

出國報告（出國類別：參加國際會議）

2023 年藥物依賴問題學院  
（CPDD）第 85 屆年會

服務機關：衛生福利部心理健康司

姓名職稱：陳亮好司長

派赴國家：美國

出國期間：112 年 06 月 16 日至 112 年 06 月 21 日

報告日期：112 年 09 月 10 日



## 摘要

藥物依賴問題學院(The College on Problems of Drug Dependence, CPDD), 為美國著名致力於解決藥物濫用問題之組織, 其年會為成癮防治議題之重要國際研討會之一, 提供產、官、學各界, 於教育、法規、研究等方面的交流連繫管道, 亦提供實證研究發展。為配合行政院新世代反毒策略行動綱領之戒毒策略與暴力防治處遇計畫之推動, 並透過參與國際研討會汲取各國寶貴經驗, 爰今年度特安排前往參與 CPDD 舉辦的第 85 屆年會, 以瞭解各國物質濫用防治政策、人才培訓制度及藥癮治療相關研究之最新進展。

2023 年 CPDD 第 85 屆年會訂於 112 年 6 月 17 日至同月 21 日, 在美國丹佛市舉行, 為期 5 天, 交流形式包含工作坊、專題研討會、口頭及壁報論文展示等, 主要議題包含「大麻的政策及法規」、「國家毒情監測預警系統」、「酒癮治療及未來發展」、「疼痛治療的新策略」、「對物質使用者的監測與診斷」、「大麻的風險與公共衛生促進」、「大麻或其他藥物引發的駕車障礙」等。透過參與本次國際研討會, 除能瞭解相關議題之國際發展趨勢, 亦能增加與各國政府及專家學者接觸之機會, 有助於建立我國與他國針對成癮防治議題之交流機制與合作管道。



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## 一、目的

衛生福利部心理健康司主管業務包含成癮防治，考量近年來國內新興毒品盛行，且藥癮為家暴、性侵等施暴行為的風險因子之一，透過與國際間交流，瞭解各國成癮防治作為，除能強化我國成癮防治、掌握最新藥物濫用趨勢，亦有助於提升本司加害人處遇之成效。透過參與國際會議，期望達成以下目的：

- (一)建立美國及國家衛生研究院合作，共同推動成癮醫療及公衛人才之跨國培訓或交流平台，充實我國藥癮防治領域專業人才。
- (二)瞭解各國政府與民間單位推動物質濫用防治工作之現況，及面臨問題與解決策略，作為我國未來物質濫用防治政策之規劃及執行參考。
- (三)藉由本次國際會議，建立友善互訪機制，為臺美簽署合作備忘錄打下堅實的基礎，促進臺美藥癮防治專業溝通與資源分享，創造卓越之防治績效。





## 二、過程

日期	行程內容
6月16日	啟程，搭乘長榮航空班機自桃園國際機場前往美國，經洛杉磯轉往丹佛國際機場，下午抵達美國科羅拉多州丹佛市。
6月17日	開幕式、工作坊、專題討論會、口頭論文及壁報論文展示
6月18日	工作坊、專題討論會、口頭論文及壁報論文展示
6月19日	工作坊、專題討論會、口頭論文、壁報論文展示、國際晚宴交流
6月20日	返程，搭乘長榮航空班機自丹佛國際機場出發，經
6月21日	洛杉磯返國，6/21下午抵達。



### 三、心得

很榮幸有機會能參與 2023 年 CPDD 第 85 屆年會，本次年會會議形式包含工作坊、專題研討會、口頭及壁報論文展示等，主題包括美國及世界各國物質濫用之現況、防治政策、最新治療方式及未來發展等，以下僅就參加重點提出心得報告：

#### (一)建立成癮醫療及公衛人才之跨國培訓或交流平台

為充實我國成癮防治領域人才，透過參與本次年會，有幸與美國國家藥物濫用研究所(National Institute on Drug Abuse, NIDA)的副執行長 Wilson Compton 及我國國家衛生研究院的陳為堅副院長於會上交流甚歡，並商討臺美雙方合作推動成癮醫療及公衛人才之跨國培訓及交流計畫，促進臺美藥癮防治專業溝通與資源分享，並期望未來能透過委託國家衛生研究院，穩定且持續推動此計畫，以利提升我國成癮防治效能。

目前衛生福利部心理健康司已推動「成癮醫療研究與臨床人才培植發展計畫」，為了符合國內藥癮政策及尖端研究需求，此計畫與國家衛生研究院合作，預計每年培訓兩名、合計為三年期的計畫，訓練內容包含成癮臨床訓練、成癮研究訓練、跨科別轉介模式、成癮國家政策治療及處遇等。其中研究的部分目前多為國衛院內部的實驗室，未來預計和 NIDA 簽訂 MOU 之後，能正式透過衛生福利部心理健康司委託國家衛生研究院之計畫，挑選 NIDA 合適的實驗室，進行尖端成癮研究之人才培訓，更進一步深化台美醫藥衛生交流平台。



圖一、左為衛生福利部心理健康司司長陳亮妤、中為美國國家藥物濫用研究所(NIDA)的 Vice Director Prof. Wilson Compton，右為國家衛生研究院陳為堅副院長

**(二)壁報論文展示：男男性行為者之不良童年經歷、物質使用及心理健康狀況(Adverse Childhood Experiences, Substance Use, and Mental Health Conditions Among Men who Have Sex With Men)**

為增加與各國在物質濫用研究上的交流，本次年會上我以先前針對男男性行為者的研究成果，參與了壁報論文的展示，並有幸與各國頂尖的專家學者，包含各國專家學者、美國約翰霍普金斯成癮科主任 Prof. Eric. C. Strain 等，在展示會場進行深入的學術交流。此亦為男男性行為族群台灣第一份完整研究物質使用與憂鬱、焦慮、自殺的關係。

透過參與本次壁報展示，充分瞭解各國物質濫用的現狀、最新研究成果、政策建議及未來發展，收穫豐碩，也讓各國初步瞭解我國特定族群藥物濫用的現況、防治作為及未來發展。



圖二、右為本部食品藥物管理署李建德專員，中間為馬偕醫學院醫學系陳紹基教授。

### (三)參與 6/19 「Measurement of Cannabis Consumption to Determine Risk and Promote Public Health」座談會

6/19 與我國國家衛生研究院及台灣各大醫院及學者專家共同參加「Measurement of Cannabis Consumption to Determine Risk and Promote Public Health」座談會，會上和我國醫院的代表們及各國的專家學者們針對大麻的濫用、可能造成的風險及公共衛生促進等相關議題有相當熱烈的討論，譬如美國開放醫療用大麻的州麻駕上升、但重大犯罪下降、微罪如偷竊等亦上升，背後有很多國家社會、法律、文化的系統性因子，本司在與法務部教育部交通部討論「新世代反毒 3.0」時，提供許多未來國家藥癮防治政策發展的參考，相關資料亦可提供給跨部會討論。



圖三、座談會會後大合照，包含國家衛生研究院陳為堅副院長、王聲昌副研究員、「成癮醫療研究與臨床人才培植發展計畫」鍾安妮醫師、臺北市立聯合醫院昆明院區郭彥君醫師等，及各大專家學者代表。

**(四)參與 6/19 「NIAAA Update Presented by George Koob, Director of the National Institute on Alcohol Abuse and Alcoholism」 專題演講**

美國國家酒精濫用與酗酒研究院(National Institute on Alcohol Abuse and Alcoholism, NIAAA) 為隸屬於美國國家衛生研究院之下的二十七個研究所之一，該研究所的主要目的在於進行關於酒癮和酒精關聯疾患的成因、後果、治療及預防的相關研究。本次很榮幸有機會可以參與 NIAAA 的執行長 Dr. George Koob 的大會報告並參與討論，Dr. Koob 不僅分享美國酒癮的全國性最新數據、包含不同年齡層之防治作為、酒駕事故發生率、還有酒精造成的身體問題諸如肝炎導致醫療費用支出，會上也宣布美國將針對酒癮跨科別轉介做全國性宣導，希望酒癮能夠及早介入、及早治療。



圖四、中間為哥倫比亞大學公共衛生學院教授 Dr. Silvia S. Martins、哥倫比亞大學公共衛生學院教授助理教授 Dr. Pia M. Mauro。

#### 四、建議

##### (一)研究與政策並進，強化國內藥癮防治政策實證基礎

為了能將國際最前端的研究成果及各國現正推行的政策，有效轉化為符合我國本土現況且能順利推行的政策，應參考 CPDD 及 NIAAA 的經驗，持續培養更多藥癮及酒癮防治領域研究人才、建立更完善的研究環境，以加強我國研究與政策轉譯量能，進而解決本土的問題。


##### (二)建立台美藥癮處遇研究人才交流平台，培育政策擬定人才專業

在醫療人員的訓練上，我國成癮醫學會業推動精神科醫師成癮治療專業能力，且行之有年，為提升相關領域人才醫療政策轉譯的能力，透過本次年會與美國 NIDA 副執行長的交流，本部心理健康司預計於 113 年透過委託我國國家衛生研究院，與 NIDA 合作，建立”臺美成癮醫療人才交流平台”，期望透過由本司與 NIDA 未來 MOU 的簽訂，由本司支應成癮醫療領域人才相關出國經費，讓 2 名我國藥癮政策領域人才得以至美國 NIDA 參訓，不僅充實其視野及增進國際交流，更期待他山之石可以攻錯，為我國藥癮防治政策提出專業政策建議，增加我國成癮防治之效能，更進一步拓展國際學術發展空間。



## 五、附件

附件、2023 年 CPDD 第 85 屆年會會議手冊



**The College on Problems  
of Drug Dependence**

**85th Annual Scientific Meeting**  
**June 17 - 21, 2023**  
**Denver, CO**

**PROGRAM BOOK**

**WWW.CPDD.ORG**

## HOTEL INFORMATION

### SHERATON DENVER DOWNTOWN HOTEL

1550 Court Place, Denver, CO

(303) 893-3333

With a recently completed \$80 million dollar renovation and located on the 16th Street Mall, the hotel offers access to some of the best attractions in Denver. The mile-long 16th Street Mall is a pedestrian promenade with shopping, dining, and entertainment.

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## REGISTRATION INFORMATION

Please visit the CPDD Registration desk to pick up your name badge and other meeting materials. Registration is located in the Plaza Building, Concourse Level, at the Plaza Registration desk during the following hours:

Saturday, June 17	12:00 pm-7:00 pm
Sunday, June 18	7:00 am-7:00 pm
Monday, June 19	7:00 am-7:00 pm
Tuesday, June 20	7:00 am-7:00 pm
Wednesday, June 21	7:00 am-3:00 pm

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## CONFERENCE WI-FI

Complimentary internet is available for CPDD attendees in the meeting spaces.

Network Name: MarriottBonvoy\_Conference

Password: cpdd2023

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# GENERAL INFORMATION

## QUESTIONS?

If you have questions during the conference, we encourage you to:

- 1) Stop by the registration desk, located in the Plaza Exhibit area in the Plaza Building, Concourse Level.
- 2) Email [info@cpdd.org](mailto:info@cpdd.org) with additional question or concerns, or call (615) 432-0099.
- 3) Visit the Speaker Ready Room, located in Plaza Court 7, for assistance with presentation or presenter questions.

## JOIN THE CONVERSATION!

CPDD is on social media, and we invite you to join the online conversation. Please follow/like the CPDD social media accounts:

**@CPDDorg**



**@CPDDmembers**



**@CPDD**



And don't forget to use #CPDD23 if you post pictures or comments about the Meeting.

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The views expressed in written conference materials or publications and by speakers and moderators do not necessarily reflect the official policies of the Department of Health and Human Services; nor does mention of trade names, commercial practices, or organizations, imply endorsement by the U.S. Government.

# #CPDD23

## SAFETY PROTOCOLS

### WEAR A MASK

Masks are strongly recommended at all CPDD events. Make sure and pack yours!



### WEAR YOUR BADGE

A CPDD badge is required at all times for entry.



### GRAB A LANYARD

Red=Keep Your Distance  
Yellow=Limited Contact  
Green=Handshakes & High Fives



ATTENDEES THAT EXPERIENCE SYMPTOMS OR FEEL ILL  
ONSITE SHOULD QUARANTINE IN THEIR GUESTROOM  
AND CALL JESSE HOWARD AT 606-233-3049  
TO RECEIVE NEXT STEPS.

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# SATURDAY, JUNE 17

## AGENDA

08:00 AM	05:30 PM	ISGIDAR Annual Meeting	Majestic Ballroom
10:00 AM	05:00 PM	Speaker Ready Room	Plaza Court 7
12:00 PM	07:00 PM	Registration	Plaza Registration
01:00 PM	02:30 PM	Workshop: Stressful Environments and Genetic Risk Factors Associated With Early Initiation of Alcohol and Substance Use: Findings From the ABCD Study	Plaza Ballroom A
01:00 PM	02:30 PM	Workshop: Evaluating Pennsylvania's Centers of Excellence on Improving OUD Treatment Access & Patient Care	Plaza Ballroom D
01:00 PM	02:30 PM	Workshop: Sharing Your Scientific Story: Tips and Tricks for Strategically and Effectively Communicating Your Research	Grand Ballroom I
01:00 PM	02:30 PM	Workshop: Pathways to Recovery and Beyond in Native American Communities	Governor's Square 15
01:00 PM	02:30 PM	Workshop: A View Beyond the Horizon: Innovative Methodologies and Approaches in Substance Use Disorder Research and Treatment Utilized Internationally	Grand Ballroom II
02:30 PM	03:00 PM	Break	
03:00 PM	04:30 PM	Workshop: New Approaches to Culturally Appropriate Treatment and Research	Grand Ballroom I
03:00 PM	04:30 PM	Workshop: Standards of Psychedelic Care: Peer & Professional Providers	Plaza Ballroom A
03:00 PM	04:30 PM	Workshop: Epidemiology and Public Health Research Methods	Grand Ballroom II
03:00 PM	04:30 PM	Workshop: Collaboration and Complication: Lessons Learned in Implementing Community-Engaged Research on Substance Use	Plaza Ballroom D
03:00 PM	04:30 PM	Workshop: r/AskAcademia: Special Considerations in the Practice of Using Reddit for Substance Use Research	Governor's Square 15
04:30 PM	06:30 PM	National Drug Early Warning System (NDEWS) Meeting	Governor's Square 16
04:30 PM	07:00 PM	Workshop: NIDA Early Career Workshop	Plaza Ballroom A
05:00 PM	06:00 PM	Closed Abstinence-Based Recovery Meeting (NA/AA)	Silver
05:00 PM	06:00 PM	Committee Chairs Meeting (Invitation Only)	Governor's Square 10
07:00 PM	08:30 PM	Opening Reception	Plaza Ballroom BCEF (Plenary)



# SUNDAY, JUNE 18

07:00 AM	07:00 PM	Registration	Plaza Registration
08:00 AM	10:00 AM	Opening Session: Plenary, NIDA Update, and Eddy Lecture	Plaza Ballroom BCEF (Plenary)
08:00 AM	05:00 PM	Speaker Ready Room	Plaza Court 7
10:15 AM	11:15 AM	Mini-Symposium: Harm Reduction Utilization and Strategies	Grand Ballroom II
10:15 AM	11:15 AM	Oral Communication: ISGIDAR: Again?	Grand Ballroom I
10:15 AM	11:15 AM	Oral Communication: Sexual Minority Health	Plaza Ballroom A
10:15 AM	11:15 AM	Oral Communication: Gapapentin: Friend or Foe?	Governor's Square 15
10:15 AM	11:15 AM	Oral Communication: Criminal Justice: Dangers Upon Release	Plaza Ballroom D
11:30 AM	12:30 PM	Mini-Symposium: 2022 NIDA Craving Challenge	Plaza Ballroom BCEF (Plenary)
11:30 AM	12:30 PM	Oral Communication: Uncertainty as a Driver of SUDs	Governor's Square 15
11:30 AM	12:30 PM	Oral Communication: Alcohol Treatment Development	Plaza Ballroom A
11:30 AM	12:30 PM	Oral Communication: Preclinical Neuro Effects of Methamphetamine	Plaza Ballroom D
11:30 AM	12:30 PM	Oral Communication: Juvenile Justice	Grand Ballroom I
12:15 PM	02:00 PM	NIDA K12 Scholars Lunch	Governor's Square 11
01:00 PM	02:00 PM	Lunch Presentation: Fischman Lecture Presented by Joy Schmitz, Marian W. Fischman Lectureship Award Winner	Plaza Ballroom BCEF (Plenary)
02:15 PM	03:45 PM	Workshop: "Pre-Addiction:" A Starting Point for a Strategic Shift Toward Earlier Intervention in Substance Use Disorders	Plaza Ballroom BCEF (Plenary)
02:15 PM	03:15 PM	Oral Communication: E-Cigarettes: That's Not a Thumb Drive, Mom!	Grand Ballroom I
02:15 PM	03:15 PM	Oral Communication: Cocaine Science in Humans	Plaza Ballroom A
02:15 PM	03:15 PM	Oral Communication: Novel Stimulants and Mechanisms	Plaza Ballroom D
02:30 PM	03:00 PM	ECMC Mentee/Mentor Mixer	Plaza Exhibit Networking Zone
03:15 PM	04:00 PM	Networking Break	Plaza Exhibit Networking Zone
03:30 PM	04:00 PM	CPDD Finance Committee Meeting	Plaza Court 5
03:45 PM	04:45 PM	DAD/DADR Editorial Board Meeting (Invitation Only)	Governor's Square 10
04:00 PM	05:15 PM	Media Forum	Grand Ballroom I
04:00 PM	05:30 PM	Policy Forum	Grand Ballroom II
05:15 PM	06:45 PM	Poster Session 1	Plaza Exhibit
05:30 PM	07:00 PM	CPDD Presidential Reception (Invitation Only)	Governor's Square 17
06:30 PM	07:30 PM	Closed Abstinence-Based Recovery Meeting (NA/AA)	Silver
06:45 PM	07:45 PM	Pre and Post-Doctoral Networking	Plaza Exhibit Networking Zone
07:00 PM	08:30 PM	Movie Screening and Discussion: Swallow THIS: A Documentary about Methadone and COVID-19	Plaza Ballroom BCEF (Plenary)

# MONDAY, JUNE 19

07:00 AM	07:00 PM	Registration	Plaza Registration
08:00 AM	09:00 AM	NIAAA Update Presented by George Koob, Director of the National Institute on Alcohol Abuse and Alcoholism	Plaza Ballroom BCEF (Plenary)
08:00 AM	05:00 PM	Speaker Ready Room	Plaza Court 7
09:00 AM	10:00 AM	Oral Communication: Novel Strategies for Pain Therapeutics: Still Trying	Plaza Ballroom A
09:00 AM	10:00 AM	Mini-Symposium: Beyond the Dichotomy	Grand Ballroom I
09:00 AM	10:00 AM	Oral Communication: Nicotine Reinforcement	Plaza Ballroom D
09:00 AM	10:00 AM	Oral Communication: Sex and Gender Differences in SUDs	Grand Ballroom II
09:00 AM	10:00 AM	Oral Communication: Cannabis Policy and Regulation	Governor's Square 15
10:00 AM	10:30 AM	Break	
10:30 AM	12:00 PM	Symposium: Measurement of Cannabis Consumption to Determine Risk and Promote Public Health	Plaza Ballroom A
10:30 AM	12:00 PM	Symposium: The Intersection of Aging, Tobacco Use, and Health Equity	Governor's Square 15
10:30 AM	12:00 PM	Symposium: The Intersection of COVID-19 and Substance Use Disorders	Grand Ballroom II
10:30 AM	12:00 PM	Symposium: Stimulation for the Treatment of Stimulant Use Disorder	Plaza Ballroom D
10:30 AM	12:00 PM	Forum: Restructuring the Pathway from Discovery to Dissemination of New Medications in the Academic Environment	Grand Ballroom I
12:30 PM	02:00 PM	CPDD Early Career Investigator Travel Awards Luncheon	Governor's Square 14
12:30 PM	02:00 PM	Lunch Presentation: Presidential Symposium	Plaza Ballroom BCEF (Plenary)
02:00 PM	03:15 PM	Human Forum: Nothing About Us Without Us: Engaging Individuals with Lived Experience of Substance Use Disorders in Substance Use Research Development and Implementation	Grand Ballroom I
02:00 PM	03:15 PM	Animal Forum: The 3Rs Concept of Replacement: Future Tools or Political Strategy?	Grand Ballroom II
03:15 PM	03:45 PM	Break	
03:30 PM	05:00 PM	Symposium: 10 Years Gone: Remembering Bill Woolverton Through His Impact on our Current Research Programs	Plaza Ballroom A
03:30 PM	05:00 PM	Workshop: Early Career Member Committee: Navigating a Career in Addiction Science	Grand Ballroom II
03:30 PM	05:00 PM	Federal Agencies and Cannabis Research: Updates From NIH, FDA and DEA	Grand Ballroom I
03:30 PM	04:30 PM	Oral Communication: PrEP Among Drug Users	Governor's Square 15
05:00 PM	06:30 PM	Poster Session 2	Plaza Exhibit
06:30 PM	07:30 PM	Primm Singleton Reception (Invitation Only)	Governor's Square 17
06:30 PM	09:30 PM	Shuttle to Space Gallery Exhibition: "Art for Hope"	
06:30 PM	07:30 PM	Closed Abstinence-Based Recovery Meeting (NA/AA)	Silver
06:30 PM	07:30 PM	LGBTQIA+ Networking Reception	Governor's Square 16

## TUESDAY, JUNE 20

07:00 AM	07:00 PM	Registration	Plaza Registration
08:00 AM	09:30 AM	Symposium: The Racist Origins and Impact of the War on Drugs	Grand Ballroom II
08:00 AM	09:30 AM	Symposium: The Past, Present, and Future of Reinforcer Pathology Theory in Substance Use Disorder	Plaza Ballroom A
08:00 AM	09:30 AM	Symposium: Dysregulation of the Prefrontal Cortex in Substance Use Disorders	Plaza Ballroom D
08:00 AM	09:30 AM	Symposium: Beyond GWAS: The Genetics and Epigenetics of Addiction	Governor's Square 15
08:00 AM	09:30 AM	Symposium: Not like Other Opioids: How is Fentanyl Unique?	Grand Ballroom I
08:00 AM	05:00 PM	Speaker Ready Room	Plaza Court 7
10:00 AM	11:30 AM	Innovator Symposium: Medication Development for Methamphetamine Use Disorder	Plaza Ballroom A
10:00 AM	11:30 AM	Symposium: The Potential of Psychedelic Therapies for Substance Use Disorders	Grand Ballroom I
10:00 AM	11:30 AM	Symposium: Neuropeptides in Reward, Addiction, and Mental Health	Plaza Ballroom D
10:00 AM	11:30 AM	Symposium: How Neuroimaging Can Be Used in Treatment Development in Drug Addiction: From FDA Standards to Clinical Applications	Grand Ballroom II
10:00 AM	11:30 AM	Workshop: 29th Annual Contingency Management Working Group	Governor's Square 15
12:15 PM	01:15 PM	Symposium: In Memoriam Martin Adler	Plaza Ballroom BCEF (Plenary)
01:15 PM	02:15 PM	Mini-Symposium: Monitoring and Diagnostic Devices for Substance Use Disorders: Challenges and Opportunities	Grand Ballroom I
01:15 PM	02:15 PM	Oral Communication: SUD and Pregnancy	Grand Ballroom II
01:15 PM	02:15 PM	Oral Communication: Minor Cannabinoids: Mild High?	Plaza Ballroom A
01:15 PM	02:15 PM	Oral Communication: Cocaine in Context	Plaza Ballroom D
01:15 PM	02:15 PM	Late-Breaking Oral Session 1	Governor's Square 15
02:15 PM	02:45 PM	Networking Break	
02:45 PM	03:45 PM	Late-Breaking Oral Session 2	Governor's Square 15
02:45 PM	03:45 PM	Mini-Symposium: From Initiation to Addiction: A Measure of the Full Range of Involvement for Opioids, Cannabis, and Alcohol	Grand Ballroom I
02:45 PM	03:45 PM	Oral Communication: Telehealth: Uniform Still Required	Grand Ballroom II
02:45 PM	03:45 PM	Oral Communication: Behavioral Economics	Plaza Ballroom A
02:45 PM	03:45 PM	Oral Communication: Nicotine Clinical Treatments	Plaza Ballroom D
04:00 PM	05:15 PM	CPDD Business Meeting	Governor's Square 15
05:15 PM	06:45 PM	Poster Session 3	Plaza Exhibit
05:30 PM	07:00 PM	Rural Opioid Initiative Meeting (Invite Only)	Governor's Square 10
06:15 PM	07:15 PM	Closed Abstinence-Based Recovery Meeting (NA/AA)	Silver
07:00 PM	09:30 PM	Awards Dinner Celebration	Plaza Ballroom BCEF (Plenary)

# WEDNESDAY, JUNE 21

07:00 AM	03:00 PM	Registration	Plaza Registration
08:00 AM	09:30 AM	Symposium: Using Big Data to Understand the Role of the Gut Microbiome in Substance Use Disorders	Plaza Ballroom D
08:00 AM	09:30 AM	Symposium: Prevention is Better than Cure: Early Intervention for Substance Use Disorders	Governor's Square 15
08:00 AM	09:30 AM	Symposium: Development of Fentanyl-Targeted Vaccines to Decrease Overdose Fatalities	Grand Ballroom II
08:00 AM	09:30 AM	Symposium: Leaving No One Behind: Ending the HIV Epidemic With Targeted Interventions for People Who Use Drugs	Grand Ballroom I
08:00 AM	09:00 AM	Oral Communication: Methamphetamine Science in Humans	Plaza Ballroom A
08:00 AM	04:00 PM	Speaker Ready Room	Plaza Court 7
08:30 AM	10:00 AM	Brunch with Champions	Governor's Square 14
09:30 AM	10:00 AM	Break	
10:00 AM	11:30 AM	Symposium: Treating SUD in Patients with PTSD and Histories of Victimization	Grand Ballroom I
10:00 AM	11:30 AM	Symposium: Driving Impairment Caused by the Use of Cannabis and Other Drugs: Recent Evidence From Human Laboratory Studies	Grand Ballroom II
10:00 AM	11:30 AM	Symposium: A Gentle Introduction to Data Science Tools for Addiction Research: Use Cases With Examples	Plaza Ballroom A
10:00 AM	11:30 AM	Symposium: Universal Precautions: Considerations When Conducting Clinical Addiction Research in the Acute Care Hospital	Plaza Ballroom D
10:00 AM	11:00 AM	Oral Communication: Emerging Drugs: As If There Weren't Enough Already	Governor's Square 15
12:00 PM	01:00 PM	In Memoriam Mary Jeanne Kreek	Plaza Ballroom BCEF (Plenary)
01:00 PM	02:00 PM	Oral Communication: Online Drug Marketing: Dealing in the Work-From-Home Age	Grand Ballroom I
01:00 PM	02:00 PM	Oral Communication: SUD and Comorbid Anxiety	Grand Ballroom II
01:00 PM	02:00 PM	Oral Communication: Imaging	Governor's Square 15
01:00 PM	02:00 PM	Oral Communication: Opioid-Stimulant Interactions: Speedballs and Goofballs	Plaza Ballroom A
01:00 PM	02:00 PM	Oral Communication: Digital Therapeutics: Harmful if Swallowed!	Plaza Ballroom D
02:00 PM	03:30 PM	Poster Session 4	Plaza Exhibit
03:45 PM	04:45 PM	Oral Communication: SUD and Suicidality	Grand Ballroom I
03:45 PM	04:45 PM	Oral Communication: Understanding SUD Through Narrative Perspectives	Plaza Ballroom A
03:45 PM	04:45 PM	Oral Communication: Delta-8-THC: Mile High?	Governor's Square 15
03:45 PM	04:45 PM	Oral Communication: Decision-Making in SUDs	Plaza Ballroom D
03:45 PM	04:45 PM	Oral Communication: Novel Treatment Targets for Fentanyl and Beyond	Grand Ballroom II
05:00 PM	05:45 PM	Closing Session and Sweepstakes	Plaza Ballroom A

## SATURDAY, JUNE 17, 2023

4:30 P.M. - 7:00 P.M.

