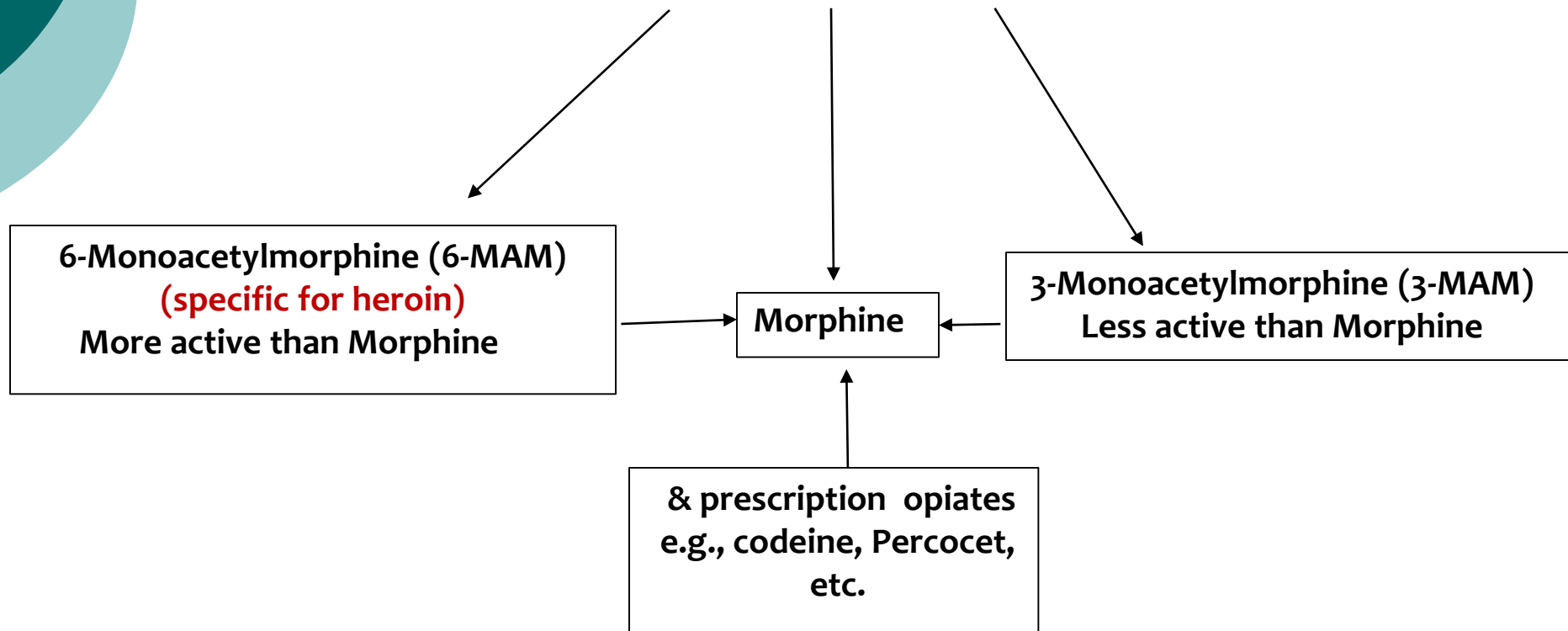


Laizure SC et al., 1995; Landry MJ et al., 2006

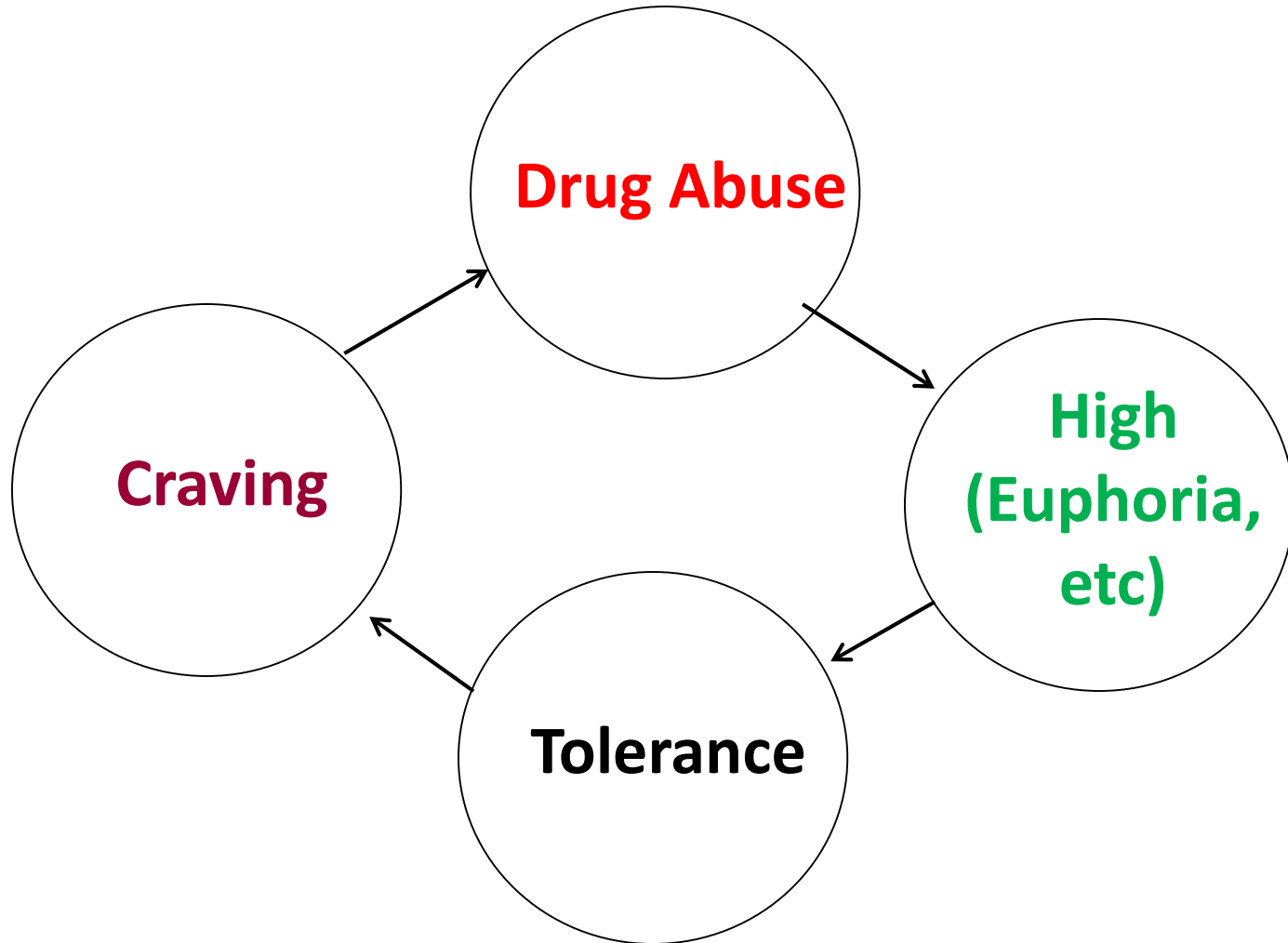
Persistent Craving & Relapse

Metabolites can also cause craving (drug seeking)

Heroin-active metabolites



Addiction becomes cyclical



Categories of Substance Use Disorder (SUD) Individuals

- 1. **Psychological Addicts**
Individual already has a mindset that he/she will get high. Any chemical will get him/her high
- 2. **Familial Addicts**
Genetic Predisposition
- 3. **Medicating Addicts**
Using drugs to treat symptoms
- 4. **Veterans Addicts**
War Veterans who came back with PTSD
- 5. **Celebrity Addicts**
 - Occupational hazards – Can afford pure drugs.
 - Overdoses are frequent.
 -