**Workshop: NIDA Early Career Workshop**  
Plaza Ballroom A

### NIDA EARLY CAREER WORKSHOP

*Lindsey Friend, National Institute on Drug Abuse*

The National Institute on Drug Abuse (NIDA) Early Career Workshop Summer 2023 will be held on Saturday June 17, 2023. This symposium will focus on career development and grantsmanship ideal for graduate students, postdoctoral fellows, and early-stage investigators. NIDA offers a strategic set of funding mechanisms for all early career stages. These awards are designed to facilitate continuous growth of early investigators to become career independence and to strengthen research workforce development of next generation biomedical scientists. The theme for this session is persistence in advancing career and science. Topics covered include National Institutes of Health grant mechanisms and review processes, and strategies to overcome hurdle, master grantsmanship, and tips to secure grant awards. Speakers include Program Officers, Scientific Review Officers, Research Training Officers and the Director of the Office of Diversity and Health Disparities from the National Institute on Drug Abuse (NIDA). Extramural speakers include early-stage NIDA awardees and experienced training director and substance use researchers.

## SUNDAY, JUNE 18, 2023

8:00 A.M. - 10:00 A.M.

**Opening Session: Plenary, NIDA Update, and Eddy Lecture**  
Plaza Ballroom BCEF (Plenary)

### NIDA UPDATE

*Nora Volkow, National Institute on Drug Abuse*

Scientific advances continue to broaden our understanding of the biological, developmental, and environmental elements underlying drug use and addiction and to accelerate efforts to develop targeted strategies for their prevention and treatment. At the same time, the challenges confronting the addiction field have grown both in number and in magnitude. This presentation will highlight such challenges as the growing use of fentanyl by itself or in combination with other opioids or stimulant drugs like cocaine and methamphetamine and the staggering number of overdose deaths that result. It will also focus on how NIH researchers have been using scientific advances to address the opioid crisis which has been further exacerbated by the COVID pandemic, including the development of new medications and formulations to help treat opioid use disorders and overdoses; prevention strategies to mitigate an individual's vulnerability to addiction; and implementation science to guide optimal deployment of therapeutic interventions including the use of telehealth in diverse settings (healthcare, justice setting, rural communities).

# PLENARY

## EDDY LECTURE: WHAT HAS BRAIN IMAGING TAUGHT US ABOUT STIMULANT USE DISORDER

*Edythe London, University of California Los Angeles*

This session will cover scientific findings about stimulant use disorder, obtained from brain imaging research. The research findings will be presented in the historical context of the cocaine/crack epidemic of the 1980s, the surge of methamphetamine use beginning in the late 1990's and the recent surge in stimulant-related deaths. A major focus will be on taking what we know about the circuitry and neurotransmitter systems affected in designing new approaches to treatment.

**1:00 P.M. - 2:00 P.M.**

## Lunch Presentation: Fischman Lecture Presented by Joy Schmitz, Marian W. Fischman Lectureship Award Winner

Plaza Ballroom BCEF (Plenary)

## FISCHMAN LECTURE: MY 30-YEAR RESEARCH JOURNEY: HIGH-RISK SITUATIONS, COPING SKILLS, AND LESSONS LEARNED ALONG THE WAY

*Joy Schmitz, University of Texas Health Science Center*

This session will honor the work of Dr. Marian W. Fischman, recognizing her as an inspiring role model for women in science. The recipient of this year's award will focus on her contributions to the field of drug abuse research and treatment, with a particular focus on her efforts to develop behavioral and pharmacological interventions for cocaine use disorder. She will conclude by highlighting her role in cultivating the next generation of women addiction researchers.

## MONDAY, JUNE 19, 2023

**8:00 A.M. - 9:00 A.M.**

## NIAAA Update Presented by George Koob, Director of the National Institute on Alcohol Abuse and Alcoholism

Plaza Ballroom BCEF (Plenary)

*George Koob, National Institute on Alcohol Abuse and Alcoholism*

Alcohol misuse and alcohol use disorder (AUD) are endemic societal problems that have been willingly absorbed into the social fabric of our society for generations. They cause an enormous amount of medical pathology, human suffering, loss of productivity and cost to our medical care system and the nation's economy. Alcohol misuse accounts for 30 million individuals with alcohol use disorder, 5% of cancers, 50% of liver disease deaths, and up to 25 % of pancreatitis. While efforts to employ screening, brief intervention and referral to treatment have successfully initiated screening in many situations, brief intervention and referral to treatment remain underused. Missed screening opportunities especially for some subgroups and the more widespread lack of follow up after screening contribute to a significant treatment gap: less than 10% of individuals in need of treatment receive treatment for AUD. Less than 2% receive one of the three FDA approved and effective medications for treatment of AUD. In addition, the COVID-19 pandemic has exposed some long-neglected drivers of AUD: increased drinking to cope with stress, interaction of alcohol with mental health, the role of

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alcohol in women's health, alcohol and health in older adults, and understanding recovery from AUD. In the face of these challenges, a cultural change is underway as highlighted by movements to reevaluate our relationship with alcohol such as Dry January, Sober October, and the broader Sober Curious movement. Current NIAAA priorities and challenges include providing resources for the public to facilitate prevention among young adults (College Aim), to help individuals evaluate their own relationship with alcohol (Rethinking Drinking), and to assist those seeking treatment (NIAAA Treatment Navigator). Also, the Healthcare Professional Core Resource on Alcohol, launched in 2022, provides healthcare professionals with evidence-based knowledge and resources to address alcohol misuse in clinical practice.

**12:30 P.M. - 2:00 P.M.**

**Lunch Presentation: Presidential Symposium\***  
Plaza Ballroom BCEF (Plenary)

**PRESIDENTIAL SYMPOSIUM: THE CASE AGAINST PURITY: STUDYING THE INTERSECTION OF PSYCHIATRIC AND SUBSTANCE USE DISORDERS**  
Plaza Ballroom BCEF (Plenary)

*Amy Janes, NIDA*

**The Case Against Purity: Studying the Intersection of Psychiatric and Substance Use Disorders**  
*Anne Eden Evins, Massachusetts General Hospital-Psychiatry*

Beginning with the question of what can we do strategically to accelerate progress in the treatment of substance use disorders? This symposium explores from clinical and pre-clinical perspectives whether a concerted effort to study the intersection of psychiatric and substance use disorders could accelerate clinical progress. There will be discussion and Q and A led by Drs. Haney, Koob, Volkow, Evins, Khokhar, and Janes.

**Cannabis Use and Schizophrenia: Cracking the Chicken or Egg Question**  
*Jibran Khokhar, Western University*

Although cannabis use occurs commonly in patients with schizophrenia and significantly worsen their clinical course, the neurobiological basis of cannabis use in schizophrenia is not well understood. Therefore, there is a critical need to understand the mechanisms underlying cannabis use in schizophrenia in order to identify potential targets for therapeutic intervention. Since cannabis use usually begins in adolescence, it is also important to understand the long-term effects of life-time cannabis exposure on schizophrenia- and reward-related behaviours and circuitry. Lastly, there is a need for exploring the shared genetic susceptibility for these co-occurring disorders. This talk will combine a variety of translational pre-clinical pharmacological, genetic, behavioural, electrophysiological (local field potential recordings) and magnetic resonance imaging (resting-state functional connectivity and magnetic resonance spectroscopy) approaches to study this topic with an eye toward developing better treatment approaches.

*Margaret Haney, Columbia University Irving Medical Center*  
*Nora Volkow, National Institute on Drug Abuse*  
*George Koob, National Institute on Alcohol Abuse and Alcoholism*

3:30 P.M. - 5:00 P.M.

**Federal Agencies and Cannabis Research: Updates From NIH, FDA and DEA**  
Grand Ballroom I

*Steve Gust, Consultant, National Center on Complementary and Integrative Health*  
*Angela Arensdorf, NIH/NCCIH*

Cannabis research is subject to rapidly changing legal and regulatory requirements, while evolving findings on its potential therapeutic effects has stimulated significant changes in Federal research support. This panel will provide updates from the key Federal agencies involved in cannabis regulation and research and should provide attendees with up-to-date information relevant to researchers interested in cannabis and related constituents.

**Cannabinoid Research at the NIH**

*David Shurtleff, NCCIH/NIH*

The National Institutes of Health (NIH) support of cannabinoid and cannabis research has increased over the past few years. Several NIH Institutes, Centers, and Offices (ICOs) have a growing interest in the therapeutic potential of cannabis, cannabinoids, and related compounds as well as their adverse effects on health and society. The National Center on Complementary (NCCIH) and Integrative Health (NCCIH) has become a focal point for research on the therapeutic potential of the heretofore understudied minor cannabinoids and terpenes found in cannabis for the management of pain. Also, NCCIH has become more actively involved in coordinating activities to stimulate new research programs and coordinating various cannabis-related activities across the NIH. This presentation will provide an update on the broad landscape of cannabis-related research at the NIH, summarize new areas of research interest and investment, including those of NCCIH, and describe a new multi-NIH ICO extramural program coordinating group to foster collaboration, share information, and expand and coordinate NIH cannabis and cannabinoid research activities.

**Cannabis Research Priorities at the National Institute on Drug Abuse**

*Susan Weiss, National Institute on Drug Abuse, National Institutes of Health*

NIDA has a wide-ranging cannabis research portfolio and remains the largest funder in the US government. This includes research on the endocannabinoid system, where THC exerts its predominant effects; studies to understand the potential harms of cannabis and cannabinoid exposure throughout the lifespan; therapeutic studies on cannabinoids for treating pain, HIV, and substance use disorders; treatment research for cannabis use disorder; and epidemiology and policy research to better understand the impact of the changing cannabis laws on health outcomes and consumption patterns (e.g., choice of diverse products; multiple routes and patterns of administration).

Research on cannabis is complex and can be difficult because of the inherent variability of the plant; its multiple components with therapeutic potential and distinct mechanisms of action; the difficulty of obtaining a Schedule I registration; and up until very recently, a single source of plant material for research. The latter is expected to change with new manufacturers approved by the DEA, but there are still no assurances that the cannabis that will be available for research will reflect the diversity of products currently available to the public in States where it is legal. Federally funded researchers are prohibited from analyzing products available in state-authorized dispensaries, and therefore, must rely on participant self-report or photos of unverified product labels from dispensaries. Understanding the characteristics of products on the market - including the amount of THC, the concentration of other cannabinoids and components, and potential toxins - is important for determining and differentiating characteristics responsible for health effects.



# PLENARY

## **Federal Agencies and Cannabis Research: Updates from NIH, FDA, and DEA** *Matthew Strait, Drug Enforcement Administration (DEA)*

Since 2016, DEA has been actively engaged in regulatory activities aimed at improving both the quality and quantity of marijuana utilized for research in the United States. DEA will provide an update of those activities, including successes and ongoing challenges. DEA will explain how it remains focused on ensuring that scientific data and evidence dictates decisions on whether marijuana should remain a schedule I controlled substance under federal law.

## **FDA Regulation of Cannabis and Cannabis-Derived Compounds** *Katherine Bonson, US Food and Drug Administration*

FDA has a well-defined role to play in the regulation and development of products containing cannabis and cannabis-derived compounds. This presentation will detail the FDA regulatory oversight of scientific investigation and new drug development with Schedule I cannabis and its derivatives and will provide a brief overview of other FDA regulatory roles for cannabis vs. hemp, particularly as impacted by the 2018 Farm Bill. With regard to potential cannabis drug products, there will be a discussion of FDA Guidance for Industry on cannabis and botanical drug development, therapeutic research areas for cannabis, IND submissions, DEA licensing of Schedule I research, and the federal process for evaluating drugs for abuse potential and scheduling them under the Controlled Substances Act.

## TUESDAY, JUNE 20, 2023

12:15 P.M. - 1:15 P.M.

### **Symposium: In Memoriam Martin Adler** Plaza Ballroom BCEF (Plenary)

**Chair:** *Scott Lukas, McLean Hospital, Harvard Medical School*

**Co-Chair:** *Toby Eisenstein, Center for Substance Abuse Research, Lewis Katz School of Medicine at Temple University*

#### **Speakers:**

*William Dewey, Virginia Commonwealth University*

*Toby Eisenstein, Center for Substance Abuse Research, Lewis Katz School of Medicine at Temple University*

*Scott Lukas, McLean Hospital, Harvard Medical School*

*Ellen Unterwald, Lewis Katz School of Medicine at Temple University*

WEDNESDAY, JUNE 21, 2023

12:00 P.M. - 1:00 P.M.

**IN MEMORIAM MARY JEANNE KREEK**  
**Plaza Ballroom BCEF (Plenary Ballroom)**

Chair: *Eduardo Butelman, Mount Sinai School of Medicine*

Seminal work performed by Dr. Mary Jeanne Kreek and colleagues demonstrate the important contribution of dysregulation of the stress-responsive hypothalamic-pituitary-adrenal axis to the acquisition and persistence of drug-seeking behaviors. Dr. Ellen Unterwald will highlight Dr. Kreek's key findings from human and animal studies and present her own research on the role of stress-responsive mediators in cocaine seeking and relapse including analysis of sex-specific effects.

Dr. Kreek's clinical research on methadone efficacy and safety led to its FDA indication for the treatment of opioid use disorder and has resulted in life-saving and life-sustaining treatment for millions of people world-wide. Her work was also critical to identifying injection drug use as a risk factor for HIV, spurring public health approaches to drug use. Furthermore, her conceptual models of addictions entailing alterations in stress responsivity have influenced treatment approaches to opioid use disorder and alcohol use disorder and has supported increased interest in the kappa opioid system as a target for pharmacotherapy of alcohol and stimulant use disorders. Dr. Gavin Bart will use highlights from her career to illustrate her impact on contemporary clinical care and research in substance use disorders.

Dr. Brian Reed will share work on diverse kappa opioid receptor ligands in animal models, in an effort to identify candidates with reduced side effect profiles, including sedation and hallucinatory-like effects, which are undesirable characteristics of some of the earlier kappa opioid receptor agonists.

*46.1 Stress-Responsive Genes and Their Role in Cocaine-Seeking*

Speaker: *Ellen Unterwald, Lewis Katz School of Medicine at Temple University*

*46.2 Kappa Opioid Receptor Ligands - Structure and Signaling Relationships*

Speaker: *Brian Reed, Marymount Manhattan College*

*46.3 The Clinical Impact of Dr. Mary Jeanne Kreek*

Speaker: *Gavin Bart, University of Minnesota*

**SATURDAY, JUNE 17, 2023**

**1:00 P.M. - 2:30 P.M.**

**WORKSHOP: STRESSFUL ENVIRONMENTS AND GENETIC RISK FACTORS ASSOCIATED WITH EARLY INITIATION OF ALCOHOL AND SUBSTANCE USE: FINDINGS FROM THE ABCD STUDY  
Plaza Ballroom A**

Chair: *Priscila Gonçalves, Columbia University*

Co-Chair: *Rick Cruz, Arizona State University*

Early initiation of alcohol or other substance use can disrupt brain development contributing to negative individual and societal consequences. Stressful environments, including adverse childhood experiences, and high family conflict, coupled with less effective parenting, play an outsized role in the risk for early substance use initiation. This constellation of environmental influences interacts with genetics and behavioral (e.g., decision-making related to delayed reward) factors to transmit risk for early substance use. Better understanding the ecodevelopmental pathways of early substance use risk can inform prevention efforts, which could have powerful downstream effects. This session describes novel research examining biological and environmental factors related to the prediction of early alcohol and other substance use in the large, longitudinal Adolescent Brain Cognitive Development (ABCD) Study®. The symposium is comprised of scholars from the NIDA-funded START program for URM investigators, which aims to enhance diversity among the network of scholars working with ABCD data. First, Skye Bristol will describe family conflict predictors of different alcohol expectancies. Next, Dr. Bounds will explore the combined impact of family conflict and adverse childhood experiences on future alcohol use and related risk behaviors. Dr. Ryan-Pettes will expand beyond parental monitoring and discipline by examining these influences in the context of peer affiliation, neighborhood, and environmental factors. This symposium on risk factors for early substance use will be concluded by Dr. Garcia who extends beyond environmental factors with a focus on the contribution of genetic risk factors and reward-related decision-making to alcohol and substance use risk in early adolescence.

*1.1 Family Conflict as a Risk Factor for Problematic Alcohol Expectancy in the ABCD Study*

Speaker: *Skye Bristol, University of South Florida*

*1.2 Exploring the Impact of Family Conflict and Adversity on Alcohol Use and Risk Behaviors in Youth in the ABCD Study*

Speaker: *Dawn Bounds, University of California, Irvine*

*1.3 Effects of Parent Monitoring and Inconsistent Discipline on Risk for Alcohol Initiation Through Deviant Peer Affiliation in the Context of Neighborhood Variables*

Speaker: *Stacy Ryan-Pettes, Baylor University*

*1.4 Innate and Environmental Determinants of Delayed Reward Discounting in Youth Participants in the ABCD Study*

Speaker: *Erik Garcia, University of Nebraska Omaha*

Moderator: *Neo Gebru, Brown University*

1:00 P.M. - 2:30 P.M.

**WORKSHOP: EVALUATING PENNSYLVANIA'S CENTERS OF EXCELLENCE ON IMPROVING OUD TREATMENT ACCESS & PATIENT CARE**  
**Plaza Ballroom D**

Chair: *Renee Cloutier, University of Pittsburgh*  
Co-Chair: *Janice Pringle, University of Pittsburgh*

States have developed several responses to address the growing US opioid public health crisis. In 2016, Pennsylvania Governor Tom Wolf introduced the Centers of Excellence to increase access to evidence-based treatment services for OUD, including medications for OUD (MOUD) and care management. Amidst early program successes and planned expansions from 45 pilot treatment sites in 2020, the COVID-19 pandemic incited disruptions to healthcare services and increased overdoses. This Mini-Symposia will present the COE history and empirical results demonstrating: 1) effects of COE care management services on improving patient outcomes, 2) how COVID-19 impacted MOUD service delivery, and 3) lessons learned for future expansion.

**Methods and Results:**

Symposia 1: A mixed-effects Cox model with n=15,100 patients nested within n=41 treatment sites indicated an overall median retention rate of 19.4 weeks. Retention rates improved with more patients care management services and declined as sites client caseload ratios increased.

Symposia 2: Correlations between staff-administered organizational health survey scales demonstrated that organizations with greater organizational health pivoted faster ( $\rho = -0.360, p < 0.001$ ) to COVID-19 disruptions/policy changes while maintaining higher workplace morale ( $r = 0.466, p = .002$ ).

Symposia 3: Qualitative interviews with COE program staff indicated COVID-19 impacts on the processes associated with MOUD implementation, care coordination, and client confidentiality. According to participants, some policy and regulatory changes/adaptations have the potential to improve patient-level MOUD-related outcomes (e.g., telehealth, take home dosing) while others did not (e.g., urine drug screening frequency).

Conclusion: Future research and policy should consider addressing organizational health to improve OUD patient-level outcomes.

**2.1 The Effects of Care Management and Provider Capacity on Opioid Use Disorder Treatment Retention**

Speaker: *Renee Cloutier, University of Pittsburgh*

**2.2 The Relationship Between Organizational Health and Resiliency Among Pennsylvania's Centers of Excellence During the COVID-19 Pandemic**

Speaker: *Debra Moore, University of Pittsburgh*

**2.3 Response to Impact of COVID-19 on Medications for Opioid Use Disorder Service Delivery at Centers of Excellence in Pennsylvania**

Speaker: *Rahul Amruthapuri, University of Pittsburgh, School of Pharmacy Program Evaluation and Research Unit (PERU)*

1:00 P.M. - 2:30 P.M.

**WORKSHOP: SHARING YOUR SCIENTIFIC STORY: TIPS AND TRICKS FOR STRATEGICALLY AND EFFECTIVELY COMMUNICATING YOUR RESEARCH**  
Grand Ballroom I

Chair: *Rachel Evans, DHHS/NIH/NIDA*

Sharing your scientific story: tips and tricks for strategically and effectively communicating your research.

“Science is not finished until it’s communicated.” – Sir Mark Walport, former UK Chief scientist

The ability to effectively communicate scientific concepts and research findings to a wide range of audiences is a crucial part of the scientific process. And in a world where misinformation continues to permeate scientific discussions, and trust in science and scientists is declining across many groups, the need to deliver the right message, to the right audience, at the right time, in the right way, has never been more important. In this forum, the speakers will share strategies to help scientists move beyond communicating their findings in academic journals to reach the general public. They will discuss how to work with their research funders and the media to get attention for their scientific findings, and how to structure strong messages that will resonate with the audiences they aim to reach. The speakers will also host a robust Q and A session to answer questions from the audience.

3.1 *Sharing Your Scientific Story: Tips and Tricks for Strategically and Effectively Communicating Your Research*

Speaker: *Magdalena Cerdá, New York University School of Medicine*

3.2 *Sharing Your Scientific Story: Tips and Tricks for Strategically and Effectively Communicating Your Research*

Speaker: *Jennifer Hobin, National Institute on Drug Abuse*

3.3 *Sharing Your Scientific Story: Tips and Tricks for Strategically and Effectively Communicating Your Research*

Speaker: *Carla Johnson, The Associated Press*

1:00 P.M. - 2:30 P.M.

**WORKSHOP: PATHWAYS TO RECOVERY AND BEYOND IN NATIVE AMERICAN COMMUNITIES**  
Governor’s Square 15

Chair: *Anne Skinstad, University of Iowa*

Recovery from substance use disorders (SUD) is a multi-dimensional phenomenon, and over the last two decades multiple definitions with varying overlap have been proposed. Research has also found that recovery definitions vary across social groups, including by race/ethnicity; however, scant research has focused on the ways that Native American individuals define recovery. Thus, current consensus definitions may have limited salience for Native American communities, may result in less efficacious interventions, and may partially explain persistent treatment disparities. To address the gap, this workshop intends to spur development of a culturally appropriate definition of recovery. First, Dr. Paul Gilbert will review findings from a current national US study of people in recovery, highlighting commonalities and differences across key dimensions of gender, race/ethnicity, and treatment exposure. Second, Dr. Anne Helene Skinstad and Steve Steine, MA, will introduce a translation of recovery definition into tribal and urban Indian community contexts, and summarize how results from the Virtual Native Talking Circles (VNTC), a workforce development program, contributed

# ABSTRACT

to a better cultural understanding of the recovery process. Furthermore, VNTC results underscored the importance of peer support and networking, as well as providing additional culturally informed tools, and self-care measures to better prepare providers to support clients' recovery in a culturally informed way. Non-AIAN VNTC participants reported improved cultural understanding and capacity to support their tribal clients with SUD or in recovery. Finally, Dr. Daniel V. Foster will lead a discussion with speakers and audience members on recovery meanings and pathways in an Indigenous cultural context.

4.1 *What Does Recovery Mean? Ubiquitous and Unique Elements From a National U.S. Survey of Adults in Recovery*  
Speaker: Paul Gilbert, University of Iowa

4.2 *Behavioral Health Benefits of Virtual Native American Talking Circles*  
Speaker: Steven Steine, ATTC/ College of Public Health/ University of Iowa

Discussant: Daniel Foster, *Included Health*

**1:00 P.M. - 2:30 P.M.**

## **WORKSHOP: A VIEW BEYOND THE HORIZON: INNOVATIVE METHODOLOGIES AND APPROACHES IN SUBSTANCE USE DISORDER RESEARCH AND TREATMENT UTILIZED INTERNATIONALLY** Grand Ballroom II

Chair: Laura Brandt, *City College of New York*

While substance use disorders (SUD) pose a challenge to public health worldwide, context-specific aspects of these challenges require context-specific solutions. Therefore, unique innovations are brought about by unique regional or local challenges. At the same time, owing to political and regulatory barriers, these innovations may not be available in other settings/countries. This workshop, hosted by CPDD's International Committee, brings together researchers with diverse cultural and professional backgrounds with the aim to enrich our shared understanding of SUD-related issues and address inadequacies in the implementation of existing evidence-based approaches into practice.

Towards the goal of providing insight into methodological and treatment innovations from international contexts, this workshop will be structured in two parts. Part 1 will consist of 15-minute panel presentations: (1) Eugenia Oviedo-Joekes will present scientific evidence from Canada on injectable opioid agonist treatment, and injectable hydromorphone in particular, as a promising treatment option for severe opioid use disorder; (2) Thiago Fidalgo will discuss challenges related to collecting epidemiological data in low- and middle-income countries and lessons learned from conducting a longitudinal field survey in Brazil; (3) Min Zhao will describe digital medicine approaches and a Community-based Addiction Rehabilitation Electronic System as alternative/ complementary care models in China, in the context of limited mental health resources; and (4) Suzanne Nielsen will discuss a collaborative prescriber-pharmacist model of care in Australia as a low-threshold approach to improve access to SUD treatment. Part 2 will be an interactive discussion, and we particularly encourage international attendees to share their diverse experiences and regional innovations.

5.1 *"Injectable Opioid Agonist Treatment - Implementing Evidence-Based Approaches into Practice for Opioid Use Disorder in Canada"*

Speaker: Eugenia Oviedo-Joekes, *School of Population and Public Health, University of British Columbia*

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*5.2 Challenges Related to Conducting Epidemiological Surveys in Low- And Middle-Income countries: Lessons Learned from Field Work in Brazil*

Speaker: *Thiago Fidalgo, Universidade Federal de Sao Paulo*

*5.3 Early learnings from a hybrid implementation-effectiveness study of pharmacist-prescriber collaborative care for opioid dependence, and other clinical innovations in Australia*

Speaker: *Suzanne Nielsen, Monash University*

**3:00 P.M. - 4:30 P.M.**

## **WORKSHOP: NEW APPROACHES TO CULTURALLY APPROPRIATE TREATMENT AND RESEARCH Grand Ballroom I**

Chair: *A. Kathleen Burlew, University of Cincinnati*

New Approaches to Culturally Appropriate Treatment and Research. A compelling body of research suggests that generic treatments may not adequately address risk, protective, and contextual factors related to substance use treatment among specific racial/ethnic minoritized (REMs) groups. Moreover, novel approaches may be required to promote REM recruitment and retention into research. The mission of the Minority Interest Group (MIG) of NIDA's National Drug Abuse Treatment Clinical Trials Network is to promote research that advances the science of REM substance use. Consistent with that mission, MIG members will present novel strategies for recruiting, retaining, and treating REMs.

Aims: 1) To share culturally-appropriate approaches for engaging/ retaining REMs in substance use research. 2) To describe treatment approaches that incorporate syndemic factors related to the etiology and treatment of substance use among REMs

Both Drs. Obel and Cain will share efforts to increase the recruitment and retention of REMs into substance use research. Dr. Obel's team has developed an evidence-based manual for recruiting and retaining REMs into research. Dr. Cain will describe her team's use of community-engaged culturally appropriate strategies to recruit and retain urban REMs in substance use treatment research.

Both Drs. Moreland and Bryant will share culturally appropriate treatment research. Dr. Moreland will describe research identifying and addressing decision-making about buprenorphine among REMs. Utilizing the ADAPT-ITT framework, Dr Bryant will describe the adaptation of an intervention to more effectively respond to substance use and discrimination distress simultaneously.

Dr. Jordan, the discussant, will address the conclusions and implications for future research.

*6.1 The Cultural Adaptation Process of a Substance Use Intervention for Black Justice-Involved Youth Using the Adapt-ITT Model (Phase 1): Lessons Learned*

Speaker: *Brittany Bryant, Medical University of South Carolina*

*6.2 Culturally Appropriate Approaches for Recruitment and Retention of African Americans in SUD Treatment:*

Speaker: *Gloria Cain, Howard University College of Medicine*

*6.3 Are Minority Patients With Opioid Use Disorder More Likely to Decline Buprenorphine in the ED? Exploring Reasons That People Accept and Decline Buprenorphine*

Speaker: *Angela Moreland, Medical University of South Carolina*

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6.4 Innovative Methods for Increasing Recruitment & Retention in Research (RCTs & Non-RCTs) among African American Communities in the United States (US).

Speaker: Geoffrey Obel, University of Texas Southwestern Medical Center At Dallas

Discussant: Caravella McCuistian, Department of Psychiatry and Behavioral Sciences, School of Medicine, University of California San Francisco

**3:00 P.M. - 4:30 P.M.**

## **WORKSHOP: STANDARDS OF PSYCHEDELIC CARE: PEER & PROFESSIONAL PROVIDERS Plaza Ballroom A**

Chair: Brian Anderson, University of California, San Francisco

Co-Chair: Jennifer Mitchell, University of California San Francisco

As the use of psychedelics like psilocybin, MDMA, and ayahuasca becomes more prevalent across the US due to the advancement of clinical drug development and drug policy reforms (e.g., decriminalization and legalization), providers of psychedelics and psychedelic-informed care have been developing standards of good practices with these substances. This includes providers from peer-based (12 step recovery fellowships), professional/therapeutic, and religious settings. Three national organizations that have generated standards of care for the safe use of psychedelics in their respective settings present information on their organizations, their processes of generating these standards, and comments specifically on what their memberships have learned about the apparent risks and benefits of using psychedelics as part of the care of persons suffering from addictions.

7.1 *Psychedelics in Recovery: Mutual Aid for Psychedelic Integration*

Speaker: Kevin Franciotti, Kevin Franciotti Counseling

7.2 *Developing Standards of Practice Within the American Psychedelic Practitioners Association Part 2*

Speaker: Stephen Xenakis, American Psychedelic Practitioners Association (APPA)

Discussant: Peter Hendricks, The University of Alabama At Birmingham

**3:00 P.M. - 4:30 P.M.**

## **WORKSHOP: EPIDEMIOLOGY AND PUBLIC HEALTH RESEARCH METHODS Grand Ballroom II**

Chair: Howard Chilcoat, Indivior, Inc.

Co-Chair: Maria Parker, Indiana University - Bloomington

This proposal is for a continuation of the annual CPDD Epidemiology and Public Health Research Methods evening workshop series that was launched nearly 20 years ago. This year's workshop will focus on geospatial analytical approaches of interest to those conducting epidemiologic, prevention, and clinical research in the field of substance use and related disorders. Topics to be discussed include: 1) Jamie Humphrey, RTI - Spatial heterogeneity in county-level racial residential segregation and overdose mortality rates of opioids, synthetic opioids, and psychostimulants with abuse potential. Using multiscale geographically weighted regression models, spatially-explicit measures of racial residential segregation, and smoothed overdose mortality rates,



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this presentation will explore the presence and scale of spatial heterogeneity in the relationship between structural racism and three overdose mortality rates in US counties, 2020: any opioids, synthetic opioids, and psychostimulants with abuse potential. 2) Richard Sadler, Michigan State University - Geospatially-Informed Strategies to Address Mental Health and Substance Use Disparities in Flint, Michigan. This talk will explore the creation of a community-informed GIS-based healthfulness index and the use of standard hot spot analyses to understand and act upon geographic disparities uncovered in the Strengthening Flint Families (SFF) and the Resiliency in Communities After Stress and Trauma (ReCAST) programs. 3) Erik Nelson, Brigham Young University - Placing drug use into context. This presentation will discuss the impact of social and environmental conditions that promote (impede) drug use. It will also explore methods for measuring and analyzing these factors using geospatial techniques.

*8.1 Spatial Heterogeneity in County-Level Racial Residential Segregation and Overdose Mortality Rates of Opioids, Synthetic Opioids, and Psychostimulants With Abuse Potential, 2020*

Speaker: *Jamie Humphrey, RTI International*

*8.2 Geospatially-Informed Strategies to Address Mental Health and Substance Use Disparities in Flint, Michigan*

Speaker: *Richard Sadler, Michigan State University College of Human Medicine*

*8.3 Placing Drug Use Into Context*

Speaker: *Erik Nelson, Brigham Young University*

**3:00 P.M. - 4:30 P.M.**

### **WORKSHOP: COLLABORATION AND COMPLICATION: LESSONS LEARNED IN IMPLEMENTING COMMUNITY-ENGAGED RESEARCH ON SUBSTANCE USE**

**Plaza Ballroom D**

Chair: *Devin Banks, University of Missouri--St. Louis*

Advocates, policy makers, patients, and recently, NIDA have called for the inclusion of people with lived experience in the conceptualization and realization of addiction science. Perhaps more than ever, research teams are including patient and community consultants and advisory boards in their research.

However, most research training paradigms do not prepare investigators to effectively collaborate with people with lived experience. This is especially true when working with communities who experience other intersecting forms of stigma, such as racial stigma, who have often been considered "hard to reach" populations.

This symposium will share lessons learned from community-engaged NIH- and foundation-funded research projects with specific focus on minoritized people with lived experience. Presenters will demonstrate how their research designs, data collection, and interpretation of qualitative and quantitative findings developed based on the feedback of people with lived experience with substance use (disorder).

Attendees will increase their knowledge of different approaches to community-engaged research and strategies for addressing common challenges that emerge when collaborating with stakeholders outside the academy. This knowledge will support investigators in not only engaging with minoritized people with lived experience, but developing long-term, bidirectional relationships.

Specifically, presentations will include practical strategies for: 1) building trusted partnerships and developing a Community Advisory Board in communities that have been previously exploited by research and/or policy; 2) recruiting, engaging, and retaining minoritized research participants; 3) developing effective, culturally-appropriate recovery interventions and education; and 4) incorporating insights of community members into data interpretation and clinical and policy recommendations.

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9.1 *We see the Value in the Hood: Developing Reciprocal Research Partnerships in an Exploited Community*  
Speaker: Maria Paschke, University of Missouri - St. Louis

9.2 *Blind Spots in Ivory Towers: Considerations for Recruiting Black American Research Participants*  
Speaker: Danelle Stevens-Watkins, University of Kentucky

9.3 *The Role of Cultural Humility in Community-Engaged Research*  
Speaker: Alexandria Bauer, Rutgers University

9.4 *From Relapse Prevention to Recovery Planning: Community-Based Participatory Research to Address Substance Use on a Rural American Indian Reservation*  
Speaker: Monica Skewes, Montana State University

Moderator: Devin Banks, University of Missouri--St. Louis

**3:00 P.M. - 4:30 P.M.**

**WORKSHOP: R/ASKACADEMIA: SPECIAL CONSIDERATIONS IN THE PRACTICE OF USING REDDIT FOR SUBSTANCE USE RESEARCH**  
Governor's Square 15

Chair: Savannah Brenneke, Johns Hopkins Bloomberg School of Public Health  
Co-Chair: Meredith Meacham, University of California San Francisco

Interest in the use of social media platforms for substance use research has been on the rise, with Reddit emerging as one of the most rapidly growing platforms studied. To date, however, standards for the practice of collecting, analyzing, and disseminating findings from these highly unstructured data are lacking, contributing to concerns around the validity and ethics of using such data in the field. Therefore, there is a need for researchers across the fields of health and social sciences, computer science and engineering, to share lessons learned and work towards establishing best practices. This symposium will focus on phases of the research process using Reddit data, moving from defining Reddit data and conceptualizing research questions, to data collection and management, analysis and inference, and ending at dissemination. Speakers will present their original research, with special attention to a phase of the research process and challenges they face. Dr. Amanda Bunting will discuss the nature of Reddit data and the conceptualization of research questions that can be asked within the data. Ms. Alexandra DeLucia will present on the use of Natural Language Processing (NLP) for the extraction of data from Reddit, providing the perspective of computer science in the application of computational methods for data harvesting and management. Ms. Savannah Brenneke's work will explore analytical approaches commonly found in the literature, including inferences drawn from them. Lastly, Dr. Nicholas Proferes will cover the ethical considerations in the decision to use Reddit for research and their implications for the dissemination of findings.

10.1 *Rapid Use of Reddit to Understand Emerging Drug Use Trends*  
Speaker: Amanda Bunting, New York University School of Medicine

10.2 *r/AskAComputerScientist: Processing Reddit Data for the Social Sciences*  
Speaker: Alexandra DeLucia, Johns Hopkins University

10.3 *Harnessing Reddit: The Methods and Their Limitations in Analyzing Unstructured Data From Social Media*  
Speaker: Savannah Brenneke, Johns Hopkins Bloomberg School of Public Health

10.4 *Ethical Responsibility and Reddit Research: How Contextual Integrity Can Help Guide Practice*  
Speaker: Nicholas Proferes, Arizona State University

## SUNDAY, JUNE 18, 2023

10:15 A.M. - 11:15 A.M.

### MINI-SYMPOSIUM: HARM REDUCTION UTILIZATION AND STRATEGIES Grand Ballroom II

Chair: *Mai Pho, The University of Chicago*

Co-Chair: *Judith Tsui, Department of Medicine, Division of General Internal Medicine, University of Washington*

Rural areas experience high rates of drug overdose. While recent surges in overdose deaths are driven largely by highly potent fentanyl and related analogues, the rural opioid crisis is co-occurring and intertwined with evolving methamphetamine use. Overdose deaths involving methamphetamines increased by over 600% between 2007 and 2017. Harm reduction services (HRS) play a vital role in risk reduction and health promotion among rural PWUD by both figuratively and literally meeting individuals where they are in the communities and settings where they live and use drugs. Strategies include sterile equipment, overdose education and naloxone distribution (OEND), product testing for fentanyl, HIV, hepatitis C, and STI screening, sexual health supplies, linkage to substance use disorder treatment and social support. Given limited substance use disorder treatment in rural areas, efforts to improve health outcomes for people who use drugs in these settings hinge on harm reduction strategies. However, the availability of HRS is limited in rural settings compared to urban areas due to funding, marginalization, and vulnerabilities exacerbated by the COVID-19 pandemic and related mitigation strategies. This mini-symposium will explore factors associated with harm reduction practices, including naloxone use and fentanyl product testing from data collected through the Rural Opioid Initiative (ROI), a research consortium funded by NIDA, CDC, SAMHSA, and the Appalachian Regional Commission, as well as present strategies for expanding access and engagement with harm reduction services in rural settings.

11.1 *Factors Associated With Possession of Naloxone Among Rural People Who Use Drugs*  
Speaker: *Alex Rains, University of Chicago, Pritzker School of Medicine*

11.2 *Fentanyl Awareness and Harm Reduction Techniques to Avoid Fatal Overdose: A Qualitative Exploration of Eight Rural Settings in the United States*  
Speaker: *Rebecca Bolinski, Southern Illinois University School of Medicine*

11.3 *Engagement in Harm Reduction Services through Academic and Community-Based Partnership*  
Speaker: *Mai Pho, The University of Chicago*

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11:30 A.M. - 12:30 P.M.

## MINI-SYMPOSIUM: 2022 NIDA CRAVING CHALLENGE Plaza Ballroom BCEF (Plenary)

Chair: *G. Andrew James, University of Arkansas for Medical Sciences*  
Co-Chair: *Ronald Thompson, University of Arkansas for Medical Sciences*

The National Institute on Drug Abuse (NIDA) issued the "Product Prototypes to Combat Drug Craving" Challenge, which solicited working prototypes of devices intended to reduce drug craving among people with substance use disorders. The Challenge specifically sought prototypes that were easily accessible, minimally invasive, available on-demand, did not require detoxification, could be adapted for different substances, modifiable to provide tailored experiences, and suitable for patients of diverse backgrounds and different stages of recovery. This mini-symposium will discuss the inspiration behind some of the winning entries.

Richard Hanbury MBA (Healthcare) will discuss the winning entry Sana, a neuromodulation platform that provides anxiety relief on-demand and has shown a 45% reduction in anxiety during methadone withdrawal. Josh Israel (Serial Entrepreneur) will discuss the runner-up entry Hale, a vaporizer system to ease nicotine craving and withdrawal by automatically reducing nicotine use over time. Ronald G. Thompson Jr., Ph.D., will discuss the Honorable Mention entry for smartphone app OptiMAT, which seeks to reduce opioid misuse through daily monitoring of mood and craving, personalized feedback, and GPS-driven "just-in-time" intervention when participants enter areas of high contextual risk for relapse. Chair Andrew James, Ph.D., a co-creator of OptiMAT, will lead discussion on the devices' common and unique approaches for reducing drug craving.

12.1 *The Sana Wearable Neuromodulation Device for Reducing Anxiety and Drug Cravings*  
Speaker: *Richard Hanbury, Sana Health, Inc.*

12.2 *Hale: Automated Nicotine Reduction Device*  
Speaker: *Josh Israel, Hava Health, Inc.*

12.3 *OptiMAT: A Smartphone Application to Decrease Opioid Cravings and Optimize MAT for Opioid Use Disorders*  
Speaker: *Ronald Thompson, University of Arkansas for Medical Sciences*

2:15 P.M. - 3:45 P.M.

## WORKSHOP: "PRE-ADDICTION:" A STARTING POINT FOR A STRATEGIC SHIFT TOWARD EARLIER INTERVENTION IN SUBSTANCE USE DISORDERS Plaza Ballroom BCEF (Plenary)

Chair: *Nora Volkow, National Institute on Drug Abuse*  
Co-Chair: *George Koob, National Institute on Alcohol Abuse and Alcoholism*  
Discussant: *A Thomas McLellan, University of Pennsylvania Perelman School of Medicine*

Federal efforts to address substance use disorders (SUDs) have focused almost exclusively on those with serious, chronic addictions. Yet treatment penetration rates and treatment outcomes have been disappointing. The far larger population of those who regularly misuse substances and often transition to serious SUDs has

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been largely ignored. Facing a similar situation, the diabetes field strategically moved toward identifying and intervening with early-stage diabetes - termed "pre-diabetes." That strategic change led to better prevention, longer delay in onset of serious diabetes, better treatment penetration and more effective reimbursement policies. This workshop first describes (15 minutes) how the diabetes field developed this strategy, including a commonly understood name to motivate both patients and clinicians, and creation of evidence-based medications and behavioral interventions. Finally, we offer our suggestion of the term "pre-addiction," initially defined by 2-5 DSM 5 diagnostic criteria as a starting point for the development of this concept for SUDs. The remainder of the workshop will be devoted to audience discussion and suggestions on five important and unresolved issues (12 minutes each) if this concept is to move forward.

1. What promising biological measures may improve the suggested operational definition of pre-addiction?
2. What medications might be appropriate for those with pre-addiction?
3. What behavioral interventions - including social media or internet apps - might be effective with pre-addiction?
4. How can insurers and healthcare systems facilitate studies of effectiveness and value pre-addiction interventions?
5. Are there concerns that the term pre-addiction will promote stigma?

**4:00 P.M. - 5:15 P.M.**

### **MEDIA FORUM Grand Ballroom I**

Chair: *Bethea Kleykamp, BAK and Associates*

Mainstream news media disseminates many problematic narratives about drug use and addiction that perpetuate stigma, discrimination, and bad policy. One way to address these shortcomings is to increase the coverage of evidence-based approaches to addiction treatment and recovery, including well-designed research studies, through collaborative efforts with subject matter experts. Unfortunately, many experts are not trained to interact with journalists or the general public about addiction science. This forum is designed to offer customized, in-person training that can help attendees develop effective science communication skills.

The Media Forum will be open to all attendees including graduate-level and early-career CPDD attendees for whom this forum could serve as a valuable career development experience. The 120-minute forum will be broken down into three components: 1) an overview of different types of science and medical writing related to substance use research and treatment (Presenter: Kleykamp; 30min); 2) tips on science communication (Presenter: Jonathan 30min) 3) tips on working with the media to communicate science (Presenter: Ashton; 30minutes); 4) trainer led small-group didactic and practice sessions (30min). The small-group trainer sessions will help attendees become aware of non-traditional avenues of disseminating their research and expertise (science journalism, regulatory writing, clinical guidelines, educational materials), sharing research accurately and concisely with the media, how to disseminate press releases, and how to pitch ideas or op-eds.

*14.1 Reporting on Addiction: Science Communication*  
Speaker: *Jonathan Stoltman, Opioid Policy Institute*

*14.2 Communicating Science Effectively Media Forum: Training With Reporting on Addiction*  
Speaker: *Ashton Marra, Reporting on Addiction*

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4:00 P.M. - 5:30 P.M.

## POLICY FORUM Grand Ballroom II

Chair: *Sandra Comer, Columbia University and NYSPI*

Despite a longstanding prohibition on psychedelics dating back to the 1970s, scientific and public interest in these substances is growing as clinical trials suggest their promise for treating mood, anxiety, and substance use disorders. Early reports that people with severe treatment-resistant depression responded to psychedelic treatment created momentum for controlled clinical trials to establish therapeutic efficacy for other indications. The Food and Drug Administration (FDA) has granted breakthrough therapy status for psilocybin and MDMA, which means that intensive FDA guidance is provided for designing the clinical trial programs and expedited timelines are applied when FDA reviews the safety and efficacy data from the completed Phase III studies.

This Forum will present the history of the therapeutic use of hallucinogens (Jack Henningfield), the epidemiology of the current illicit use of hallucinogens (Deborah Hasin), and current regulatory perspectives on psychedelic drug development from the FDA (Marta Sokolowska) and Industry (Beatriz Rocha).

*15.1 The History of Therapeutic Use: Lessons Learned From 1960s Studies, and From the Renaissance in Clinical Development Beginning in the First Decade of the 21st Century*

Speaker: *Jack Henningfield, Pinney Associates, Inc.*

*15.2 The Epidemiology of Hallucinogen/Psychedelic Use in the United States*

Speaker: *Deborah Hasin, Columbia University*

*15.3 Analyses of U.S. Trends in Non-Medical Use of Hallucinogens*

Speaker: *Beatriz Rocha, Fortrea*

*15.4 MDMA for PTSD and Psilocybin for Treatment-Resistant Depression Currently in Phase III Trials*

Speaker: *Marta Sokolowska, FDA*

## MONDAY, JUNE 19, 2023

9:00 A.M. - 10:00 A.M.