Getwele offers 4 products



**Cocaine, Marijuana
& Nicotine Abstinence
Support.**

Combamino-C



**Alcohol Abstinence
Support**

Combamino-A



**Opiate Abstinence
Support**

Combamino-H



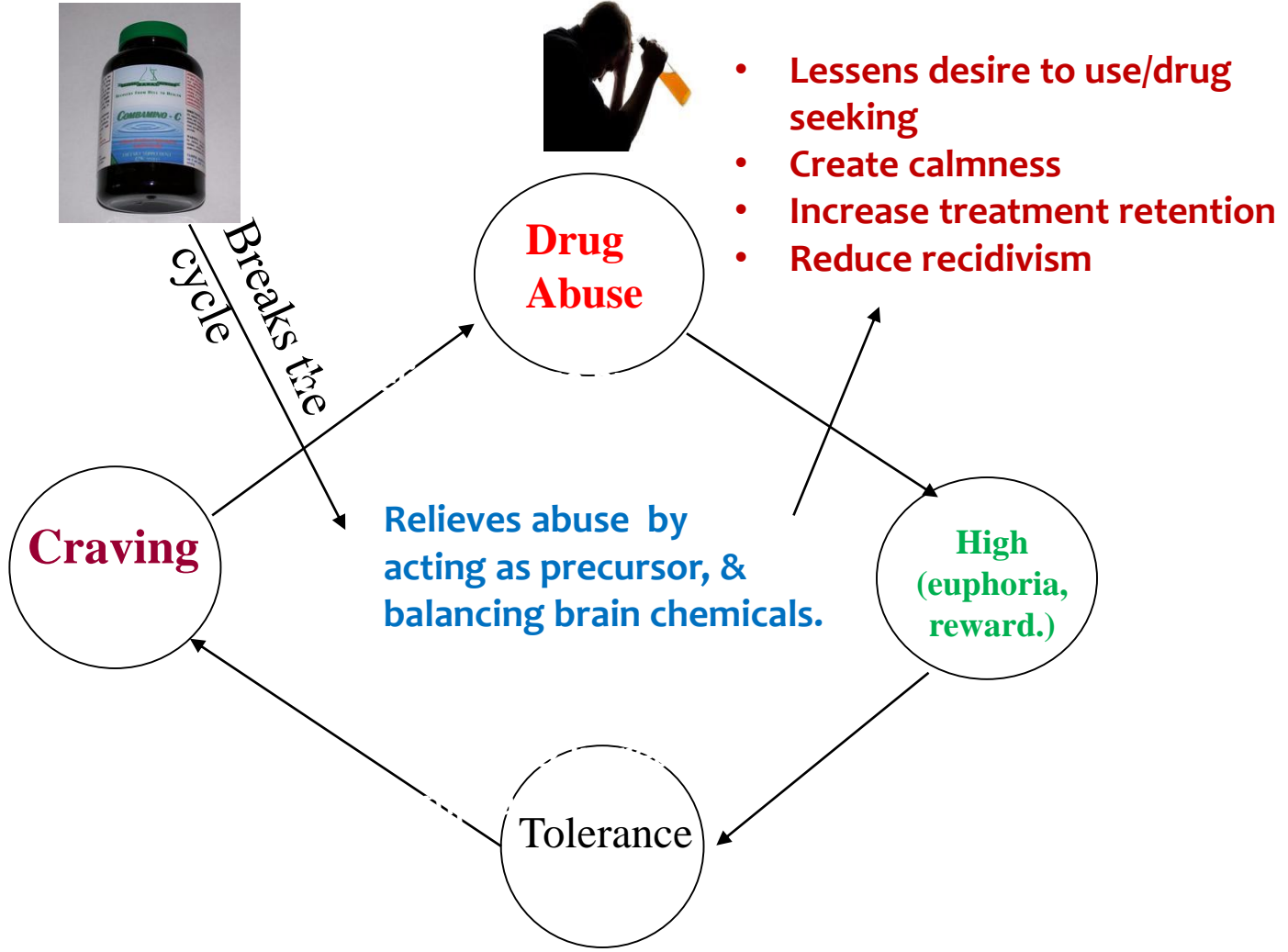
Immune Boosting

Combamino-M

Contents: Amino Acids, Multi-vitamins, Minerals and Fish Oil

Overview of Technology

Products can break the cycle & create good outcomes

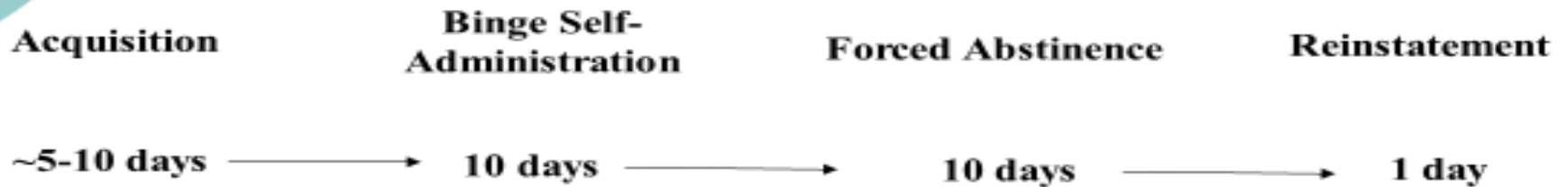




Pilot: Efficacy of Nutritional Supplement (SMAASH-C) at Reducing Relapse Vulnerability

UVA-Getwele Study 2016

Experimental Design: Mar-July 2016



Food Plus Nutritional Supplement (Experimental)
Food without Supplement (Control)