## MINI-SYMPOSIUM: BEYOND THE DICHOTOMY Grand Ballroom I

Chair: *Cara Struble, Geisel School of Medicine at Dartmouth*

Co-Chair: *Jessica Barrington-Trimis, University of Southern California*

Cannabis use and cannabis-related problems remain highly prevalent among adolescents and young adults (AYA). Burgeoning research reveals substantial disparities in problematic cannabis use between LGBTN+ (lesbian, gay, bisexual, transgender, non-binary+) AYA and their cisgender, heterosexual counterparts. However, this research has been limited by a lack of adequate sampling, leading studies to combine individuals from any LGBTN+ subgroup into a single analytic group and obfuscating heterogeneity in cannabis use behaviors across

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the diverse range of identities utilized by AYA. This mini-symposium will highlight the need for scientists to expand analyses to explore differences within the LGBTN+ population by describing heterogeneity observed in cannabis use behaviors across subgroups. Talks will examine key individual, interpersonal, and structural mechanisms that may explain observed disparities within and outside the LGBTN+ population of AYA. The first speaker will present on distinct cannabis use patterns among subgroups of LGBTN+ youth from Southern California, and relatedly explore how outness (openness about one's identity) and discrimination experiences might explain disparities in use. The second speaker will examine differences in the effects of depression and anxiety on associations between minority stressors and cannabis problems across subgroups of LGBTN+ young adults. The third speaker will examine LGBTN+ subgroup differences in reported exposure to pro-cannabis marketing, and associations with LGBTN+ disparities in cannabis use. This collection of presentations on LGBTN+ disparities in cannabis use behaviors will highlight implications for future research, treatment, and policy, providing concrete suggestions for research strategies to better understand disparities in substance use behaviors for the LGBTN+ population.

*16.1 Addressing the Role of Minority Stressors: A Cross-Sectional Analysis of Cannabis Use Patterns Among LGBTN+ High Schoolers*

Speaker: *Tahsin Rahman, University of Southern California*

*16.2 Comparing the Impact of Minority Stressors and Co-Occurring Mental Health Factors on Cannabis-Related Problems in a Diverse Sample of LGBTN+ Young Adults*

Speaker: *Cara Struble, Geisel School of Medicine at Dartmouth*

*16.3 Pro-Cannabis Marketing and LGBTQ+ Disparities in Cannabis Use Among Youth and Young Adults*

Speaker: *Evan Krueger, Tulane University*

**10:30 A.M. - 12:00 P.M.**

### **SYMPOSIUM: MEASUREMENT OF CANNABIS CONSUMPTION TO DETERMINE RISK AND PROMOTE PUBLIC HEALTH**

**Plaza Ballroom A**

Chair: *Alan Budney, Geisel School of Medicine at Dartmouth*

Co-Chair: *Ashley Linden-Carmichael, Penn State University*

With the escalation of cannabis legalization and commercialization, the need for better public messaging and guidelines about safe vs. risky use patterns has become imperative. Efforts to develop such guidelines are hindered by a lack of valid methods for measuring diverse cannabis products and quantifying consumption of the intoxicating component of cannabis, i.e., THC. This symposium will provide data from a diverse set of studies that help move the field towards resolution of this cannabis quantification impasse. The initial presentation will showcase methods utilized in the International Cannabis Policy Study for measuring novel cannabis product consumption quantities, generating national prevalence estimates, and evaluating consumer understanding of product labels. Next, a community-based study of frequent cannabis consumers that measured quantity, frequency, potency, and dose will demonstrate how those metrics can predict risk of problematic cannabis use. Findings from an intensive ecological momentary assessment study of young adults, will show how quantity reports and their interaction with product type and route of administration relate to subjective intoxication and other adverse consequences. Last, results from a study in which milligrams of THC consumption was calculated using responses from an internet-based survey of frequent cannabis consumers will describe associations between THC amount, pattern of use, and Cannabis Use Disorder severity. A moderated discussion will

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highlight how this work advances methods for measuring cannabis dose and determining its relationship to risk, and importantly, generate future innovative studies that will expedite the development of guidelines for safe and unsafe use of cannabis.

*17.1 Consumption Patterns for Cannabis Products From a National Sample of Consumers in the United States: Edibles, Extracts, CBD, and Other 'Novel' Products*  
Speaker: David Hammond, University of Waterloo

*17.2 Predicting Problematic Cannabis Use From Estimates of Cannabis Quantity, Frequency, Potency, and Standard Dose*  
Speaker: Brad Conner, Colorado State University

*17.3 Measuring Cannabis Use, Subjective Experiences, and Cannabis-Related Consequences in the Moment: Associations by Cannabis Product, Route of Administration, and Other Substance Use*  
Speaker: Ashley Linden-Carmichael, Penn State University

*17.4 Exploring the Link Between the Amount and Pattern of THC Consumption and CUD Severity in a Large Sample of Adults*  
Speaker: Jacob Borodovsky, Dartmouth Geisel School of Medicine

Moderator: Alan Budney, Geisel School of Medicine at Dartmouth

**10:30 A.M. - 12:00 P.M.**

### **SYMPOSIUM: THE INTERSECTION OF AGING, TOBACCO USE, AND HEALTH EQUITY** Governor's Square 15

Chair: Bethea Kleykamp, BAK and Associates

**Significance:** Over the last 20-plus years, combustible cigarette prevalence has dropped to the lowest levels ever recorded for young people in the United States but has not changed for older adults (65 years+). At the same time, novel tobacco products and policies continue to evolve, and the extent to which these shifts will impact older smokers is rarely addressed. For example, although electronic nicotine delivery systems (ENDS) are the fastest-growing tobacco product category, few research studies examine their harm reduction potential among older adults. Yet, these individuals stand to gain the most from stopping their combustible tobacco use as soon as possible. In addition, many people who smoke into later decades of life have been historically minoritized, including individuals who are Black and Hispanic, have a lower socioeconomic status, and/or have more chronic health issues. Thus, aging and tobacco use is a long-standing health equity issue that continues to be overlooked in research, treatment, and policy.

**Specific Aims:** The primary aim of this symposium is to educate and promote discussion about older adults that use tobacco and nicotine. Four presentations will address four different tobacco products/policy initiatives, including 1) very low nicotine content cigarettes, 2) electronic cigarettes, 3) menthol and non-menthol tobacco flavoring, and 4) lung cancer screening. Given the broad focus of this symposium, we expect that it will be of great interest to clinical researchers, healthcare providers, and health policy organizations that seek to learn about tobacco-related disparities among older adults.



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18.1 *A Qualitative Analysis of Older Adults' Perspectives on Very Low Nicotine Content Cigarettes*  
Speaker: Jessica Kulak, University at Buffalo

18.2 *Expectations and Patterns of Electronic Nicotine Delivery Systems (ENDS) Use Among Older Adults who Smoke Cigarettes Within a Nationwide RCT*  
Speaker: Margaret Fahey, Medical University of South Carolina

18.3 *Racial and Ethnic Differences in Lung Cancer Screening Eligibility and Health Services Utilization Among Older Smokers in the U.S.*  
Speaker: Jaqueline Avila, University of Massachusetts Boston

18.4 *Representation of Older Adults in Tobacco Flavoring Research*  
Speaker: Bethea Kleykamp, BAK and Associates

**10:30 A.M. - 12:00 P.M.**

## **SYMPOSIUM: THE INTERSECTION OF COVID-19 AND SUBSTANCE USE DISORDERS** Grand Ballroom II

Chair: Carlos Blanco, National Institute on Drug Abuse  
Co-Chair: Leonardo Angelone, DHHS/National Institute on Drug Abuse

This symposium will present a variety of epidemiological and health services responses to the intersection of the COVID-19 pandemic and substance use disorders and overdose. Dr. Ramsey will present an overview of changes in overdose deaths in New York State during COVID-19, innovative practices in the delivery of SUD treatment services during that period and lessons learned for the future. Dr. Halden will discuss the use of wastewater-based epidemiology to monitor community levels of SARS-CoV-2 as well as opioids, as well as opportunities and limits of information gleaned from wastewater analysis.

Dr. Jones will discuss a series of analyses examining use of telehealth for opioid use disorder prior to and during the COVID-19 pandemic among the Medicare population. The analyses explore use of telehealth services and impacts on receipt of medications for opioid use disorder (MOUD), MOUD retention, experiencing medically treated overdose, and overdose death.

There will be a discussion among all panelists regarding changes in Federal- and state-level legislation and regulations, innovations to increase access to MOUD, approaches to workforce support and augmentation and innovations to increase access to overdose prevention, such as naloxone distribution, syringe services programs, drug checking, and overdose prevention centers.

Throughout the symposium, there will be multiple opportunities for interaction with the audience to ensure that the approach is participative and inclusive, rather than adopting a top-down didactic approach.

19.1 *COVID-19 and Substance Use: Lessons Learned and where Do We Go from Here?*  
Speaker: Kelly Ramsey, NYS OASAS

19.2 *Examining the Relationship between Use of Emergency Authorities to Support Oud Treatment and Outcomes in the Medicare Population during the COVID-19 Pandemic*  
Speaker: Christopher Jones, National Center for Injury Prevention and Control, Centers for Disease Control and Prevention

# ABSTRACT

10:30 A.M. - 12:00 P.M.

## **SYMPOSIUM: STIMULATION FOR THE TREATMENT OF STIMULANT USE DISORDER** Plaza Ballroom D

Chair: *Katrina Foster, NIH/NIDA/DTMC*

Co-Chair: *Jennifer Wong, National Institute on Drug Abuse*

Stimulating the Brain to Treat Stimulant Use Disorder: Stimulant use disorder (StUD) is a significant public health concern. In 2020, over 5 million people aged 12 and older reported past year use of stimulants (SAMHSA, 2021). Currently, there are no FDA approved treatments for this devastating disorder despite decades of research focused on developing pharmacotherapies. Neuromodulation provides a new direction for developing treatments for StUDs. This treatment modality has already been authorized by the FDA for smoking cessation and mental health disorders, such as depression. Neuromodulation involves the alteration of nerve activity through targeted delivery of a stimulus, such as electrical or magnetic stimulation to specific brain area(s) to modulate behavior. Examples of neuromodulation include Deep Brain Stimulation (DBS), Transcranial Magnetic Stimulation (TMS) and Low-intensity Focused Ultrasound (LIFU). There are pre-clinical data demonstrating that neuromodulation is effective in reducing drug-seeking behavior (Knapp CM et al., 2009; Friedman A et al., 2010; Fakhrieh-Asl G et al., 2020). Moreover, preliminary data show that neuromodulation reduces alcohol, cocaine and methamphetamine use (da Silva MC et al., 2013; Batra et al., 2017; Hang S et al., 2020). Neuromodulation for the treatment of StUDs is in the early stages but significant advances are being made in clinical studies. This symposium focuses on compelling clinical neuromodulation data for the treatment of StUD and StUD craving from three different types of neuromodulation, as well as having the FDA provide guidance on the authorization pathway for new devices.

20.1 *Low Intensity Focused Ultrasound (LIF) as a New Tool to Treat Cocaine Use Disorder*

Speaker: *Nassima Ait-Daoud Tiouririne, University of Virginia School of Medicine*

20.2 *Development of Portable Neuromodulatory Intervention to Reduce Craving in Cocaine Addiction*

Speaker: *Abhishek Datta, Soterix Medical*

20.3 *Deep Brain Stimulation for Treatment Refractory Methamphetamine Use Disorder*

Speaker: *Joseph Sakai, University of Colorado School of Medicine*

20.4 *The Approval Process for New Devices and the Data Needed for This Process*

Speaker: *Pamela Scott*

10:30 A.M. - 12:00 P.M.

## **FORUM: RESTRUCTURING THE PATHWAY FROM DISCOVERY TO DISSEMINATION OF NEW MEDICATIONS IN THE ACADEMIC ENVIRONMENT** Grand Ballroom I

Chair: *Charles France, University of Texas Health Science Center*

Co-Chair: *Jennifer Potter, University of Texas Health San Antonio*

# ABSTRACT

Discovery, development, dissemination, and implementation of treatments for substance use disorders (SUD) can be inefficient and ineffective, particularly in academic environments, thereby delaying the availability of medications to patients most in need. Scientific evidence clearly shows that medications can be effective for treating SUD and that with comprehensive care recovery is achievable. Despite the availability of effective medications (e.g., buprenorphine for opioid use disorder), relatively few individuals who need treatment receive a medication. Barriers to uptake of new medications include stigma surrounding SUD, misinformation, and policy regulations surrounding prescribing. One approach to mitigate these barriers is adjusting the manner by which new discoveries become treatments. This forum will discuss the potential value of bidirectional translational conversations across the spectrum of stakeholders, from drug discovery to patients, early and throughout the process of medication development, and from community-oriented solutions back to basic scientists to identify mechanisms of action. Discussion topics will include an adapted translational model for medication development for SUD, including adjusting the typical sequential process of translational science to a parallel interactive process. This model of translational research proposes that activities such as those that are typically conducted in T3 and T4 (e.g., dissemination and implementation research to address potential barriers and discover facilitators) are conducted in parallel with the earlier stages of development, starting with stage T0. Examples of current research will highlight how early engagement of implementation and dissemination research can accelerate the manner by which drugs for treating SUD become available as treatment options.

#### *21.1 Integrated Research to Support Multi-Level Readiness for Evidence-Based Care*

Speaker: *Tara Karns-Wright, The University of Texas Health Science Center At San Antonio*

#### *21.2 Community Engagement to Facilitate Dissemination and Implementation of SUD Innovations*

Speaker: *Kasey Claborn, The University of Texas At Austin*

#### *21.3 The Impact of Physical Activity on Biological Circadian Rhythms in Early Remission From Alcohol Use Disorder*

Speaker: *Susette Moyers, Oklahoma State University- Center for Health Sciences*

#### *21.4 Immune Biomarkers to Accelerate Drug Discovery in Substance Use Disorders*

Speaker: *Elise Marino, University of Texas Southwestern Medical Center At Dallas*

**2:00 P.M. - 3:15 P.M.**

### **HUMAN FORUM: NOTHING ABOUT US WITHOUT US: ENGAGING INDIVIDUALS WITH LIVED EXPERIENCE OF SUBSTANCE USE DISORDERS IN SUBSTANCE USE RESEARCH DEVELOPMENT AND IMPLEMENTATION**

**Grand Ballroom I**

Chair: *Omayma Alshaarawy, Department of Family Medicine, Michigan State University College of Human Medicine.*

Co-Chair: *Rachel Luba, New York State Psychiatric Institute*

Involving individuals with lived experience of substance use disorders (LESUD) in research is increasingly recognized as a critical strategy to reduce stigma, develop effective personalized interventions, and enhance policy recommendations. Individuals with LESUD are well-positioned to identify research challenges and intended outcomes, perform outreach activities, develop referrals, foster trust, and disseminate findings to the community. Accordingly, several organizations (e.g., SAMHSA and NIDA) now strongly encourage researchers to engage individuals with LESUD and their families in all steps of research process including grant proposal development, implementation, and review. The College of Problems on Drug Dependence Human Research Committee presents a forum focusing on guiding principles to ensure purposeful engagement of individuals

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# ABSTRACT

with LESUD in SUD research. Forum speakers will give overviews of effective collaborations with organizations representing individuals with SUD, study planning, data collection methods and analysis, and dissemination of findings. The forum will provide attendees with different perspectives and best practices to collaborate with individuals with LESUD to design effective and responsive research programs and enhance clinical practice and public policy.

*22.1 What do we do When Everyone With Lived Experience Wants to Help? Insights From a Recent Research Project of College Students With Histories of Addiction*

Speaker: Noel Vest, Boston University

*22.2 Qualitative Interviews to Inform Research on and Implementation of Effective Treatments for OUD: How Can the Perspectives of People With LESUD Shape Our Definitions of Clinically-Meaningful Outcomes?*

Speaker: Manesh Gopaldas, Columbia University

*22.3 Supporting Technology Use and Harm Reduction Within a Housing First Framework*

Speaker: Tessa Frohe, University of Washington

**2:00 P.M. - 3:15 P.M.**

## **ANIMAL FORUM: THE 3RS CONCEPT OF REPLACEMENT: FUTURE TOOLS OR POLITICAL STRATEGY? Grand Ballroom II**

Chair: James Rowlett, University of Mississippi Medical Center

The “3Rs” concept was introduced in the 1959 by Russell and Birch, and consists of “Replacement”, “Reduction”, and “Refinement”. At present, these concepts play a central role in animal welfare and regulation of animal research worldwide. However, the concept of “replacement” (originally defined as scientific method using non-sentient material instead of conscious living vertebrates) has been used increasingly to promote the complete abolition of all animal-based research (e.g., US FDA Modernization Act passed Oct 2022 by the Senate). Nevertheless, research on alternatives to animals is a viable and active field. To discuss recent issues in the area of non-animal research alternatives, Dr. James Rowlett will introduce the topic and provide updates from the political arena. Dr. Robert Hester will discuss his use of animals for physiological research and his responsibility serving as IACUC Chair at the University of Mississippi Medical Center. He will then present how computer simulation of physiology was initially used to plan animal experiments, then his work on the development of computer simulation for understanding physiology and how investigators and companies are using physiological simulation for virtual clinical trials. Our primary goal is to provide perspectives (sometimes competing ones) on the realities of replacement, and to provide informed responses to challenges that animal research is outdated, including evidence-based knowledge for when alternatives are available and appropriate.

*23.1 Non-Animal Alternatives as Political Strategy*

Speaker: James Rowlett, University of Mississippi Medical Center

*23.2 Animal Experimentation or Computer Simulations? Both are Needed*

Speaker: Robert Hester, University of Mississippi Medical Center Department of Physiology

**3:30 P.M. - 5:00 P.M.**

**SYMPOSIUM: 10 YEARS GONE: REMEMBERING BILL WOOLVERTON THROUGH HIS IMPACT ON OUR CURRENT RESEARCH PROGRAMS**

**Plaza Ballroom A**

Chair: *Sally Huskinson, University of Mississippi Medical Center*

Co-Chair: *Michael Nader, Wake Forest University School of Medicine*

Considerable progress in understanding substance use disorders has been made using nonhuman animal models. This symposium will highlight the profound contributions of such research and its translational impact made by one of CPDD's long-time members, Bill Woolverton, on the 10th anniversary of his passing. Bill was passionate about rigorous experimental designs using operant procedures, with a focus on translating these preclinical findings to clinical applications. Dr. Nader will discuss the use of concurrent food-drug schedules of reinforcement to model vulnerability to substance misuse, which began for Bill during the late 1980's and while at the University of Chicago, and how these models can inform interpretations of reinforcing strength and intervention strategies involving polysubstance use. Dr. Rowlett will explore mechanisms of reinforcement and how they tie into, or are explained by, other pharmacological effects engendered by drugs using examples from his research using nonhuman primates, which originated after joining the Bill Woolverton Band (1993-1997) at the University of Mississippi Medical Center. Dr. Freeman will discuss the study of drugs as punishers and the translational implications of Bill's efforts for the development of abuse-deterrent formulations for prescription drugs. Bill had a deep appreciation for the powerful role of the environment, and Dr. Huskinson will discuss environmental determinants of drug vs. non-drug choice, including delay and variable schedules of reinforcement. The session will conclude with moderated discussion of, and reflection on, Bill's substantial legacy and the growth opportunities stemming from his impressive body of work.

*24.1 Bill was Right: For Most Research Questions, Models of Reinforcing Efficacy are the Best*

Speaker: *Michael Nader, Wake Forest University School of Medicine*

*24.2 Woolverton's "3Ms": Monkeys, Music, and Mississippi*

Speaker: *James Rowlett, University of Mississippi Medical Center*

*24.3 Bill Woolverton and the Study of Drugs as Punishers: Translational Growth From a Bedrock of Rigor*

Speaker: *Kevin Freeman, University of Mississippi Medical Center*

*24.4 Looking out Instead of in: How Bill Inspired us to Study Context in Drug Taking*

Speaker: *Sally Huskinson, University of Mississippi Medical Center*

**3:30 P.M. - 5:00 P.M.**

**WORKSHOP: EARLY CAREER MEMBER COMMITTEE: NAVIGATING A CAREER IN ADDICTION SCIENCE**

**Grand Ballroom II**

Chair: *Danielle Davis, Yale University School of Medicine*

Co-Chair: *Denise Vidot, University of Miami School of Nursing and Health Studies*

# ABSTRACT

Despite a wide range of career paths available to scientists in the substance use and addiction fields, knowledge on how to navigate a career can be limited. This gap in knowledge can be a function of limited access to resources, mentorship, and/or institutional knowledge. Opportunities may exist for emerging addiction scientists that are well suited for their skillsets or expertise but are otherwise inaccessible due to a lack of knowledge on how to pursue certain career paths. The purpose of this workshop is to provide early career attendees at CPDD the opportunity to hear from a diverse group of addiction scientists from a range of professions spanning academia, industry, and government agencies. This workshop will provide valuable information to early career scientists about skill sets, expertise, and experiences needed for various careers and the benefits of different career paths. Our speakers include preclinical, clinical, and epidemiological addiction scientists with experience in Industry positions, government agencies, and both research-focused and teaching-focused academic institutions. Presenters will share experiences that prepared them for their careers, describe their day-to-day work, and discuss available growth opportunities. Presentations by speakers will be followed by breakout groups to allow early career attendees to ask directed questions about specific careers. CPDD is successful, in part, because of dedicated scientists with careers in academia, industry, and government who collaborate to advance the understanding of addiction science. This workshop will provide critical insights for early career attendees, facilitate unique networking opportunities, and will ultimately enrich the future membership of CPDD.

*25.1 Addiction Science Research at a Primarily Undergraduate Institution: Balancing the Classroom and Laboratory*  
Speaker: Ryan Lacy, Franklin and Marshall College

*25.2 Federal Regulatory Scientist: Evaluating Drug Abuse-Potential*  
Speaker: Jovita Randall-Thompson, US Food and Drug Administration

*25.3 Trading Paces: One Perspective on the Journey From Academia to Industry*  
Speaker: Erica Peters, Canopy Growth Corporation

*25.4 The Role of the Psychiatrist in Academic Research*  
Speaker: Denis Antoine, Johns Hopkins University School of Medicine

*25.5 Navigating Non-Academic Careers in Addiction Science*  
Speaker: Alexandra Duncan, The Pew Charitable Trusts

## TUESDAY, JUNE 20, 2023

8:00 A.M. - 9:30 A.M.

### SYMPOSIUM: THE RACIST ORIGINS AND IMPACT OF THE WAR ON DRUGS Grand Ballroom II

Chair: Bryon Adinoff, *Doctors for Cannabis Regulation*  
Co-Chair: Brenda Curtis, *NIH/NIDA-IRP*

The Black Lives Matter (BLM) movement has raised awareness of the systemic racism embedded in the laws, institutions, and culture of the U.S. A key driver of systemic racism is the War on Drugs. Most U.S. drug laws were promoted to the public using racist arguments and have been used to disenfranchise and incarcerate millions of individuals, particularly people of color. Consequences include arrests, incarcerations, violent policing, and the lifelong effects of an arrest/prison record upon education, employment, housing, and child custody. The criminal

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consequences of illicit drug use make our field of medicine unique in that suffering from an addictive illness (e.g. opioid use disorder) is punishable by law, even in the absence of harm. Moreover, criminal punishment can also exacerbate mental illness and contribute to problematic drug use. Nevertheless, addiction-related medical and research organizations by and large continue to either support drug prohibition or remain silent. In this symposium, the speakers will provide an overview of the origins and impact of drug prohibition, the centrality of race and stigma to the prohibitionist structure, and the role of the addiction research community in resolving the inherent conflict between an illicit drug use disorder as a criminal behavior vs. biologic illness. A moderated discussion will allow audience input into the role the CPDD community can play to re-orient society's focus on drug prohibition to evidence-based drug treatment, where appropriate.

*26.1 The Racist Origins and Impact of the War on Drugs*  
Speaker: Maritza Perez Medina, Office of Federal Affairs

*26.2 The Dehumanization of Substance Users*  
Speaker: Brenda Curtis, NIH/NIDA-IRP

*26.3 The Role of Addiction Researchers in Righting the Wrongs of the Drug War*  
Speaker: Bryon Adinoff, Doctors for Cannabis Regulation

**8:00 A.M. - 9:30 A.M.**

### **SYMPOSIUM: THE PAST, PRESENT, AND FUTURE OF REINFORCER PATHOLOGY THEORY IN SUBSTANCE USE DISORDER** Plaza Ballroom A

Chair: Justin Strickland, Johns Hopkins University School of Medicine  
Co-Chair: Warren Bickel, Fralin Biomedical Research Institute at VTC

Behavioral economics is an interdisciplinary field that uses psychological, economic, and neuroscience principles to inform behavioral health and decision-making science. Advances in behavioral economic research have culminated in the development of a novel conceptual framework – Reinforcer Pathology Theory. Reinforcer Pathology Theory posits that reinforcers are integrated over a temporal window that determines the relative value of drugs and prosocial alternatives such that brief, immediate, intense, and reliable reinforcers (e.g., substance use) are overvalued compared to alternatives lower in their intensity, variable in their outcome, and delayed in their value accumulation (e.g., employment). This session will trace the past, present, and future of Reinforcer Pathology Theory using data from diverse drug classes and preclinical, human laboratory, and clinical settings. We will first describe the development and evolution of Reinforcer Pathology Theory along with basic science tests of diverse phenomena explained by this theoretical framework (e.g., alternative reinforcer and satiation hypotheses). Speakers will then discuss applications of Reinforcer Pathology Theory to behavioral and medications development work in substance use disorder. These data will demonstrate improved translational potential achieved through Reinforcer Pathology Theory across a pipeline of preclinical rodent studies to the human laboratory to clinical assessment. A public health view of Reinforcer Pathology Theory will then be explained, and how these approaches have rendered novel insights to guide policy development and thus garnered widespread attention outside of academia. The session will conclude with a moderated discussion of future theory refinement and applications for new intervention contexts.