Pilot: Efficacy of the Nutritional Supplement at Reducing Relapse Vulnerability

UVA-Getwele Study, 2016

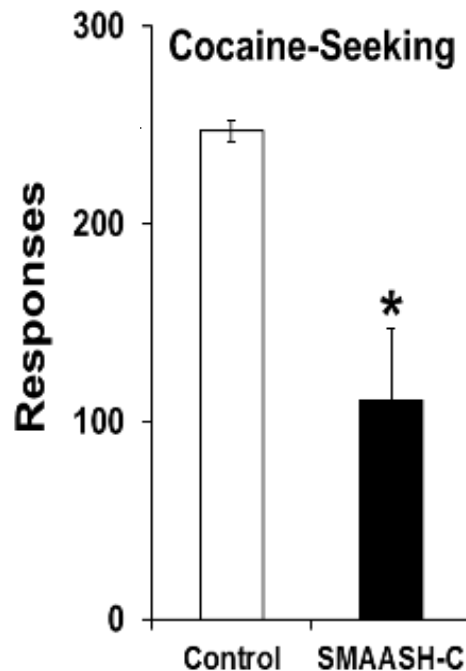
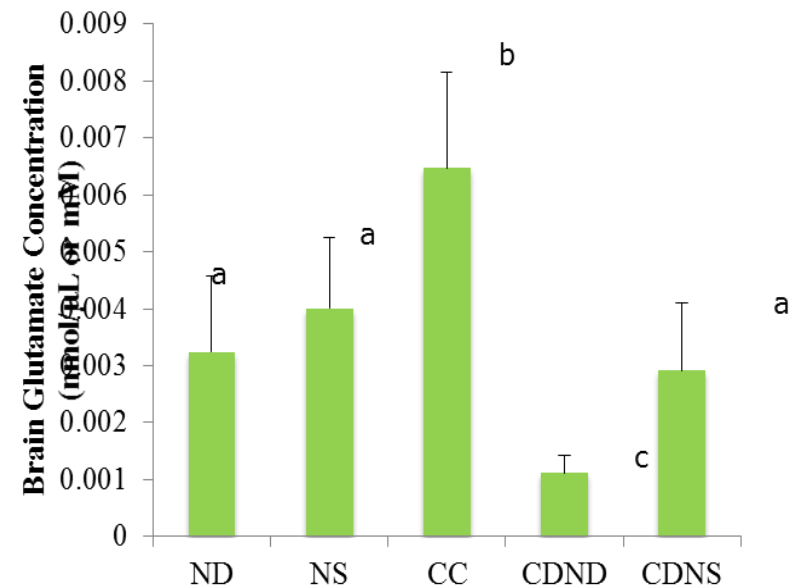
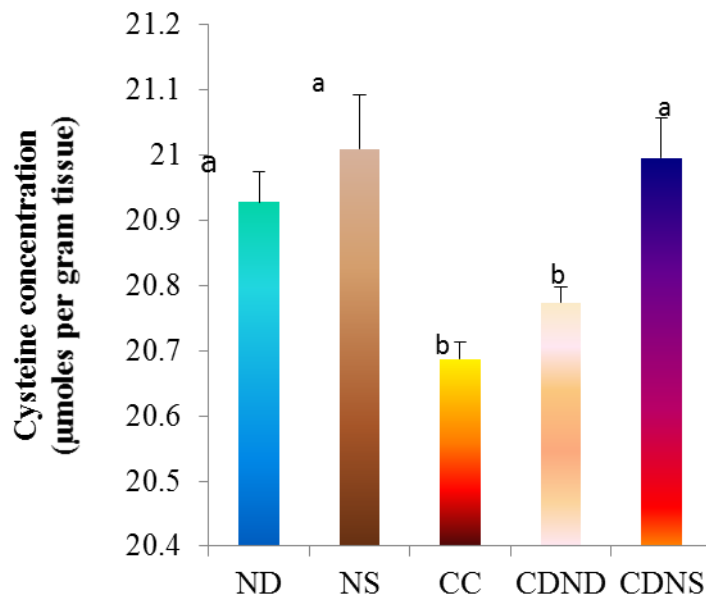


Figure 1. SMAASH-C markedly reduced cocaine-seeking. Rats had either chow without (n=4) or with SMAASH-C (160 mg/day; n=6) during abstinence. Extinction and cue-induced reinstatement responding was assessed on the 11th day of abstinence.