*27.1 Reinforcer Pathology: Contemporary Status and Future Directions*  
Speaker: Warren Bickel, Fralin Biomedical Research Institute at VTC

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*27.2 Understanding the Effects of Visual Exposure to Nature on Substance Demand and Discounting Using Reinforcer Pathology*

Speaker: Meredith Berry, University of Florida

*27.3 Applying Behavioral Economics and Reinforcer Pathology Theory to Improve Translational Medications Development*

Speaker: Justin Strickland, Johns Hopkins University School of Medicine

*27.4 The Historical Precedence and Translational Promise of Reinforcer Pathology Theory in Public Health Policy for Substance Use Disorder*

Speaker: Derek Reed, University of Kansas

**8:00 A.M. - 9:30 A.M.**

## **SYMPOSIUM: DYSREGULATION OF THE PREFRONTAL CORTEX IN SUBSTANCE USE DISORDERS Plaza Ballroom D**

Chair: Jacqueline McGinty, Medical University of South Carolina

Co-Chair: Kathryn Cunningham, John Sealy School of Medicine University of Texas Medical Branch

Dysregulation of the medial prefrontal cortex (mPFC) during substance use disorders (SUDs) is a major characteristic of relapse to drug seeking and the cognitive deficits that accompany relapse. However, we know little about the phenotypes that result from structure and functional mPFC deficits in impulse control and executive decision-making during SUD development. Recent evidence indicates that abused drugs disrupt regulation of mPFC pyramidal neurons by fast-spiking, parvalbumin (PV)-expressing interneurons and the perineuronal nets (PNNs) that surround them. In this symposium, a diverse panel of investigators who represent multi-disciplinary perspectives will address these issues and more. To introduce the clinical context, F. Gerard Moeller (VCU) will discuss human brain effective connectivity engaging the mPFC to gain a richer "fingerprint" of the complex neurocircuitry and behavior to develop precise diagnoses and make therapeutic decisions in SUDs. Barbara Sorg (Legacy Research Institute) will discuss the effects of repeated cocaine on PNNs and synaptic excitability of PV interneurons in the mPFC as well as the impact of mPFC PNN removal on communication between the mPFC and hippocampus during consolidation of cocaine-associated memories. Antonieta Lavin (MUSC) will discuss the role of PV-positive interneurons in METH- induced hypofrontality and its resulting cognitive deficits. Kathryn Cunningham (UT Galveston) will highlight preclinical studies of serotonin target-phenotype relationships engaging mPFC circuitry which precipitate SUD risk. Altogether this panel will highlight the importance of the relationship between specific PFC neuronal subpopulations in preclinical and clinical models that expand our understanding of clinical phenotypes of SUDs.

*28.1 Human Brain Connectivity as a Fingerprint of Neurocircuitry and Behavior*

Speaker: F. Gerard Moeller, Virginia Commonwealth University

*28.2 Impact of Perineuronal Nets on Reconsolidation of Cocaine-Associated Memories and Prefrontal-Hippocampal Coupling During Cocaine Cue Acquisition*

Speaker: Barbara Sorg, Legacy Research Institute

*28.3 Chronic Methamphetamine Administration Produces Cognitive Deficits Through Augmentation of Gabaergic Synaptic Transmission in the Prefrontal Cortex*

Speaker: Antonieta Lavin, MUSC, Dept. of Neuroscience

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28.4 Prefrontal Cortex 5-HT<sub>2A</sub> and 5-HT<sub>2C</sub> Receptors Control Target Behaviors Allied With Cocaine Use Disorder  
Speaker: Kathryn Cunningham, John Sealy School of Medicine University of Texas Medical Branch

8:00 A.M. – 9:30 A.M.

## SYMPOSIUM: BEYOND GWAS: THE GENETICS AND EPIGENETICS OF ADDICTION Governor's Square 15

Chair: Jonathan Pollock, National Institute of Drug Abuse, National Institutes of Health  
Co-Chair: Arpana Agrawal, Washington University School of Medicine

GWAS studies are rapidly identifying variants underlying addiction and complex psychiatric disorders. These variants are being found within the coding regions of genes and in non-coding regions of the genome. Understanding how these different types of variants contribute to addiction and behaviors associated with addiction requires approaches that identify functional consequences, assess gene x gene interactions within gene networks, and creation of addiction risk scores associated with these variants. In this symposium, we will discuss technologies that uncover the underlying biology of GWAS variants using three different approaches: identifying function through analysis of variant-specific chromatin changes, machine learning, and analysis of short tandem repeats.

29.1 Substance Use Disorders in 3D Genome  
Speaker: Hyejung Won, University of North Carolina at Chapel Hill

29.2 Transcriptomic Profiling of the Opioid Exposed Human Ventral Midbrain at Single Nuclei Resolution  
Speaker: Schahram Akbarian, Icahn School of Medicine at Mount Sinai

29.3 Systems Biology Integration of Multi-Omic Data Reveals Biological Pathways Underlying Substance Use Disorders  
Speaker: Kyle Sullivan, Oak Ridge National Laboratory

29.4 The Contribution of Short Tandem Repeats to Splicing Variation in Humans  
Speaker: Yang Li, University of California - San Diego

8:00 A.M. - 9:30 A.M.

## SYMPOSIUM: NOT LIKE OTHER OPIOIDS: HOW IS FENTANYL UNIQUE? Grand Ballroom I

Chair: Kelly Dunn, Johns Hopkins University School of Medicine  
Co-Chair: Andrew Huhn, Johns Hopkins University School of Medicine

Illicitly manufactured fentanyl has infiltrated and, in many places, completely replaced the heroin product in the United States and Canada. Fentanyl has many unique characteristics that distinguish it from other opioid agonists and make it a particularly nefarious compound. Specifically, the mechanisms through which fentanyl exerts effects leads to differences in its subjective effect profile and withdrawal experience and increases its lethality relative to other opioids, putting patients at extreme risk and complicating conventional treatment strategies. This symposium brings together researchers from several disciplines to discuss these unique features. First, Dr. Sandra Comer will discuss fentanyl's unique pharmacodynamic profile relative to

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other opioids. Next, Dr. Jaime Yanez-Farfan will discuss fentanyl's secondary peaking profile, an effect that is not typically observed in persons using other opioid agonists. Third, Dr. Phillip (Randy) Torralva will review preclinical evidence of the unique lethality of fentanyl-induced vocal cord (glottic) closure (FIVCC) as it relates to fentanyl overdose in humans. Finally, Dr. Kelly Dunn will present data on withdrawal and play recorded (and anonymized) conversations with persons who have lived experience with illicit fentanyl exposure to illustrate patient-reported differences in the experience of withdrawal following fentanyl versus heroin as well as during buprenorphine inductions. A panel discussion, moderated by Dr. Andrew Huhn, will focus on how these distinct features make fentanyl uniquely challenging relative to other opioids and review the epidemiological, clinical, and preclinical research that is needed to help advance the care of patients.

### *30.1 Pharmacology of Fentanyl and its Implications for Treatment of Opioid Use Disorder and Overdose*

Speaker: *Jermaine Jones, Columbia University Irving Medical Center*

### *30.2 Multiple Peaking Phenomena in Fentanyl Disposition*

Speaker: *Jaime Yanez, Universidad Norbert Wiener*

### *30.3 Preclinical Evidence of Fentanyl-Induced Vocal Cord Closure (FIVCC)- Relevance to Fentanyl Overdose in Humans*

Speaker: *Phillip Torralva, Oregon Health and Science University / Torralva Medical Therapeutics, INC.*

### *30.4 Withdrawal From Fentanyl is Different: Data Presentation and First-Hand Accounts From Persons With Lived Experience*

Speaker: *Kelly Dunn, Johns Hopkins University School of Medicine*

Moderator: *Andrew Huhn, Johns Hopkins University School of Medicine*

**10:00 A.M. - 11:30 A.M.**

## **INNOVATOR SYMPOSIUM: MEDICATION DEVELOPMENT FOR METHAMPHETAMINE USE DISORDER**

**Plaza Ballroom A**

Chair: *Linda Dwoskin, University of Kentucky*

Methamphetamine Use Disorder (MUD) afflicts 2.6 million US citizens, caused >23,000 US deaths in 2020, and imposes an economic burden of >\$600B annually. MUD is the compulsive, chronic use of methamphetamine, causing devastating health consequences (e.g., psychotic behavior, brain and heart damage, death) and harm to communities (e.g., crime, unemployment, child neglect or abuse). There are currently no FDA approved medications to treat MUD. Methamphetamine increases extracellular dopamine by inhibiting cellular uptake and reversing transport at the vesicular monoamine transporter-2 (VMAT2). Blocking methamphetamine's effects at VMAT2, and thus blocking METH-induced reward and relapse, could lead to a MUD pharmacotherapy. Our late lead preclinical candidate VMAT2 inhibitor, UKY-21, potently ( $K_i = 31$  nM) inhibits VMAT2 function with minimal interactions at potential off targets (dopamine transporter and hERG,  $K_i$ 's >100-fold higher than at VMAT2). UKY-21 evolved from a previously reported series of related VMAT2 inhibitors with poor oral bioavailability and hERG liability. Oral administration of UKY-21 in rats, potently ( $ID_{50} = 17$  mg/kg/d) and effectively decreases methamphetamine self-administration without the development of tolerance. In vivo selectivity for UKY-21 is supported by failure to decrease cocaine self-administration at oral doses that decrease METH self-administration. UKY-21 has high oral bioavailability (>65% in rat) and provides durable exposure in plasma and brain, consistent with once daily oral dosing. UKY-21 is well tolerated in vivo in rat and

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appears to have an optimal safety pharmacology profile, including no significant hERG inhibition. Successful development of a pharmacotherapy for MUD would have a tremendously beneficial health and socioeconomic impact.

## *31.1 Mirtazapine for Methamphetamine Use Disorder*

Speaker: *Phillip Coffin, San Francisco Department of Public Health*

## *31.2 Development of Biased Neurotensin Receptor 1 Ligands for the Treatment of Addiction*

Speaker: *Lauren Slosky, University of Minnesota*

**10:00 A.M. - 11:30 A.M.**

## **SYMPOSIUM: THE POTENTIAL OF PSYCHEDELIC THERAPIES FOR SUBSTANCE USE DISORDERS**

**Grand Ballroom I**

Chair: *Albert Garcia-Romeu, Johns Hopkins University School of Medicine*

Historically, clinical research with classic psychedelics such as LSD focused heavily on applications treating substance use disorders (SUDs). Meta-analysis of early controlled trials comparing LSD to non-psychedelic control conditions found a single high-dose LSD treatment was associated with significantly greater reductions in alcohol misuse than control. Similarly, a preliminary trial of high-dose LSD with residential treatment in formerly incarcerated men with a history of opioid dependence found significantly greater biologically verified opioid abstinence in the LSD vs. treatment-as-usual control condition up to 12 months post-treatment. These studies and anecdotal and observational reports on indigenous and naturalistic psychedelic use formed the basis for novel research on psychedelic therapies for SUD in the 21st century, with small preliminary trials of psilocybin and ayahuasca for various SUDs showing feasibility and promise. More recently, larger randomized controlled trials of psilocybin for SUD have been conducted. Published data from a placebo-controlled trial in patients with alcohol use disorder showed significantly greater reductions in heavy drinking days and daily alcohol consumption after two high doses of psilocybin with motivational enhancement therapy (MET) compared to placebo with MET. Available data from recently completed controlled trials of psilocybin-assisted treatment for tobacco and cocaine use disorder will also be discussed. Additionally, growing preclinical research is probing biological activity underlying psychedelics' anti-addictive effects. These findings will be examined in the context of investigating psychedelic therapies and their mechanisms and exploring the ramifications for potential psychedelic-assisted treatments for SUD.

## *32.1 Effects of Psilocybin in Treatment-Seeking Adults With Alcohol Use Disorder*

Speaker: *Michael Bogenschutz, New York University Grossman School of Medicine*

## *32.2 Psilocybin Treatment for Cocaine Use Disorder*

Speaker: *Peter Hendricks, The University of Alabama At Birmingham*

## *32.3 Effects of Psychedelics in Preclinical Models of Substance Use Disorders*

Speaker: *Kevin Murnane, Louisiana State University Health Sciences Center - Shreveport*

## *32.4 Psilocybin-Assisted Smoking Cessation: A Randomized Controlled Trial*

Speaker: *Matthew Johnson, Johns Hopkins University School of Medicine*

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10:00 A.M. - 11:30 A.M.

## **SYMPOSIUM: NEUROPEPTIDES IN REWARD, ADDICTION, AND MENTAL HEALTH** Plaza Ballroom D

Chair: *Subramaniam Ananthan, DHHS/NIH/NIDA*  
Co-Chair: *Lakshmi Devi, Icahn School of Medicine At Mount Sinai*

Neuropeptides are known to play a central role in physiological and pathological processes relating to reward, learning, memory, stress, addiction, and neurological disorders. Peptidomic studies using mass spectroscopy and single cell transcriptional profiling are revealing a surprising prevalence of neuropeptides in brain that are positioned to broadly modulate neural activity and behavioral functions. These findings offer novel targets for therapeutics development for neurobehavioral disorders. This symposium will feature presentations on innovations and recent advances in the field of neuropeptides and their signaling mechanisms in addiction, mental health, and psychiatric disorders.

*33.1 The Role of Pituitary Adenylate Cyclase-Activating Polypeptide (PACAP) in Binge-Like Ethanol Drinking and Affective Behavior*

Speaker: *Jessica Barson, Drexel University College of Medicine*

*33.2 Extended Amygdala Neuropeptide Circuitry of Emotional Arousal*

Speaker: *William Giardino, Stanford University*

*33.3 Endogenous Opioid Peptides and Novel Neuropeptides in Addiction, Reward, and Mental Health*

Speaker: *Lakshmi Devi, Icahn School of Medicine At Mount Sinai*

10:00 A.M. - 11:30 A.M.

## **SYMPOSIUM: HOW NEUROIMAGING CAN BE USED IN TREATMENT DEVELOPMENT IN DRUG ADDICTION: FROM FDA STANDARDS TO CLINICAL APPLICATIONS** Grand Ballroom II

Chair: *Hamed Ekhtiari, University of Minnesota*  
Co-Chair: *Sarah Yip, Yale University*

As a neurobiological process, addiction involves pathological patterns of engagement with substances and a range of behaviors with a chronic and relapsing course. Neuroimaging technologies assess brain activity, structure, physiology, and metabolism at scales ranging from neurotransmitter receptors to large-scale brain networks, providing unique windows into the core neural processes implicated in substance use disorders. Identified aberrations in the neural substrates of reward and salience processing, response inhibition, interoception, and executive functions with neuroimaging can inform the development of pharmacological, neuromodulatory, and psychotherapeutic interventions to modulate the disordered neurobiology. Neuroimaging measures can facilitate the development of a range of biomarkers that may prove useful in the arsenal of addiction treatments in the coming years. There is evidence that these markers of large-scale neural structure and activity may indicate vulnerability or separate disease subtypes, predict response to treatment, or provide objective measures of treatment response or recovery. Neuroimaging biomarkers can also suggest novel targets for interventions. Closed or open loop interventions can integrate these biomarkers with neuromodulation in real-

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time or offline to personalize stimulation parameters and deliver precise intervention. Given the sheer diversity and rapid advances in neuroimaging in recent years, this symposium will provide an overview of neuroimaging modalities in addiction, potential neuroimaging biomarkers, and future directions and challenges in bringing these putative biomarkers from the bench to the bedside. At the end, we will discuss an executive pathway to support FDA qualification for neuroimaging biomarkers in certain contexts of use and how other labs can contribute in this collective effort.

#### *34.1 From Neuroimaging Markers to Biomarkers in Treatment Development*

Speaker: *Lara Ray, University of California Los Angeles*

#### *34.2 Brain-Based Predictive Modeling of Addiction*

Speaker: *Sarah Yip, Yale University*

#### *34.3 Neuroimaging as a Response Biomarker in Drug Development*

Speaker: *Joseph Schacht, University of Colorado School of Medicine*

#### *34.4 Neuroimaging as a Target Biomarker in Neuromodulation*

Speaker: *Hamed Ekhtiari, University of Minnesota*

**10:00 A.M. - 11:30 A.M.**

### **WORKSHOP: 29TH ANNUAL CONTINGENCY MANAGEMENT WORKING GROUP**

**Governor's Square 15**

Chair: *Matthew Novak, Johns Hopkins University School of Medicine*

Co-Chair: *Diann Gaalema, University of Vermont*

The Contingency Management (CM) Working Group, held annually during the CPDD convention, is an opportunity for the discussion and dissemination of current research regarding the use of CM interventions to promote behavior change and reduce drug use. CM is a behavioral treatment strategy that has demonstrated consistent success in promoting abstinence from a wide range of drugs and across many different treatment populations. It is also being used to promote change in behaviors impacting the course of other chronic diseases (e.g., obesity, diabetes). At the 29th annual meeting of the CM Working Group, junior and senior researchers will present preliminary data from ongoing studies involving CM. The goal for this working group is to provide an informal outlet for discussion of ongoing CM research, with an emphasis on developing or improving research strategies by seeking audience input and providing opportunities for junior and senior researchers to interact. As the goal for this working group has always been to provide an informal outlet for discussion of CM data, names of presenters are not included with this submission. Rather, participants and topics will be chosen during the Spring of 2023 to capture the most current data in contingency management research for presentation at our annual working group.

1:15 P.M. - 2:15 P.M.

**MINI-SYMPOSIUM: MONITORING AND DIAGNOSTIC DEVICES FOR SUBSTANCE USE DISORDERS: CHALLENGES AND OPPORTUNITIES**  
Grand Ballroom I

Chair: *Stacie Gutowski, National Institute on Drug Abuse, National Institutes of Health*  
Co-Chair: *Kelly Dunn, Johns Hopkins University School of Medicine*

Medical devices can serve as tools for monitoring patients and/or diagnosing drug overdose to provide innovative solutions in the management of substance use disorders. New developments in hospital-based monitoring options can provide personalized pain management and medication dosing to reduce opioid exposure. Beyond the clinical environment, novel technological developments have led to monitoring for a wide range of real-time physiologic parameters in daily life including respiratory rate, blood oxygen saturation, heart rate, and electrodermal activity through wearable devices and accompanying mobile phone applications. These devices can be utilized by patients to provide instantaneous monitoring of the patient experience, such as identifying when a person is experiencing stress or anxiety and subsequently providing real-time options for social support, geo-located interventions (e.g., meetings, treatment centers), cognitive behavioral therapies through clinician or chat bot interactions. Additionally, medical devices are being developed to focus on the detection of opioid-induced respiratory depression, to monitor and possibly alert bystanders and/or caregivers and allow for a timely administration of naloxone. As these devices are developed, we must discuss and understand the challenges and opportunities about which measures are most useful and the types of data output and alerts that will be accepted in this patient population.

*36.1 Monitoring and Diagnostic Devices for Substance Use Disorders: Challenges and Opportunities*  
Speaker: *David Reeser, OpiAID, Inc.*

*36.2 An EEG Biomarker for Opioids: Insights From the Operating Room to aid in the Opioid Crisis*  
Speaker: *Patrick Purdon, Harvard Medical School*

*36.3 Wearable and On-Body Devices for Detection of Opioid Overdose*  
Speaker: *Michael Hite, Ayuda Medical*

2:45 P.M. - 3:45 P.M.

**MINI-SYMPOSIUM: FROM INITIATION TO ADDICTION: A MEASURE OF THE FULL RANGE OF INVOLVEMENT FOR OPIOIDS, CANNABIS, AND ALCOHOL**  
Grand Ballroom I

Chair: *Ty Ridenour, RTI International*  
Co-Chair: *Lisette Saavedra, RTI International*

This mini symposium will present an innovative measure of the full developmental continuum of substance use (SU) involvement from pre-initiation through physiological dependence onto which numerous other SU measures could be mapped. This measure could help delineate which stages of progression from earlier to later involvement are impacted by specific environmental risks, genetic mechanisms, and underlying neurophysiology as well as when and for whom prevention and treatment programs are most impactful. Involvement was tested

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using items on initiation, regular use, and SU disorder (SUD) criteria available in many commonly used datasets. Methods: National Survey on Drug Use and Health (NSDUH) datasets 2016-2019 (N=225,622) were analyzed using moderated non-linear factor analysis and traditional psychometric analyses to evaluate “anchor items” for recreating involvement measures in other datasets for alcohol, cannabis, prescription opioids, and heroin. NSDUH data represent noninstitutionalized U.S. civilians, ages 12 or older. Sample composition was 52.2% female; 58.3% non-Hispanic White, 12.8%, non-Hispanic Black and 18.5% Hispanic; and 21.5% with an income below 2 times the poverty level. Results: Psychometrics in the general population and an elevated risk subsample supported involvement measures for each substance and overall SU involvement. Greater involvement with each substance was associated with SUDs of the same or other drugs (e.g., cocaine), major depression, risk taking, criminal behavior, and suicidality. Conclusions: Panelists will present study results; methods to create involvement measures in other datasets illustrated using NIH HEAL datasets; and how involvement could shed light on SUD etiology, prevention, treatment, and recovery.

*37.1 Substance Use Involvement Associations With Risk Factors and Psychopathology*  
Speaker: Barrett Montgomery, RTI International

*37.2 Development and Psychometrics of Substance Use Involvement Measures With Nonlinear Moderated Factor Analysis*  
Speaker: Alexandra Tonigan, RTI International

*37.3 Substance Use Involvement Replication in Other Datasets and Potential Research Directions Illustrated With Heal Initiatives Studies*  
Speaker: Ty Ridenour, RTI International

## WEDNESDAY, JUNE 21, 2023

8:00 A.M. - 9:30 A.M.

**SYMPOSIUM: USING BIG DATA TO UNDERSTAND THE ROLE OF THE GUT MICROBIOME IN SUBSTANCE USE DISORDERS**  
Plaza Ballroom D

Chair: Susan Wright, NIDA/NIH  
Co-Chair: Kiran Vemuri, National Institute of Drug Abuse/NIH/DHHS

Substance use disorders (SUDs) continue to be a significant public health challenge with negative health, social, and economic consequences. They are known to co-occur at high prevalence with several mental health disorders and can involve several different substances, including cocaine, opiates, cannabinoids, nicotine, and alcohol. While much SUD research has focused on the neurologic and genetic components of usage behavior, there is increasing interest in the role of the gut microbiome in the pathogenesis of SUD. With the continuous collection of large volumes of various data types, researchers are trying to facilitate microbiome research by building large reference data sets to serve as a foundation for new technologies and data analysis tools. This session will explore current research providing evidence that the gut microbiome is involved in SUDs and the challenges and opportunities for understanding the role of the microbiome in health. Accordingly, the symposium will address key knowledge gaps in the field while describing relationships between the gut microbiome and various addiction or addiction-related behaviors. The panel will also discuss relevant models of drug-seeking behavior along with metagenomics, metabolomics, and proteomics approaches to identify

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molecular signatures underlying gut microbiome affects, including biomarkers that covary in the context of SUD.

*38.1 Using Big Data to Understand the Role of Gut Microbiome in Substance Use Disorder*  
Speaker: Jason Bubier, The Jackson Laboratory

*38.2 The Gut Microbiome in Modulating Binge Drinking*  
Speaker: Yanjiao Zhou, UConn Health

*38.3 Utilizing Multi-Omics Approaches to Identify Molecular Signatures of Gut-Brain Signaling in Models of Fentanyl Use Disorder*  
Speaker: Drew Kiraly, Wake Forest School of Medicine

*38.4 The Microbiome as a Risk Factor in Opioid Use Disorders*  
Speaker: Jennifer Whistler, Center for Neuroscience

**8:00 A.M. - 9:30 A.M.**

## **SYMPOSIUM: PREVENTION IS BETTER THAN CURE: EARLY INTERVENTION FOR SUBSTANCE USE DISORDERS**

**Governor's Square 15**

Chair: Gillinder Bedi, The University of Melbourne  
Co-Chair: Carlos Blanco, National Institute on Drug Abuse

Substance use disorders (SUD) commonly emerge during adolescence/young adulthood, a critical period of neurobiological and psychosocial development. Onset of SUD during this period confers risk of harm to the developmental trajectory, setting the stage for a cascade of future difficulties. Without intervention, SUDs can develop into chronic conditions, requiring multiple episodes of care. Yet, delayed treatment remains the norm and most treatments are targeted to the severe end of the SUD spectrum. There is a need to refocus intervention efforts towards the early stages of SUD to disrupt progression to more severe SUD and prevent adverse health outcomes. This symposium will provide an overview of the current limited evidence guiding early intervention strategies for SUD. We will review the clinical staging model in psychiatry and developments in early intervention psychiatry, assessing the utility of these frameworks for clinical addiction science. Early intervention depends on the presence of well-delineated early clinical phenotypes: the second speaker will use epidemiological data to assess whether clinical high-risk states for SUD can be identified. The second section of the symposium will present emerging evidence on early intervention methods. This will include data on implementation of screening, brief intervention and referral to treatment for adolescents in pediatric medical and school settings, and opportunistic early intervention in college students and youth presenting for emergency care. Speakers will highlight the potential for early intervention to modify negative effects of SUD across the life course, and the clear need for further research to enable these impacts to be realised.

*39.1 Early Intervention for Substance Use Disorders: Lessons From Clinical Staging and Early Intervention Psychiatry*  
Speaker: Gillinder Bedi, The University of Melbourne

*39.2 Is There a Clinical High Risk State for Substance Use Disorder? An Epidemiological Perspective*  
Speaker: Carlos Blanco, National Institute on Drug Abuse

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*39.3 Implementing SBIRT for Adolescent Substance Use in Pediatric Medical and School Settings*

Speaker: *Christopher Hammond, Johns Hopkins University School of Medicine*

*39.4 Opportunistic Early Intervention for Problematic Substance Use in Young People via University and Emergency Services*

Speaker: *Leanne Hides, University of Queensland*

**8:00 A.M. - 9:30 A.M.**

**SYMPOSIUM: DEVELOPMENT OF FENTANYL-TARGETED VACCINES TO DECREASE OVERDOSE FATALITIES**

**Grand Ballroom II**

Chair: *Drew Townsend, NIDA DTMC*

Co-Chair: *Jason Sousa, National Institute on Drug Abuse*

Opioid-related fatalities have become the most common cause of death for Americans between 18-45 years of age. This surge in deaths may be attributable to the adulteration of illicit drugs (heroin, cocaine, methamphetamine) with fentanyl, leading to the unintentional exposure of illicit drug users to this highly potent opioid. Recent findings suggest that fentanyl-targeted vaccines can confer robust protection against fentanyl and structurally similar opioids. However, it is critical that the durability of fentanyl-targeted vaccines is closely examined preclinically to identify the most promising candidates for clinical testing. The aims of this symposium, organized by NIDA's Division of Therapeutics and Medical Consequences, include 1) educating the audience on the mechanisms of the leading anti-opioid vaccination strategies, 2) provide the current state of the science of opioid-targeted vaccines, and 3) discuss practical considerations of opioid vaccine development (e.g., preclinical vs. clinical endpoints, gaining IND approval, manufacturing). These goals will be accomplished by highlighting three approaches for vaccination under preclinical consideration and conclude with a preview of how these vaccines may be tested under human-laboratory conditions. The first speaker will share findings with a fentanyl-conjugated vaccine, a conventional and well-established approach for vaccination. The second speaker will share findings with a monoclonal vaccination approach for fentanyl. The third speaker will share data related to a novel "nanoparticle vaccine" approach. Finally, potential challenges to the forward translation of opioid-targeted vaccines towards clinical evaluation will be discussed.

*40.1 Translation of Vaccines and Antibody Based Strategies Against Fentanyl and its Analogs*

Speaker: *Marco Pravetoni, University of Washington School of Medicine*

*40.2 Development of CSX-1004 Monoclonal Antibody for Treatment and Prevention of Fentanyl Overdose*

Speaker: *Paul Bremer, Cessation Therapeutics*

*40.3 Hybrid Nanoparticle as a Platform for Vaccine Development Against Opioids and Other Psychoactive Compounds*

Speaker: *Chenming Zhang, Virginia Tech*

*40.4 Clinical Testing of Opioid Vaccines: Lessons Learned*

Speaker: *Sandra Comer, Columbia University and NYSPI*

Co-Presenter: *Rachel Luba, New York State Psychiatric Institute*

8:00 A.M. - 9:30 A.M.

**SYMPOSIUM: LEAVING NO ONE BEHIND: ENDING THE HIV EPIDEMIC WITH TARGETED INTERVENTIONS FOR PEOPLE WHO USE DRUGS**  
Grand Ballroom I

Chair: *Joy Schmitz, University of Texas Health Science Center*

Co-Chair: *Angela Heads, The University of Texas Health Science Center At Houston*

In 2019, the US announced a plan to End the HIV Epidemic by 2030. People who use drugs (PWUD) are disproportionately affected by the epidemic, due in part to low rates of HIV testing and insufficient access to HIV prevention and care services. Consequently, many PWUD do not benefit from highly efficacious HIV prevention and treatment interventions, such as pre-exposure prophylaxis (PrEP) and antiretroviral therapies (ART). Effectively ending the HIV epidemic involves improving HIV prevention and treatment outcomes for PWUD so that no one is left behind. In this symposium, speakers will present progress being made in the development of integrated interventions, encompassing a range of substances of abuse, treatment delivery modalities, and affected populations. Dr. Christopher Kahler will present findings from a factorial randomized controlled trial of telehealth interventions to reduce substance use in men who have sex with men (MSM) living with HIV. Dr. Glenn-Milo Santos will discuss the use of intermittent naltrexone with an in-the-moment ecological momentary intervention to increase PrEP and ART adherence in MSM who use methamphetamine. Research presented by Dr. Adam Carrico will focus on optimizing contingency management to improve HIV prevention and care with sexually minority men who use stimulants. Finally, Dr. Jennifer Jain will present an intervention approach that addresses stigma-related barriers to HIV care engagement among racially diverse women living with HIV who use drugs. Drs. Joy Schmitz and Angela Heads will summarize the talks and moderate a discussion on research priorities for addressing the intersection of substance use and HIV.

*41.1 Leaving No One Behind: Ending the HIV Epidemic With Targeted Interventions for People who Use Drugs*

Speaker: *Christopher Kahler, Brown University School of Public Health*

*41.2 Pharmacotherapy With an Ecological Momentary Intervention to Increase Pre-Exposure Prophylaxis and Anti-Retroviral Therapy Adherence Among Men who Have Sex With Men who Use Methamphetamine*

Speaker: *Glenn-Milo Santos, University of California San Francisco*

*41.3 Optimizing the Benefits of Contingency Management for HIV Prevention and Care With Sexual Minority Men who Use Stimulants*

Speaker: *Adam Carrico, University of Miami*

*41.4 WISH: Women, Intersectionality, Substance Use, and HIV*

Speaker: *Jennifer Jain, University of California, San Francisco*

10:00 A.M. - 11:30 A.M.

**SYMPOSIUM: TREATING SUD IN PATIENTS WITH PTSD AND HISTORIES OF VICTIMIZATION**  
Grand Ballroom I

Chair: *Carrie Mulford, National Institute on Drug Abuse, National Institutes of Health*

PTSD and SUD commonly co-occur, with approximately 30% of youth and 50% of adults with PTSD also meeting criteria for SUD. Traumatic experiences are risk factors for the development of SUD. Moreover, the co-occurrence of PTSD and SUD is associated with more severe symptoms and worse clinical outcomes. This panel will present research demonstrating that integrated treatment of comorbid PTSD and SUD, is feasible and effective in reducing symptoms of both disorders. The first presentation will identify neurobiology and symptomatology common to comorbid PTSD and SUD and review the clinical impact of co-occurring disorders. The second presenter will summarize results from the Collaboration Leading to Addiction Treatment and Recovery from Other Stresses (CLARO) study, a randomized controlled trial comparing the effectiveness of collaborative care for patients with co-occurring OUD, PTSD and/or depression. In this presentation, the authors will describe and compare adult patients who have OUD and co-occurring PTSD with and without traumatic experiences of victimization. The third presentation will provide an overview of research on Risk Reduction through Family Therapy (RRFT), including preliminary findings from an ongoing effectiveness implementation trial in adolescent outpatient clinics. RRFT is an integrative, exposure-based treatment for youth that incorporates best-practice interventions for PTSD, SUD, and related health risk behaviors. The final presentation will present preliminary outcomes from an RCT examining the efficacy Concurrent Treatment of PTSD and Substance Use Using Prolonged Exposure - Adolescent (COPE-A), a 16-session intervention, on substance use and PTSD outcomes for adolescents and young adults.

**42.1 Comorbid PTSD and Substance Use disorders: Shared Symptomatology and Neurobiology**

Speaker: *Jesse Hinckley, University of Colorado School of Medicine*

**42.2 Challenges in Addressing Victimization for People who Have Opioid Use Disorder and Probable PTSD**

Speaker: *Lisa Meredith, RAND*

Co-Presenter: *Grace Hindmarch, RAND Corporation*

**42.3 Advancing Treatment for Adolescents with Co-Occurring Substance Use Disorders (SUDs) and Posttraumatic Stress Disorder (PTSD): Risk Reduction through Family Therapy**

Speaker: *Zachary Adams, Indiana University School of Medicine*

Moderator: *Devin Banks, University of Missouri--St. Louis*

10:00 A.M. - 11:30 A.M.

**SYMPOSIUM: DRIVING IMPAIRMENT CAUSED BY THE USE OF CANNABIS AND OTHER DRUGS:  
RECENT EVIDENCE FROM HUMAN LABORATORY STUDIES  
Grand Ballroom II**

Chair: *Tory Spindle, Johns Hopkins University School of Medicine*

Co-Chair: *Carlos Zamarripa, Johns Hopkins University School of Medicine, Department of Psychiatry*

The global expansion of cannabis legalization for medical and “recreational” purposes has created an urgent need for research on cannabis-induced driving impairment. Controlled studies demonstrate that cannabis can impair driving performance and epidemiological evidence shows that: 1) driving under the influence of cannabis is increasing, and 2) cannabis-positive drivers have an increased crash risk. However, there are currently no validated methods to detect cannabis-impaired drivers and novel approaches are sorely needed. Further, many novel cannabis products (e.g., edibles) have emerged that remain understudied. Finally, given the heterogeneity in cannabis users, there is a need to characterize impairment among different groups (e.g., medical vs recreational users) and to evaluate individual differences in impairment. This symposium includes four presentations describing data from human laboratory studies featuring sophisticated driving simulators. Dr. Austin Zamarripa will present a study evaluating the individual and interactive effects of cannabis edibles and alcohol on driving performance. Dr. Thomas Arkell will present research on the effects of real-world medical cannabis use on driving/cognitive performance. Dr. Jan Ramaekers will present data showing neural mechanisms underlying individual differences in cannabis-induced impairment. Lastly, Dr. Amie Hayley will describe a novel impairment-detection approach (Driver Monitoring Systems, DMS) that evaluates fitness to drive using eye-tracking; the effectiveness of DMS at detecting drug/alcohol-induced impairment and future applications of this technology will be discussed. Dr. Tory Spindle will synthesize findings from these studies and facilitate an interactive discussion, with an emphasis on U.S. and global policy implications and possible future directions in the driving impairment field.

**43.1 Individual and Interactive Effects of Oral Cannabis Products (i.e., “Edibles”) and Alcohol on Driving Impairment**

Speaker: *Carlos Zamarripa, Johns Hopkins University School of Medicine, Department of Psychiatry*

**43.2 Acute Effects of Medicinal Cannabis on Driving and Cognitive Function: Real-World Evidence**

Speaker: *Thomas Arkell, Centre for Human Psychopharmacology, Swinburne University of Technology*

**43.3 Neural Mechanisms Underlying Cannabis-Induced Driving Impairment: The Impact of Tolerance and Individual Differences**

Speaker: *Jan Ramaekers, Maastricht University*

**43.4 Driver Monitoring Systems (DMS): Next Generation Methods to Manage Driver Impairment**

Speaker: *Amie Hayley, Swinburne University of Technology*

Moderator: *Tory Spindle, Johns Hopkins University School of Medicine*

10:00 A.M. - 11:30 A.M.

**SYMPOSIUM: A GENTLE INTRODUCTION TO DATA SCIENCE TOOLS FOR ADDICTION RESEARCH: USE CASES WITH EXAMPLES**  
Plaza Ballroom A

Chair: *Gabriel Odom, Florida International University*  
Co-Chair: *Raymond Balise, University of Miami*  
Discussant: *Daniel Feaster, University of Miami Miller School of Medicine*

Writing and publishing fully replicable scientific analyses is the goal for addiction research, but because of limitations in common software (e.g., copying and pasting numbers between SAS/Excel and Word) researchers do not have the easy-to-use tools to build fully reproducible workflows. In this workshop, participants will be shown how to use free (open source) software tools, including REDCap, R/RStudio, Quarto, and Zotero, to build a completely reproducible pipeline from data collection to manuscript publication. We will present general-purpose software add-ons (the Tidyverse, tidyREDCap, and rUM R Packages) in addition to other user-friendly software tools designed to aid addiction science researchers (R Packages including DOPE, ctn0094data, ctn0094DataExtra, and CTNote). We will give examples of how we write our manuscripts: starting with data curation in REDCap; data wrangling, preprocessing, and engineering in RStudio with tidyREDCap and the Tidyverse; specific tasks related to addiction data with DOPE, ctn0094DataExtra, and CTNote; managing our research bibliographies with Zotero, and creating publication-ready manuscripts with Quarto and rUM. Some of our examples will use the data sets from the Clinical Trials Network, namely CTN-0027, CTN-0030, and CTN-0051, as harmonized during the CTN-0094 project.

10:00 A.M. - 11:30 A.M.

**SYMPOSIUM: UNIVERSAL PRECAUTIONS: CONSIDERATIONS WHEN CONDUCTING CLINICAL ADDICTION RESEARCH IN THE ACUTE CARE HOSPITAL**  
Plaza Ballroom D

Chair: *Michelle Lofwall, University of Kentucky, College of Medicine*  
Co-Chair: *Laura Fanucchi, University of Kentucky, College of Medicine*

Hospitalizations for consequences of opioid use disorder (OUD), such as overdose and severe infections associated with injection drug use, are increasing with the opioid epidemic. Persons with OUD hospitalized with significant medical consequences are a unique population with complex needs both during and after hospitalization. Though there has been recent attention to the need to screen, diagnose, and initiate medications for OUD in hospitals, and also facilitate linkage to continued care in the community, there is a lack of evidence informing best practices, and major gaps in the care continuum post-discharge. Clinical research that involves persons with OUD and other substance use disorders in acute care hospitals, and that addresses the specific implementation issues in that setting is challenging but urgently needed. Investigators must navigate myriad factors that affect recruitment, enrollment, and adverse event monitoring, such as changes in clinical care and participant medical complexity. In addition, to be successful, research teams must frequently communicate with and coordinate among various multidisciplinary members of clinical teams and hospital administration. Furthermore, stigma related to persons with OUD and medications for OUD is common in general healthcare settings, and complicates interactions between researchers and the clinical team. During this session we will explore challenges, successes, and lessons learned in initiating, recruiting, enrolling, and randomizing medically

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complex, hospitalized patients with opioid use disorder through the lens of two ongoing clinical trials. We will also discuss a hybrid implementation-effectiveness trial evaluating the roll-out of an addiction consultation service in a large health care system.

*45.1 Conducting a Randomized Controlled Trial in Hard to Control Hospital Settings: Lessons Learned From the B-OPAT Trial (Buprenorphine plus Outpatient Parenteral Antibiotic Therapy)*

Speaker: *Laura Fanucchi, University of Kentucky, College of Medicine*

*45.2 Inpatient and out of Treatment: The Ins and Outs of Addiction Research in Hospitals*

Speaker: *Gavin Bart, University of Minnesota*

*45.3 Understanding the Implementation and Effectiveness of Addiction Consult Services: Partnering With a Large Public Hospital System to Conduct a Pragmatic Trial of Addiction Consult Services in 6 Urban Hospitals*

Speaker: *Jennifer McNeely, New York University Grossman School of Medicine*

SUNDAY, JUNE 18, 2023

## POSTER SESSION 1

**S1. Substance Use Patterns and Impulsivity Among Bariatric Surgery Patients**Rachel Arnold<sup>1</sup>, Dace Svikis<sup>1</sup><sup>1</sup>Virginia Commonwealth University**S2. Sex Differences in Acute Pharmacological Stress-Induced Mood and Opioid-Seeking Behavior**Tabitha Moses<sup>1</sup>, Mark Greenwald<sup>2</sup><sup>1</sup>Wayne State University School of Medicine, <sup>2</sup>Wayne State University, Dept of Psychiatry and Behavioral Neurosciences**S3. Sex Differences in Adversity and Risk for Future Alcohol Use in Youth in the ABCD Study**Dawn Bounds<sup>1</sup>, Sarah Rodrigues<sup>1</sup>, Sanghyuk Shin<sup>1</sup><sup>1</sup>University of California, Irvine**S4. Amyloid Pet and Diffusion Kurtosis Imaging for Alcohol Use Disorder**Kyoji Okita<sup>1</sup>, Noriko Sato<sup>1</sup>, Yoko Shigemoto<sup>1</sup>, Mitsuru Syakadou<sup>1</sup>, Yumi Saito<sup>1</sup>, Toshihiko Matsumoto<sup>1</sup><sup>1</sup>National Center of Neurology and Psychiatry**S5. Alcohol Cue Reactivity in Virtual, Video Game Environments**Timothy Regan<sup>1</sup>, Deicy De la Ossa Brown<sup>2</sup>, Christopher Burrows<sup>3</sup>, Hart Blanton<sup>3</sup>, Sherece Fields<sup>2</sup><sup>1</sup>Department of Mental Health, Johns Hopkins Bloomberg School of Public Health, <sup>2</sup>Department of Psychological and Brain Sciences, Texas A and M University, <sup>3</sup>Department of Communication, Texas A and M University**S6. Investigating the Association Between Discrimination, Internalizing Symptoms, and Alcohol Use Among Latino/a Immigrant Parent in the United States**Miracle Macias<sup>1</sup>, Tara Bautista<sup>1</sup>, Sumeyra Sahbaz<sup>2</sup>, Yesenia Cruz Carrillo<sup>1</sup>, Seth Schwartz<sup>3</sup>, Pablo Montero-Zamora<sup>3</sup><sup>1</sup>Northern Arizona University, <sup>2</sup>Oklahoma State University, <sup>3</sup>University of Texas at Austin**S7. Realist Evaluation of the Impact, Viability, and Transferability of an Alcohol Harm Reduction Support Program Based on Mental Health Recovery: The Vitae Study: First Results**Sarah Moriceau<sup>1</sup>, Marc Auriacombe<sup>1</sup>, Fuschia Serre<sup>1</sup>, Judith Martin-Fernandez<sup>1</sup>, Nolwenn Stevens<sup>1</sup>, Linda Cambon<sup>1</sup><sup>1</sup>Universite de Bordeaux**S8. SBI Tech Michigan: Optimizing Implementation of Screening and Brief Intervention for Excessive Alcohol Use Among Women of Reproductive Age**Amy Loree<sup>1</sup>, Hsueh-Han Yeh<sup>1</sup>, Farah Elsiss<sup>1</sup>, Celeste Zabel<sup>1</sup>, Logan Zelenak<sup>1</sup>, Sarah Moore<sup>1</sup>, Gregory Goyert<sup>1</sup>, Jessica Beatty<sup>2</sup>, Poonam Yadav<sup>3</sup>, Melissa Riba<sup>3</sup>, Steven Ondersma<sup>4</sup><sup>1</sup>Henry Ford Health, <sup>2</sup>Wayne State University, <sup>3</sup>Center for Health and Research Transformation, <sup>4</sup>Michigan State University

**S9. Modes of Marijuana Use by Secondary School Students in 2019–20, Findings From a California Statewide Survey**

Jijiang Wang<sup>1</sup>, Yue-Lin Zhuang<sup>1</sup>, Anthony Gamst<sup>1</sup>, Katherine Braden<sup>1</sup>, Shu-Hong Zhu<sup>1</sup>  
<sup>1</sup>UC San Diego

**S10. Provider-Patient Alliance and Trauma Among Pregnant People With Opioid Use Disorder**

Gustavo Angarita<sup>1</sup>, Kathryn Gilstad-Hayden<sup>2</sup>, Kimberly Yonkers<sup>2</sup>, Ariadna Forray<sup>1</sup>  
<sup>1</sup>Yale School of Medicine, <sup>2</sup>Yale University Department of Psychiatry

**S11. Cannabis Use and Mental Health Coping Behavior Among Minority Women During the COVID-19 Pandemic: Results From the COVID-19 Cannabis Health Study**

Bria-Necole Diggs<sup>1</sup>, Ranya Marrakchi El Fellah<sup>1</sup>, Cynthia Lebron<sup>2</sup>, Sitara Weerakoon<sup>3</sup>, Sarah Messiah<sup>4</sup>, Denise Vidot<sup>2</sup>  
<sup>1</sup>University of Miami Miller School of Medicine, <sup>2</sup>University of Miami School of Nursing and Health Studies, <sup>3</sup>Yale University School of Medicine, <sup>4</sup>University of Texas Health Science Center

**S12. Trends in the Co-Use of Cannabis and Prescription Psychotherapeutic Drugs in the United States**

Hosam Elbaz<sup>1</sup>, Omayma Alshaarawy<sup>2</sup>  
<sup>1</sup>Department of Pharmacology and Toxicology. Michigan State University College of Osteopathic Medicine., <sup>2</sup>Department of Family Medicine. Michigan State University College of Human Medicine.