Data: End of Rx - Effects of NS

UWIMONA-AFI
2007-2013, Ph.D Study

Stability & Normalization of Cysteine-Glutamate-GSH ratio (a major cell anti-oxidant)

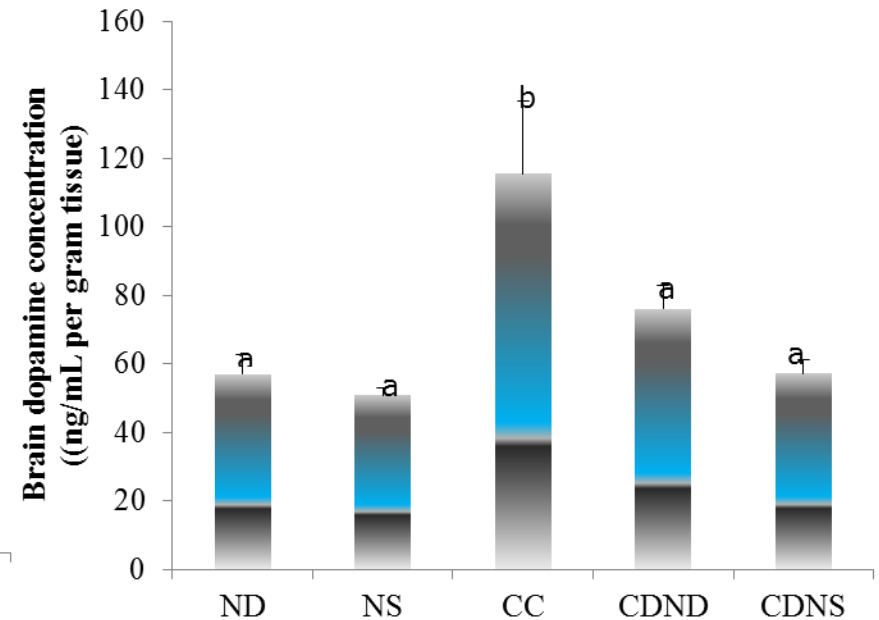
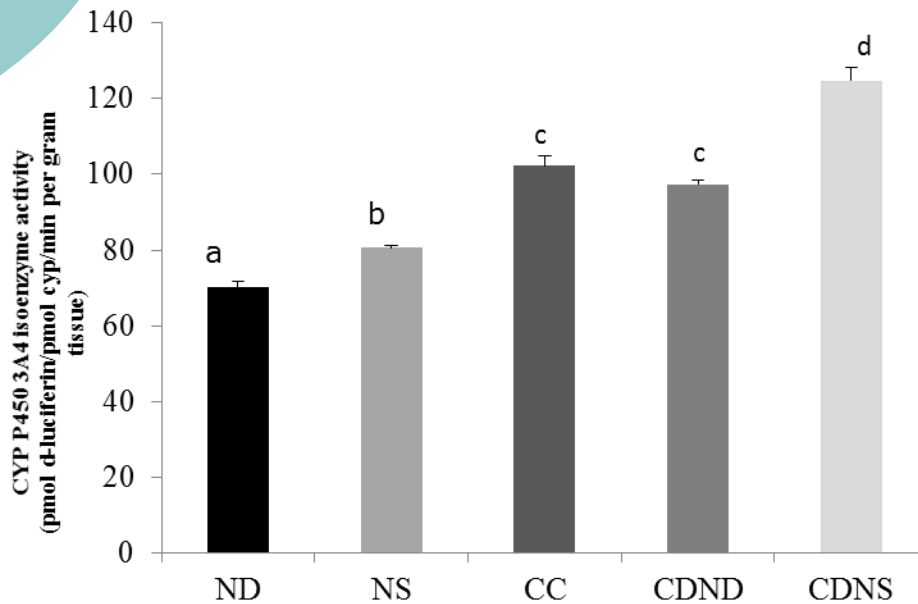


Ref: Varga V, et al., 1997; Burnistov SO et al., 1997

Data: End of Rx - Effects of NS

CYP450 3A4 Isoenzyme conc. highest in the CDNS rats

Significant reduction in brain DA conc. in the CDNS rats



Ref: Manjunath S. Shet, et al 1993; Dawes et al. 2002; Venton et al. 2006

Value Proposition

Getwele Products are purely nutritional and can:

- a) Reduce desire and seeking behavior**
- b) Can be used with conventional treatment**
- c) Reduce hospital admission number & time**
- d) Are cheaper than pharmacological meds**
- f) Prevent relapse by 1-3 years**
- g) Improve general wellbeing & nutritional status**





Management Team

Management

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- Henry Daniyan, MBA-Business Manager

Advisory

- Diana Caldwell, PhD, Inventor/Researcher
- Stephen Dordunoo, PhD, Pharmacist & Pharmaceutical Company
- David Fink, PhD, Entrepreneur In Residence
- Alicia Moran, Communication Consultant

Business Partners

1. bwtech
2. Accountants: SB&Co
3. Attorneys: WTP Law

Clinical Partners

1. Pennorth Comm. Ctr., Tuerk House
2. Universities of VA, MD, UWIMona
3. Metamorphosis Institute



Contact

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