**S13. Trends in Prevalence of Cannabis Use Disorders Among U.S. Veterans With Psychiatric Disorders Between 2005 and 2019**

Ofir Livne<sup>1</sup>, Carol Malte<sup>2</sup>, Yoanna McDowell<sup>2</sup>, Mark Olfson<sup>3</sup>, Melanie Wall<sup>3</sup>, Katherine Keyes<sup>4</sup>, Magdalena Cerda<sup>5</sup>, Silvia Martins<sup>1</sup>, Andrew Saxon<sup>6</sup>, Zachary Mannes<sup>7</sup>, David Fink<sup>8</sup>, Salomeh Keyhani<sup>9</sup>, Deborah Hasin<sup>1</sup>  
<sup>1</sup>Columbia University, <sup>2</sup>VA Puget Sound Health Care System, <sup>3</sup>Columbia University and NYSPI, <sup>4</sup>Columbia University Mailman School of Public Health, <sup>5</sup>Department of Population Health, NYU School of Medicine, <sup>6</sup>Veterans Affairs Puget Sound Healthcare System, <sup>7</sup>Columbia University, Mailman School of Public Health, <sup>8</sup>New York State Psychiatric Institute, <sup>9</sup>University of California, San Francisco

**S14. Aerobic Exercise During Adolescence Protects Against Anxiety Disorders in the United States**

Whitney Cordoba-Grueso<sup>1</sup>, Karla I. Galaviz<sup>2</sup>, Maria A. Parker<sup>2</sup>  
<sup>1</sup>Indiana University, <sup>2</sup>Indiana University - Bloomington

**S15. Factors Related to Cannabis Use in Individuals Over 65**

Lauren Russell<sup>1</sup>, Alison Oliveto<sup>1</sup>  
<sup>1</sup>University of Arkansas for Medical Sciences

**S16. Factors Associated With Risk for Cannabis Use Disorder Among Adults Using Medical Marijuana in Florida**

Robert Cook<sup>1</sup>, Hannah J Fechtel<sup>1</sup>, Ruba Sajdeya<sup>1</sup>, Gabriel Spandau<sup>1</sup>, Yan Wang<sup>1</sup>  
<sup>1</sup>University of Florida

**S17. Evaluation of the Pharmacokinetic and Pharmacodynamic Profile of Cannabigerol (CBG) in Human Subjects**

David Wolinsky<sup>1</sup>, Elise Weerts<sup>2</sup>, Marcel O. Bonn-Miller Bonn-Miller<sup>3</sup>, Matthew Feldner<sup>3</sup>, Ryan Vandrey<sup>2</sup>, Cecilia Bergeria<sup>2</sup>  
<sup>1</sup>Johns Hopkins University School of Medicine, Department of Psychiatry, <sup>2</sup>Johns Hopkins University School of Medicine, <sup>3</sup>Canopy Growth Corporation



**S18. Neural Correlates of Controllable Negative Life Events and Their Relationships With Cannabis and Alcohol Use Initiation**

Yihong Zhao<sup>1</sup>, Marc Potenza<sup>2</sup>, Susan Tapert<sup>3</sup>, Martin Paulus<sup>4</sup>

<sup>1</sup>Columbia School of Nursing, <sup>2</sup>Yale University School of Medicine, <sup>3</sup>University of California San Diego,

<sup>4</sup>Laureate Institute for Brain Research

**S19. Neural Reward Reactivity to Delta-9-Tetrahydrocannabinol (THC) among Young Adults as a Function of Lifetime Cannabis Use Frequency**

Julia Brooks<sup>1</sup>, Zoa Glab<sup>2</sup>, Rebecca Denson<sup>1</sup>, Natania Crane<sup>2</sup>

<sup>1</sup>University of Illinois At Chicago, <sup>2</sup>Psychiatric Institute, University of Illinois At Chicago

**S20. Identifying Brief Intervention Factors to Improve Cannabis Related Outcomes in Adolescents and Emerging Adults: A Systematic Review**

Kathryn Gex<sup>1</sup>, Ruschelle Leone<sup>2</sup>, Jenna Aungst<sup>3</sup>, Kevin Branson<sup>1</sup>, Kevin Gray<sup>1</sup>, Rachel Tomko<sup>1</sup>

<sup>1</sup>Medical University of South Carolina, <sup>2</sup>Georgia State University, <sup>3</sup>Lincoln Memorial University

**S21. A Human Laboratory Study Investigating the Influences of Sex on the Acute Pharmacological Effects of a Range of Smoked Cannabis Doses**

Madison Wright<sup>1</sup>, Justin Matheson<sup>2</sup>, Bernard Le Foll<sup>1</sup>, Bruna Brands<sup>3</sup>

<sup>1</sup>University of Toronto, <sup>2</sup>Centre for Addiction and Mental Health, <sup>3</sup>Health Canada

**S22. Results of Pilot Randomized Controlled Trial of Cognitive Behavioral Therapy for Insomnia to Reduce Cannabis Use**

Mark Ilgen<sup>1</sup>, J. Todd Arnedt<sup>1</sup>, Deirdre Conroy<sup>1</sup>, Emily Yeagley<sup>1</sup>, Kipling Bohnert<sup>2</sup>

<sup>1</sup>University of Michigan, <sup>2</sup>Michigan State University

**S23. Adolescents' Online Searches for Marijuana Information: Results From a Random Sample of Middle and High School Students in Los Angeles County**

Shuwen Li<sup>1</sup>, Yue-Lin Zhuang<sup>1</sup>, Adam Cole<sup>2</sup>, Shu-Hong Zhu<sup>1</sup>

<sup>1</sup>University of California - San Diego, <sup>2</sup>Ontario Tech University

**S24. Domestic Cannabis Cultivation: Results of the Georgian (country) Sample of the Transnational Online Survey of Cannabis Growers**

Irma Kirtadze<sup>1</sup>

<sup>1</sup>Ilia State University

**S25. Differences in Immediate Memory Performance Between Individuals Living With and Without Cannabis Use Disorder in Young Adult HBCU Undergraduates**

Emma Quarles<sup>1</sup>, Larry Keen<sup>1</sup>

<sup>1</sup>Virginia State University

**S26. Cannabis Retail Staff Perspectives on Trustworthiness of Social Media Information: A Qualitative Study**

Meredith Meacham<sup>1</sup>, Danielle Schell<sup>2</sup>, Coye Cheshire<sup>2</sup>

<sup>1</sup>University of California San Francisco, <sup>2</sup>University of California Berkeley

**S27. THC/CBD Vapor Self-Administration in Female Rats Results in Spatial Memory Deficits and Increases Methamphetamine Self-Administration**

Jordan Carter<sup>1</sup>, Samuel Wood<sup>1</sup>, Caroline Limbaker<sup>1</sup>, Ayteria Crow<sup>1</sup>, Carmela Reichel<sup>1</sup>  
<sup>1</sup>Medical University of South Carolina

**S28. Open Board**

**S29. Cigarillo Purchasing and Pack Sizes by Their Use as Blunts**

Brian Fairman<sup>1</sup>  
<sup>1</sup>University of Arkansas for Medical Sciences

**S30. Likelihood and Duration of Breastfeeding by Maternal Smoking and Drinking Change During Pregnancy**

Yukiko Washio<sup>1</sup>, Ashton Raines<sup>2</sup>, Mengxi Li<sup>3</sup>, Shaopeng Pei<sup>4</sup>, Shantae Taylor<sup>1</sup>, Zugui Zhang<sup>5</sup>  
<sup>1</sup>RTI International, <sup>2</sup>Drexel University, <sup>3</sup>University of Delaware, <sup>4</sup>University of Delaware, <sup>5</sup>Christiana Care

**S31. Sex-Specific Associations Between Childhood Trauma and Tobacco Use Outcomes**

Alexandra Palmisano<sup>1</sup>, Elizabeth Schwartz<sup>2</sup>, Mehmet Sofuoglu<sup>3</sup>  
<sup>1</sup>Yale University School of Medicine, <sup>2</sup>West Haven VA, Yale School of Medicine, and Yale University, <sup>3</sup>Yale University

**S32. The Impact (or Lack Thereof) of Moving to Remote Study Procedures on Quit Attempts in an NRT Sampling Intervention**

Elizabeth Hawes<sup>1</sup>, Andrew Bontemps<sup>1</sup>, Andres Azuero<sup>1</sup>, Matthew Carpenter<sup>2</sup>, Peter Hendricks<sup>1</sup>, Adrienne Lahti<sup>1</sup>, Karen Cropsey<sup>1</sup>  
<sup>1</sup>The University of Alabama At Birmingham, <sup>2</sup>Medical University of South Carolina

**S33. Tobacco Use and Sleep Problems in the Population Assessment of Tobacco and Health (PATH) Study**

Jocelyn Hansson<sup>1</sup>, Halle Thomas<sup>1</sup>, Samantha Bauer<sup>1</sup>, Leslie Lundahl<sup>2</sup>, David Ledgerwood<sup>1</sup>  
<sup>1</sup>Wayne State University, <sup>2</sup>Wayne State University School of Medicine

**S34. Optimizing the Training Conditions of Rats in Nicotine Drug Discrimination Studies**

Nana Kofi Kusi-Boadam<sup>1</sup>, Nathalie Sumien<sup>1</sup>, Michael Forster<sup>1</sup>  
<sup>1</sup>University of North Texas Health Science Center

**S35. Is Resilience Enough? Resilience Processes to Intersectional Stigma Among People who Inject Drugs (PWID) in Appalachia Ohio**

Kathryn Lancaster<sup>1</sup>, Anna D. Sucaldito<sup>2</sup>, Stacy Endres-Dighe<sup>1</sup>, Renee McDowell<sup>1</sup>, Ashleigh LoVette<sup>1</sup>, William C. Miller<sup>1</sup>, Vivian F. Go<sup>3</sup>  
<sup>1</sup>The Ohio State University, <sup>2</sup>Wake Forest University, <sup>3</sup>University of North Carolina at Chapel Hill

**S36. Examining Population Trends in the Association Between Mental Health and Psychedelic Use**

Daniel Grossman<sup>1</sup>, Melissa Bradley<sup>1</sup>, Alex Clain<sup>2</sup>, Greg Pavela<sup>1</sup>, Peter Hendricks<sup>1</sup>  
<sup>1</sup>The University of Alabama At Birmingham, <sup>2</sup>Northwestern University

**S37. Prevalence of Comorbid Substance Use Disorders Among People With Opioid Use disorder: A Systematic Review and Meta-Analysis**

Thomas Santo<sup>1</sup>, Gabrielle Campbell<sup>2</sup>, Natasa Gisev<sup>1</sup>, Lucy Thi Tran<sup>1</sup>, Daniel Martino-Burke<sup>1</sup>, Jack Wilson<sup>3</sup>, Samantha Colledge-Frisby<sup>4</sup>, Brodie Clark<sup>1</sup>, Louisa Degenhardt<sup>1</sup>  
<sup>1</sup>National Drug and Alcohol Research Centre, UNSW Sydney, <sup>2</sup>School of Psychology, University of Queensland, <sup>3</sup>Matilda Centre, The University of the Sydney, <sup>4</sup>National Drug Research Institute, Curtin University

**S38. State-Level Synthetic Opioid Arrests in the United States: Overall and Race-Specific Trends, 1990-2016**

Erin Annunziato<sup>1</sup>, John Pamplin<sup>1</sup>, Seth Prins<sup>1</sup>, Pia Mauro<sup>1</sup>  
<sup>1</sup>Columbia University

**S39. Overdose Death Rates Among Racial Minority Women in Wisconsin: Changes During the COVID-19 Pandemic**

Alexa Lopez<sup>1</sup>, Jeneile Luebke<sup>2</sup>, Hanan Abusbaitain<sup>1</sup>  
<sup>1</sup>University of Wisconsin-Milwaukee, <sup>2</sup>University of Wisconsin-Madison

**S40. Syndemic Profiles and Opioid-Related Mortality among People Initiating Chronic Episodes of Prescription Opioid Use in BC, Canada**

Mohammad Karamouzian<sup>1</sup>, Younathan Abdia<sup>2</sup>, James Wilton<sup>2</sup>, Naveed Janjua<sup>2</sup>, Jane Buxton<sup>3</sup>, Roy Purssell<sup>2</sup>  
<sup>1</sup>Centre of Drug Policy Evaluation, St. Michael's Hospital, <sup>2</sup>BC Centre for Disease Control, Vancouver, British Columbia, <sup>3</sup>School of Population and Public Health, UBC

**S41. Sex Differences in Non-Fatal Overdose Rates: A Population-Based Administrative Health Records Study in British Columbia, Canada**

Megan Marziali<sup>1</sup>, Katherine Kooij<sup>2</sup>, Jason Trigg<sup>3</sup>, Michael Budu<sup>3</sup>, Viviane Lima<sup>3</sup>, Julio Montaner<sup>3</sup>, Robert Hogg<sup>2</sup>  
<sup>1</sup>Columbia University Medical Center, <sup>2</sup>Simon Fraser University, British Columbia, Canada, <sup>3</sup>British Columbia Centre for Excellence in HIV/AIDS, British Columbia, Canada

**S42. Oud Treatment, Harm Reduction Service Engagement, and Sexually Transmitted Infection Risk Among Men and Women who Use Illicit Opioids in New York City**

Joy Scheidell<sup>1</sup>, Muthoni Mahachi<sup>2</sup>, Maria Khan<sup>3</sup>, Holly Hagan<sup>2</sup>, Alex S. Bennett<sup>2</sup>, Luther Elliott<sup>2</sup>  
<sup>1</sup>University of Central Florida, <sup>2</sup>New York University, <sup>3</sup>New York University Grossman School of Medicine

**S43. Open Board**

**S44. Prescription Opioid Tapering Patterns Prior to Discontinuation of Long-Term, High-Dosage Treatment Episodes Among Adult Medicaid Enrollees**

Hillary Samples<sup>1</sup>, Nicole Kennelly<sup>2</sup>, Arthur Robin Williams<sup>3</sup>, Mark Olfson<sup>4</sup>, Stephen Crystal<sup>5</sup>  
<sup>1</sup>Center for Pharmacoepidemiology and Treatment Science, Rutgers Institute for Health, Health Care Policy and Aging Research, <sup>2</sup>Rutgers Institute for Health, Health Care Policy and Aging Research, <sup>3</sup>Columbia University Division on Substance Use Disorders, <sup>4</sup>Columbia University and NYSPI, <sup>5</sup>Rutgers University

**S45. Transition Strategies to Link Patients With Substance Use Disorders From Acute Care to Community-Based Treatment Settings: A Scoping Review**

Noa Krawczyk<sup>1</sup>, Bianca Rivera<sup>2</sup>, Ji Chang<sup>3</sup>, Margaux Grivel<sup>3</sup>, Yu-Heng Chen<sup>4</sup>, Suhas Nagappala<sup>2</sup>, Honora Englander<sup>5</sup>, Jennifer McNeely<sup>2</sup>  
<sup>1</sup>NYU Grossman School of Medicine, <sup>2</sup>New York University Grossman School of Medicine, <sup>3</sup>NYU Global School of Public Health, <sup>4</sup>Temple University, <sup>5</sup>Oregon Health and Science University

**S46. Impact of Oat Initiation During Acute Hospitalization on Readmission, Overdose, and Mortality Among People With Opioid Use Disorder**

Tamara Mihic<sup>1</sup>, Nadia Fairbairn<sup>1</sup>, Janet Mok<sup>2</sup>, Michelle Cui<sup>2</sup>, Seonaid Nolan<sup>1</sup>, Eugenia Socias<sup>1</sup>  
<sup>1</sup>University of British Columbia, <sup>2</sup>British Columbia Centre on Substance Use

**S47. Trends in Buprenorphine Dosage and Days Supplied for New Treatment Episodes, 2010-2019**

Alyssa Tihou<sup>1</sup>, Eleanor Murray<sup>2</sup>, Jiayi Wang<sup>3</sup>, Benjamin Linas, MD MPH<sup>3</sup>, Laura White<sup>2</sup>, Jeffrey Samet<sup>3</sup>, Marc Larochelle<sup>3</sup>  
<sup>1</sup>Boston Medical Center, <sup>2</sup>Boston University School of Public Health, <sup>3</sup>Boston University School of Medicine

**S48. Barriers and Facilitators to Integrating Medications for Opioid Use Disorder (MOUD) and HIV Pre-Exposure Prophylaxis (PrEP) for Adolescents and Young Adults (AYA)**

Maria Herrera<sup>1</sup>, Kaja Darien<sup>1</sup>, Sarah Wood<sup>2</sup>, Scott Hadland<sup>3</sup>, David Metzger<sup>2</sup>, Nadia Dowshen<sup>2</sup>  
<sup>1</sup>Children's Hospital of Philadelphia, <sup>2</sup>Perelman School of Medicine at the University of Pennsylvania, <sup>3</sup>Harvard Medical School

**S49. Removal of Medicaid Prior Authorizations for Buprenorphine did Not Result in a Substantial Change in Prescriptions**

Paul Christine<sup>1</sup>, Marc Larochelle<sup>2</sup>, Lewei (Allison) Lin<sup>3</sup>, Jonathon McBride<sup>3</sup>, Renuka Tipirneni<sup>3</sup>  
<sup>1</sup>Boston Medical Center, <sup>2</sup>Boston University School of Medicine, <sup>3</sup>University of Michigan

**S50. Effectiveness of Rapid Inpatient Initiation of Methadone for Pregnant Women With Opioid Use Disorder**

Dennis Hand<sup>1</sup>, Amulya Raju<sup>1</sup>, Ryan Sholes<sup>1</sup>, Neel Iyer<sup>1</sup>, Vanessa Short<sup>1</sup>, Meghan Gannon<sup>1</sup>, Diane Abatemarco<sup>1</sup>, Rupsa Boelig<sup>1</sup>  
<sup>1</sup>Thomas Jefferson University

**S51. Qualitatively Exploring Pharmacist and Patient Needs to Design a Patient-Centered Pharmacy-Based Opioid Misuse Screening and Brief Intervention**

Deepika Rao<sup>1</sup>, Olayinka Shiyanbola<sup>2</sup>, James Ford<sup>2</sup>  
<sup>1</sup>Dartmouth College, <sup>2</sup>University of Wisconsin - Madison

**S52. Opioid Prescribing Trajectories in Veterans With and Without Substance Use Disorder**

Anne Black<sup>1</sup>, Sydney Axson<sup>2</sup>, Jessica Merlin<sup>3</sup>, Karl Lorenz<sup>4</sup>, William Becker<sup>2</sup>  
<sup>1</sup>VA Connecticut Healthcare System, <sup>2</sup>Yale University, <sup>3</sup>University of Pittsburgh School of Medicine, <sup>4</sup>Stanford University

**S53. Investigation of Life Events Associated With Development of OUD in Young Adults: A Longitudinal Study of a High-Risk Clinical Population**

Grace Blake<sup>1</sup>, Jarrod Ellingson<sup>1</sup>, Kristen Raymond<sup>2</sup>, Soo Rhee<sup>3</sup>, Michael Stallings<sup>2</sup>, Tamara Wall<sup>4</sup>, Christian Hopfer<sup>5</sup>, Jesse Hinckley<sup>5</sup>  
<sup>1</sup>University of Colorado Anschutz Medical Campus, <sup>2</sup>University of Colorado, <sup>3</sup>University of Colorado Boulder, <sup>4</sup>University of California San Diego, <sup>5</sup>University of Colorado School of Medicine

**S54. Social Determinants of Health and Quality of Care Among Patients With Opioid Use Disorder Receiving Treatment in Rural Primary Care Settings**

Huyen Pham<sup>1</sup>, Allison Ober<sup>2</sup>, Yuhui Zhu<sup>1</sup>, Zhe Fei<sup>3</sup>, Laura-Mae Baldwin<sup>4</sup>, Larissa Mooney<sup>5</sup>, Yih-Ing Hser<sup>5</sup>  
<sup>1</sup>Semel Institute - UCLA, <sup>2</sup>RAND Corporation, <sup>3</sup>University of California, Los Angeles, <sup>4</sup>University of Washington Department of Family Medicine, <sup>5</sup>Department of Psychiatry and Biobehavioral Sciences at the David Geffen School of Medicine, University of California, Los Angeles

**S55. Prevalence of Opioid Use Disorder and Overdose Rates Among People With Mental Illness in New York State**

Felipe Castillo<sup>1</sup>, Qingxian Chen<sup>2</sup>, Nancy Covell<sup>1</sup>, Manesh Gopaldas<sup>1</sup>, Emily Leckman-Westin<sup>2</sup>, Edward V Nunes<sup>1</sup>, Frances R Levin<sup>1</sup>, Molly Finnerty<sup>2</sup>  
<sup>1</sup>Columbia University and New York State Psychiatric Institute, <sup>2</sup>New York State Office of Mental Health, New York

**S56. Changes in Buprenorphine Prescribing After X-Waiver Exemptions: An Interrupted Time Series Analysis**

Payel Roy<sup>1</sup>, Katie Suda<sup>2</sup>, Jing Luo<sup>1</sup>, MyoungKeun Lee<sup>2</sup>, Joel Anderton<sup>2</sup>, Donna Olejniczak<sup>2</sup>, Jane Liebschutz<sup>1</sup>  
<sup>1</sup>UPMC/University of Pittsburgh, <sup>2</sup>University of Pittsburgh

**S57. Assessment of Treatment Retention Rates and Factors Affecting Retention on Opioid Agonist Maintenance Treatment Among Adolescents: A Retrospective Cohort Study From India**

Pooja Shakya<sup>1</sup>, Jaswant Jangra<sup>2</sup>, Roshan Bhad<sup>3</sup>, Ravindra Rao<sup>4</sup>  
<sup>1</sup>All India Institute of Medical Sciences New Delhi, <sup>2</sup>All India Institute of Medical Science New Delhi, <sup>3</sup>Department of Psychiatry and National Drug Dependence Treatment Centre (NDDTC), AIIMS, New Delhi, INDIA, <sup>4</sup>National Drug Dependence Treatment Centre, All India Institute of Medical Sciences, New Delhi

**S58. Examining the Relationship Between Childhood Trauma and Behavioral Economic Indices Among Individuals who use Opioids**

Andrea Vasquez Ferreiro<sup>1</sup>, Shahar Almog<sup>1</sup>, Meredith Berry<sup>1</sup>  
<sup>1</sup>University of Florida

**S59. Fentanyl Concentrations and Withdrawal in Illicit Fentanyl Exposure**

Helen Bird<sup>1</sup>, William Clarke<sup>1</sup>, Melanie Baime<sup>1</sup>, Prem Umang Satyavolu<sup>1</sup>, Rachel Burns<sup>1</sup>, Kelly Dunn<sup>1</sup>, Andrew Huhn<sup>1</sup>  
<sup>1</sup>Johns Hopkins University School of Medicine

**S60. Prolonged Exposure Therapy for Individuals with Co-Occurring Posttraumatic Stress Disorder and Opioid Use Disorder: A Randomized Clinical Trial**

Kelly Peck<sup>1</sup>, Jillian Giannini<sup>1</sup>, Rebecca Cole<sup>1</sup>, Gary Badger<sup>1</sup>, Letizia Mosca<sup>1</sup>, Stacey Sigmon<sup>1</sup>  
<sup>1</sup>University of Vermont

**S61. Racial/Ethnic Differences in Treatment-Related Barriers and Facilitators Among Patients Initiating Medication for Opioid Use Disorder (MOUD) as Part of Comprehensive Patient Navigation Programs**

Caravella McCuistian<sup>1</sup>, Maria Olivas<sup>1</sup>, Alexandra Haas<sup>1</sup>, Emily Dauria<sup>2</sup>, Valerie Gruber<sup>1</sup>, Paula Lum<sup>3</sup>, J. Konadu Fokuo<sup>4</sup>, D. Andrew Tompkins<sup>1</sup>  
<sup>1</sup>Department of Psychiatry and Behavioral Sciences, School of Medicine, University of California San Francisco, <sup>2</sup>Department of Behavioral and Community Health Sciences, University of Pittsburgh, School of Public Health, <sup>3</sup>Department of Medicine, School of Medicine, University of California, San Francisco, <sup>4</sup>Department of Psychiatry, College of Medicine, University of Illinois at Chicago

**S62. Implementation of a "Tele-Peer" Model to Expand Access to Medications for Opioid Use Disorder (MOUD) in a Rural Emergency Department (R-ED) in South Carolina**

Sarah Gainey<sup>1</sup>, Lindsey Jennings<sup>1</sup>, Suzanne Lane<sup>1</sup>, Angela Moreland<sup>1</sup>, Karen Hartwell<sup>2</sup>, Louise Haynes<sup>1</sup>, Kathleen Brady<sup>1</sup>

<sup>1</sup>Medical University of South Carolina, <sup>2</sup>Medical University of South Carolina; Ralph H. Johnson VAMC

**S63. Effects of a Comprehensive Patient Navigation Program on High-Cost Healthcare Utilization Among Patients Enrolled in Project HOUDINI LINK (Hospital Opioid Use Disorder treatment INITiation and LINKage to Care)**

Kendall Islam<sup>1</sup>, Maria Olivas<sup>1</sup>, Alexandra Haas<sup>1</sup>, Alexander Bazazi<sup>1</sup>, D. Andrew Tompkins<sup>1</sup>

<sup>1</sup>University of California San Francisco School of Medicine

**S64. Preliminary Evidence of Lower Kappa Opioid Receptor Availability in Opiate Use Disorder: An Exploratory 11C-EKAP Positron Emission Tomography Study in Humans**

Henrique Oliva<sup>1</sup>, Ansel Hillmer<sup>2</sup>, Marcella Mignosa<sup>1</sup>, Yiyun Henry Huang<sup>2</sup>, Richard Carson<sup>2</sup>, Sarah Yip<sup>1</sup>, David Matuskey<sup>2</sup>, Gustavo Angarita<sup>1</sup>

<sup>1</sup>Yale University School of Medicine, <sup>2</sup>Yale University

**S65. Data-Driven Selection of Regions of Interest (ROIs) for fMRI Opioid Cue Reactivity: Using Systematic Review, Bold Signal Intensity and Test-Retest Reliability Data**

Hamed Ekhtiari<sup>1</sup>, Arshiya Sangchooli<sup>2</sup>, Sara Jafakesh<sup>3</sup>, Rayus Kuplicki<sup>4</sup>

<sup>1</sup>University of Minnesota, <sup>2</sup>Melbourne University, <sup>3</sup>University of Shiraz, <sup>4</sup>Laureate Institute for Brain Research

**S66. The Substance Abuse Self-Stigma Scale: Reliability Among Veterans With Co-Occurring Chronic Pain and Opioid Use Disorder**

Verlin Joseph<sup>1</sup>, Frank Schwebel<sup>2</sup>, Zachary Schmidt<sup>3</sup>, Juliana Bondzie<sup>4</sup>, Brian Bosari<sup>5</sup>, Joannalyn Delacruz<sup>6</sup>, David Moniz-Lewis<sup>1</sup>, Megan Kirouac<sup>2</sup>, Kevin Vowles<sup>1</sup>, Katie Witkiewitz<sup>2</sup>

<sup>1</sup>University of New Mexico, <sup>2</sup>Center on Alcohol, Substance Use, and Addictions (CASAA), <sup>3</sup>New Mexico Veterans Affairs, <sup>4</sup>VA Puget Sound Health Care System, <sup>5</sup>San Francisco Veterans Affairs Health Care System, <sup>6</sup>University of California San Francisco

**S67. Transition to Antagonist Treatment in the Age of Fentanyl**

George Woody<sup>1</sup>, Sabrina Poole<sup>1</sup>, Evgeny Krupitsky<sup>2</sup>, Kyle Kampman<sup>3</sup>

<sup>1</sup>Perelman School of Medicine at the University of Pennsylvania, <sup>2</sup>V.M. Bekhterev National Medical Research Center for Psychiatry and Neurology, <sup>3</sup>University of Pennsylvania

**S68. Within-Subject Variations in Opioid Sensitivity Across Patient-Reported Outcomes, Observer-Ratings, Physiological Endpoints, and Analgesic Responses**

Caitlyn Durgin<sup>1</sup>, Andrew Huhn<sup>2</sup>, Cecilia Bergeria<sup>2</sup>, Patrick Finan<sup>3</sup>, Claudia Campbell<sup>2</sup>, Denis Antoine<sup>2</sup>, Kelly Dunn<sup>2</sup>

<sup>1</sup>Pinney Associates, <sup>2</sup>Johns Hopkins University School of Medicine, <sup>3</sup>University of Virginia

**S69. Sociodemographic Differences in Engagement With a Mobile Application to Support Recovery From Opioid and Stimulant Use Disorders in Missouri**

Hannah Szlyk<sup>1</sup>, Lindsey Filiatreau<sup>2</sup>, Xiao Li<sup>3</sup>, Alex Ramsey<sup>3</sup>, Patricia Cavazos<sup>4</sup>

<sup>1</sup>Washington University School of Medicine, Department of Psychiatry, <sup>2</sup>Washington University in St. Louis, <sup>3</sup>Washington University School of Medicine, <sup>4</sup>Washington University St. Louis

## 570. Open Board

**571. Association Between Ongoing Illicit Fentanyl Use and Risk for Non-Fatal Overdose Among Patients Treated With Opioid Agonist Therapy in Canada**Kenneth Lee<sup>1</sup>, Sophie Zhao<sup>2</sup>, Tazmin Merali<sup>3</sup>, Chris Fraser<sup>4</sup>, Jan Kozicky<sup>5</sup>, Brian Conway<sup>6</sup><sup>1</sup>University of Western Ontario Faculty of Medicine, <sup>2</sup>Indivior, Inc., <sup>3</sup>Drug Intelligence Inc, Toronto, ON Canada, <sup>4</sup>COOL-AID Community Health Centre, <sup>5</sup>Indivior Canada, <sup>6</sup>Vancouver Infectious Diseases Center and Simon Fraser University, Vancouver BC, Canada**572. The Association of Self-Report Adherence to Hepatitis C (HCV) Direct-Acting Antiviral (DAA) Therapy With Measured Adherence and Sustained Virologic Response Among People Who Inject Drugs (PWID) Receiving Opioid Agonist Therapy**Snehal Lopes<sup>1</sup>, Irene Pericot-Valverde<sup>1</sup>, Julia Arnsten<sup>2</sup>, Paula Lum<sup>3</sup>, Lynn Taylor<sup>4</sup>, Shruti H Mehta<sup>5</sup>, Judith Tsui<sup>6</sup>, Judith Feinberg<sup>7</sup>, Arthur Kim<sup>8</sup>, Brianna Norton<sup>9</sup>, Kimberly Page<sup>10</sup>, Moonseong Heo<sup>1</sup>, Alain Litwin<sup>11</sup><sup>1</sup>Clemson University, <sup>2</sup>Montefiore Medical Center, <sup>3</sup>University of California San Francisco School of Medicine, <sup>4</sup>University of Rhode Island, <sup>5</sup>Department of Epidemiology, Bloomberg School of Public Health, Johns Hopkins University, <sup>6</sup>Department of Medicine, Division of General Internal Medicine, University of Washington, <sup>7</sup>West Virginia University School of Medicine, <sup>8</sup>Massachusetts General Hospital, <sup>9</sup>Albert Einstein College of Medicine and Montefiore Medical Center, <sup>10</sup>University of New Mexico, <sup>11</sup>University of South Carolina School of Medicine**573. Prevalence of Secondary Health Diagnoses Among Persons Presenting in Texas Hospitals With an Opioid or Stimulant Diagnosis Compared to General Population**J. Michael Wilkerson<sup>1</sup>, Cecilia M Ganduglia Cazaban<sup>1</sup>, Regina M Hansen<sup>1</sup>, Caroline M Schaefer<sup>1</sup>, Elizabeth M Caballero<sup>1</sup>, David Adzrago<sup>1</sup>, Kathryn R. Gallardo<sup>1</sup>, Sheryl McCurdy<sup>2</sup><sup>1</sup>The University of Texas Health Science Center at Houston, <sup>2</sup>University of Texas Health Science Center**574. Sex Trafficking Experiences and Substance Use Patterns Among Incarcerated Women Who Use Opioids**Martha Tillson<sup>1</sup>, Jaxin Annett<sup>1</sup>, Megan Dickson<sup>1</sup>, Matt Webster<sup>1</sup>, Carrie Oser<sup>1</sup>, Michele Staton<sup>2</sup><sup>1</sup>University of Kentucky, <sup>2</sup>University of Kentucky, College of Medicine**575. Rapid Jail-Based Implementation of Overdose Education and Naloxone Distribution (OEND) in Response to the COVID-19 Pandemic**Carrie Oser<sup>1</sup>, Margaret McGladrey<sup>2</sup>, Marisa Booty<sup>1</sup>, Hilary Surratt<sup>1</sup>, Hannah Knudsen<sup>1</sup>, Patricia Freeman<sup>1</sup>, Danelle Stevens-Watkins<sup>1</sup>, Monica Roberts<sup>1</sup>, Michele Staton<sup>3</sup>, April Young<sup>4</sup>, Emma Draper<sup>5</sup>, Sharon Walsh<sup>1</sup><sup>1</sup>University of Kentucky, <sup>2</sup>University of South Florida, <sup>3</sup>University of Kentucky, College of Medicine, <sup>4</sup>University of Kentucky, College of Public Health, <sup>5</sup>Williams College**576. A Consistent Decrease of Opioid Misuse Among Young Americans: A Pseudo-Cohort Analysis of Use Patterns From the National Household Survey on Drug Use and Health**Georgiy Bobashev<sup>1</sup>, Lauren Warren<sup>1</sup>, Joella Adams<sup>1</sup><sup>1</sup>RTI International**577. Exploring the Relationship Between Readiness to Change and Engagement with Substance Use Disorder Treatment Among People who Inject Drugs**Lauren Crimmins<sup>1</sup>, Edward Suarez Jr.<sup>2</sup>, Renae Schmidt<sup>2</sup>, Viviana Horigian<sup>2</sup><sup>1</sup>Brigham and Women's Hospital, <sup>2</sup>University of Miami Miller School of Medicine

**S78. Adoption and Reach of Overdose Education and Naloxone Distribution in Kentucky During Wave 1 of the Healing Communities Study**

Hannah Knudsen<sup>1</sup>, Patricia Freeman<sup>1</sup>, Carrie Oser<sup>1</sup>, Doug Oyler<sup>1</sup>, Sharon Walsh<sup>1</sup>  
<sup>1</sup>University of Kentucky

**S79. A Qualitative Study Examining Factors Influencing Access to Opioid Agonist Treatment Among a Sample of People who Use Drugs in Rural and Remote Canada**

Kate Hodgson<sup>1</sup>, Manal Mansoor<sup>2</sup>, Ellery Cleaveland<sup>3</sup>, Thomas Kerr<sup>1</sup>, Geoff Bardwell<sup>4</sup>  
<sup>1</sup>University of British Columbia, <sup>2</sup>University of British Columbia Faculty of Medicine, <sup>3</sup>Lift Community Services, <sup>4</sup>University of British Columbia, BC Centre on Substance Use

**S80. Using Implementation Facilitation to Implement Interim Methadone in Opioid Treatment Programs**

Shannon Mitchell<sup>1</sup>, Karen Burruss-Cousins<sup>1</sup>, Julia Jester<sup>2</sup>, Jan Gryczynski<sup>1</sup>, Melanie Whitter<sup>3</sup>, Douglas Fuller<sup>3</sup>, Caroline Halsted<sup>3</sup>, Robert Schwartz<sup>1</sup>  
<sup>1</sup>Friends Research Institute, <sup>2</sup>Mid Shore Pro Bono, <sup>3</sup>National Association of State Alcohol and Drug Abuse Directors, Inc.

**S81. Factors Associated With Patient Referral From Rural Primary Care Clinics to Vendor-Based Telemedicine for Opioid Use Disorder Treatment**

Chunqing Lin<sup>1</sup>, Yuhui Zhu<sup>2</sup>, Megan Black<sup>3</sup>, Sarah Clingan<sup>4</sup>, Huyen Pham<sup>2</sup>, Larissa Mooney<sup>4</sup>, Yih-Ing Hser<sup>4</sup>  
<sup>1</sup>David Geffen School of Medicine at UCLA, <sup>2</sup>Semel Institute - UCLA, <sup>3</sup>Semel Institute for Neuroscience and Human Behavior at UCLA, <sup>4</sup>Department of Psychiatry and Biobehavioral Sciences at the David Geffen School of Medicine, University of California, Los Angeles

**S82. Predictors and Correlates of Hepatitis C Incidence Among Young People who Inject Drugs in the Chicago Metropolitan Area**

Mary Mackesy-Amiti<sup>1</sup>, Basmattee Boodram<sup>2</sup>  
<sup>1</sup>University of Illinois at Chicago, School of Public Health, <sup>2</sup>University of Illinois at Chicago

**S83. Calcium Imaging of Central Amygdala Activity After Escalation of Fentanyl Self-Administration**

Samantha Malone<sup>1</sup>, Pavel Ortinski<sup>2</sup>, Michael Bardo<sup>1</sup>  
<sup>1</sup>University of Kentucky College of Arts and Sciences, Department of Psychology, <sup>2</sup>University of Kentucky College of Medicine, Department of Neuroscience

**S84. Lived Experiences of Addiction Counselors: A Protocol Exploring Stigma in a Time of Regulatory Change Within Opioid Treatment Programs**

Kathryn Eggert<sup>1</sup>, Lynn Madden<sup>1</sup>, Beth Mabry<sup>2</sup>, Ermonda Gjoni-Markaj<sup>1</sup>, Kim Hoffman<sup>3</sup>, Kimberly DiMeola<sup>4</sup>, Erica Cannata<sup>1</sup>, Scott Farnum<sup>1</sup>, Gretchen Hermes<sup>5</sup>, Declan Barry<sup>5</sup>  
<sup>1</sup>APT Foundation, Inc., <sup>2</sup>Antioch University, <sup>3</sup>Oregon Health and Science University, <sup>4</sup>APT Foundation, <sup>5</sup>Yale University School of Medicine



**S85. Pharmacy-Level Barriers to Buprenorphine Dispensing: Evidence From the Medicaid Distributed Research Network in Five States**

Patricia Freeman<sup>1</sup>, Lindsey Hammerslag<sup>2</sup>, Michael Sharbaugh<sup>3</sup>, Katherine Ahrens<sup>4</sup>, Anna Austin<sup>5</sup>, Adam Gordon<sup>6</sup>, Lindsay Allen<sup>7</sup>, Andrew Barnes<sup>8</sup>, Julie Donohue<sup>3</sup>, Jeffery Talbert<sup>2</sup>

<sup>1</sup>University of Kentucky, <sup>2</sup>College of Medicine, University of Kentucky, <sup>3</sup>University of Pittsburgh, <sup>4</sup>Muskie School of Public Service, University of Southern Maine, <sup>5</sup>Injury Prevention Research Center, Gillings School of Public Health, University of North Carolina, <sup>6</sup>University of Utah School of Medicine and VASLCHCS, <sup>7</sup>Feinberg School of Medicine, Northwestern University, <sup>8</sup>School of Medicine Health Behavior and Policy, Virginia Commonwealth University

**S86. Changes in Opioid and Other Analgesic Prescribing Following Voluntary and Mandatory Prescription Drug Monitoring Program Implementation: A Time Series Analysis**

Suzanne Nielsen<sup>1</sup>, Louisa Picco<sup>1</sup>, Grant Russell<sup>1</sup>, Christopher Pearce<sup>2</sup>, Nadine Andrew<sup>1</sup>, Dan Lubman<sup>3</sup>, Simon Bell<sup>1</sup>, Rachel Buchbinder<sup>1</sup>, Ting Xia<sup>1</sup>

<sup>1</sup>Monash University, <sup>2</sup>Outcome Health, <sup>3</sup>Turning Point

**S87. Naloxone Distribution in the Emergency Department: Program Evaluation of the University of Washington Harborview Medical Center Emergency Department's Response to Washington State Bill 5195**

Sophie Morse<sup>1</sup>, Canada Parrish, PhD<sup>2</sup>, Callan E. Fockele, MD MS<sup>3</sup>, Chris Craft<sup>2</sup>, Sarah Leyde, MD<sup>2</sup>, Arvin R. Akhavan, MD MPA<sup>2</sup>, Elinor Sveum, MD<sup>2</sup>, Timothy Fredrickson, RN<sup>2</sup>, Lauren Whiteside, MD MS<sup>2</sup>

<sup>1</sup>University of Washington School of Medicine, <sup>2</sup>University of Washington, <sup>3</sup>University of Washington at Harborview Medical Center

**S88. Photovoice – a Methodology to Engage People With Lived Experience in Order to Understand Contextual Drivers of the Opioid Epidemic and Promote Community Activism**

Peter Balvanz<sup>1</sup>, Alyssa Curran<sup>2</sup>, Anna Martin<sup>1</sup>, Carolyn Damato-MacPherson<sup>1</sup>, Randy Gratton<sup>3</sup>

<sup>1</sup>Boston Medical Center, <sup>2</sup>WMTC, <sup>3</sup>BHN

**S89. Perceptions of Racism's Impact on Drug Use Among African Americans Using Opioids**

Natalie Malone<sup>1</sup>, Gabriella Pitcher<sup>1</sup>, Danelle Stevens-Watkins<sup>2</sup>

<sup>1</sup>University of Kentucky, <sup>2</sup>University of Kentucky, Center on Drug and Alcohol Research

**S90. Referral Appointment Wait-Times and Arrival for Patients Accessing Medication for Opioid Use Disorder (MOUD) in an Emergency Department (ED)**

Suzanne Lane<sup>1</sup>, Lindsey Jennings<sup>1</sup>, Sarah Gainey<sup>1</sup>, Angela Moreland<sup>1</sup>, Karen Hartwell<sup>2</sup>, Louise Haynes<sup>1</sup>, Kathleen Brady<sup>1</sup>

<sup>1</sup>Medical University of South Carolina, <sup>2</sup>Medical University of South Carolina; Ralph H. Johnson VAMC

**S91. Advantages and Disadvantages of Online Networking Among Those Engaged in Opioid Misuse**

Erin Kasson<sup>1</sup>, Hannah Szlyk<sup>1</sup>, Xiao Li<sup>1</sup>, Aishwarya Rajamahanty<sup>1</sup>, Nina Kaiser<sup>1</sup>, Patricia Cavazos-Rehg<sup>1</sup>

<sup>1</sup>Washington University School of Medicine Department of Psychiatry

**S92. Pain in Opioid Use Disorder Recovery: Is Pain Severity or Chronicity a Stronger Predictor of Health Outcomes?**

William Craft<sup>1</sup>, Allison Tegge<sup>1</sup>, Candice Dwyer<sup>1</sup>, Devin Tomlinson<sup>1</sup>, Diana Keith<sup>2</sup>, Liqa Athamneh<sup>1</sup>, Jeffrey Stein<sup>1</sup>, Anne Le Moigne<sup>3</sup>, Angela DeVeauugh-Geiss<sup>3</sup>, Howard Chilcoat<sup>3</sup>, Warren Bickel<sup>1</sup>

<sup>1</sup>Fralin Biomedical Research Institute at Virginia Tech Carilion, <sup>2</sup>Behavioral Psychopharmacology Research Laboratory, McLean Hospital, Belmont, MA; Department of Psychiatry, Harvard Medical School, Boston, MA, <sup>3</sup>Indivior, Inc.

## S93. Open Board

### **S94. Patient Perspectives on an Open Access Model for Methadone Treatment: A Research and Process Improvement Protocol**

Lynn Madden<sup>1</sup>, Scott Farnum<sup>2</sup>, Kathryn Eggert<sup>2</sup>, Erica Cannata<sup>2</sup>, Gretchen Hermes<sup>3</sup>, Kimberly DiMeola<sup>1</sup>, Kim Hoffman<sup>4</sup>, Declan Barry<sup>3</sup>

<sup>1</sup>APT Foundation, <sup>2</sup>APT Foundation, Inc., <sup>3</sup>Yale University School of Medicine, <sup>4</sup>Oregon Health and Science University

### **S95. Mobile Units Improve Access to Medications for Opioid Use Disorder: A Qualitative Implementation Study**

Avik Chatterjee<sup>1</sup>, Trevor Baker<sup>1</sup>, Maria Rudorf<sup>1</sup>, Galya Walt<sup>2</sup>, Caroline Stotz<sup>1</sup>, Anna Martin<sup>1</sup>, Elizabeth Kinnard<sup>1</sup>, Ann McAlearney<sup>1</sup>, Julie Bosak<sup>1</sup>, Bethany Medley<sup>3</sup>, Jeffrey Samet<sup>4</sup>, Karsten Lunze<sup>4</sup>

<sup>1</sup>Boston Medical Center, <sup>2</sup>Harvard T.H. Chan School of Public Health, <sup>3</sup>Columbia School of Social Work, <sup>4</sup>Boston University School of Medicine

### **S96. The Pharmacist-Integrated Medication Treatment for Opioid Use Disorder (PRIMO) Model: Operationalizing an Effective Clinical Care Model to Assess Feasibility in Diverse Care Settings**

Felicity Homsted<sup>1</sup>, Trip Gardner<sup>2</sup>, Noah Nesen<sup>2</sup>, Frank R. McGrady<sup>2</sup>, David Fiellin<sup>3</sup>, Paul Joudrey<sup>4</sup>, Bethany McLeman<sup>5</sup>, Phoebe Gauthier<sup>5</sup>, Sarah K. Moore<sup>5</sup>, Lisa Marsch<sup>5</sup>, Udi Ghitzza<sup>6</sup>, Deepika Rao<sup>7</sup>

<sup>1</sup>FQHC 340B Compliance, <sup>2</sup>Penobscot Community Health Care, <sup>3</sup>Yale University School of Medicine, <sup>4</sup>University of Pittsburgh, <sup>5</sup>Geisel School of Medicine at Dartmouth College, <sup>6</sup>National Institute of Drug Abuse, National Institutes of Health, <sup>7</sup>Dartmouth College

### **S97. Initiation and Retention in Medications for Opioid Use Disorder (MOUD) Among Women: A Multi-Paneled Qualitative Study of Women in Recovery, Women who Terminated Treatment, and the Professionals who Serve Them**

Hannah Apsley<sup>1</sup>, Robert Schwartz<sup>2</sup>, Hobart Cleveland<sup>1</sup>, Eric Harrison<sup>1</sup>, Kristina Brant<sup>1</sup>, Sarah Brothers<sup>1</sup>, Abenaa Jones<sup>1</sup>

<sup>1</sup>Pennsylvania State University, <sup>2</sup>Friends Research Institute

### **S98. More Stress Than You Know: A Qualitative Study of Client Experiences Navigating MOUD Treatment**

Jodie Dewey<sup>1</sup>, Dennis Watson<sup>2</sup>, Monte Staton<sup>3</sup>

<sup>1</sup>Chestnut Health System's Lighthouse Institute, <sup>2</sup>Chestnut Health Systems, <sup>3</sup>University of Illinois at Chicago

### **S99. Patient Perceptions of Integrating Meditation-Based Interventions in Office-Based Opioid Treatment With Buprenorphine: A Mixed-Methods Survey**

Babak Tofighi<sup>1</sup>, Christina Marini<sup>1</sup>, Joshua D. Lee<sup>1</sup>, Eric Garland<sup>2</sup>

<sup>1</sup>New York University School of Medicine, <sup>2</sup>University of Utah

### **S100. Vulnerability to Hyperalgesia and Hyperkatifeia Drives Addiction-Like Behaviors**

Renata Marchette<sup>1</sup>, Emma Frye<sup>1</sup>, Lyndsay Hastings<sup>1</sup>, Erika Carlson<sup>1</sup>, Leandro Vendruscolo<sup>1</sup>, Hugo Tejada<sup>2</sup>, George Koob<sup>1</sup>

<sup>1</sup>National Institute on Drug Abuse, Intramural Research Program, <sup>2</sup>National Institute of Mental Health, Intramural Research Program

### **S101. Ventilatory Effects of Fentanyl, Heroin, and D-Methamphetamine, Alone and in Mixtures, in Male Rats**

Takato Hiranita<sup>1</sup>, Nicholas Ho<sup>1</sup>, Charles France<sup>1</sup>

<sup>1</sup>UT Health San Antonio

**S102. NMRA-140, a Novel and Selective Kappa Opioid Receptor Antagonist: Mode of Action Profiling Studies Demonstrate No Opioid Agonist Properties Implicated in Opioid-Related Abuse**

Filomene Morrison<sup>1</sup>, Lori Jean Van Orden<sup>2</sup>, Karla Zeitz<sup>2</sup>, David Heal<sup>3</sup>, Sharon Smith<sup>3</sup>, Tanya Wallace<sup>2</sup>  
<sup>1</sup>Neumora Therapeutics, <sup>2</sup>Neumora Therapeutics Inc., <sup>3</sup>DevelRx Ltd.

**S103. Extended Access to Fentanyl Self-Administration During Pregnancy: Effects on Dams and Offspring**

Barrett Aldridge<sup>1</sup>, Isaac Johnson<sup>2</sup>, DONNA Platt<sup>2</sup>, Daniela Rüedi-Bettschen<sup>2</sup>  
<sup>1</sup>University of Mississippi Medical Center, <sup>2</sup>University of Mississippi Medical Center, Dept. of Psychiatry and Human Behavior

**S104. Estradiol Enhances the Development of Addiction-Like Features in a Female Rat Model of Opioid Use Disorder**

Eleanor Towers<sup>1</sup>, Ben Setaro<sup>1</sup>, Wendy Lynch<sup>1</sup>  
<sup>1</sup>University of Virginia

**S105. Acute Effects of Oral 3,4-Methylenedioxymethamphetamine (MDMA) and Delta-9-Tetrahydrocannabinol (THC) on Intrinsic Functional Connectivity**

Tonisha Kearney-Ramos<sup>1</sup>, Xuejun Hao<sup>1</sup>, Margaret Haney<sup>2</sup>, Gillinder Bedi<sup>3</sup>  
<sup>1</sup>Columbia University Medical Center, <sup>2</sup>Columbia University Irving Medical Center, <sup>3</sup>The University of Melbourne

**S106. Reduced Demand for Substances Following Visual Exposure to Natural Versus Built Stimuli**

Shahar Almog<sup>1</sup>, Andrea Vásquez Ferreiro<sup>1</sup>, Ali Yurasek<sup>1</sup>, Meredith Berry<sup>1</sup>  
<sup>1</sup>University of Florida

**S107. Anger Across Substance Use Disorders: Results From the National Epidemiologic Survey on Alcohol Use and Related Conditions-III**

Krista Miloslavich<sup>1</sup>, Margaret Wardle<sup>1</sup>  
<sup>1</sup>University of Illinois Chicago

**S108. Drug Decriminalization in the United States: Emerging Models, Implementation Experiences and Implications for Health and Racial Equity**

Saba Rouhani<sup>1</sup>, Leanne Zhang<sup>2</sup>, Abigail Winiker<sup>2</sup>, Catherine Tomko<sup>2</sup>, Bradley Silberzahn<sup>3</sup>, Susan Sherman<sup>4</sup>, Sachini Bandara<sup>2</sup>  
<sup>1</sup>New York University School of Global Public Health, <sup>2</sup>Johns Hopkins Bloomberg School of Public Health, <sup>3</sup>University of Texas at Austin, <sup>4</sup>Department of Health, Behavior and Society, Bloomberg School of Public Health

**S109. Cross-Spouse Relationships Between Drug Use and Marital Functioning Among Reserve and National Guard Soldiers and Their Spouses**

Bonnie Vest<sup>1</sup>, Rachel Hoopsick<sup>2</sup>, D. Lynn Homish<sup>1</sup>, Gregory Homish<sup>1</sup>  
<sup>1</sup>State University of New York at Buffalo, <sup>2</sup>University of Illinois Urbana-Champaign

**S110. Brandeis/Harvard Spire Center: SUD Systems Performance Improvement Research and Engagement**

Sharon Reif<sup>1</sup>, Haiden Huskamp<sup>2</sup>, Constance Horgan<sup>3</sup>  
<sup>1</sup>Brandeis University, Heller School for Social Policy and Management, Institute for Behavioral Health, <sup>2</sup>Harvard Medical School, Department of Health Care Policy, <sup>3</sup>Brandeis University, Heller School for Social Policy and Management

**S111. Regional Differences of Self-Reported Past-12-month Marijuana, Psilocybin, and Cocaine Use: Results From NDEWS Rapid Street Reporting 2021-2022**

Nae Won<sup>1</sup>, Anna Wang<sup>1</sup>, Joseph Palamar<sup>2</sup>, Nicole Fitzgerald<sup>1</sup>, MeLisa Creamer<sup>3</sup>, Catherine Striley<sup>1</sup>, Linda Cottler<sup>1</sup>

<sup>1</sup>University of Florida, <sup>2</sup>New York University School of Medicine, <sup>3</sup>National Institute on Drug Abuse

**S112. Toxicology Testing Inequities During the Birthing Hospitalization and Impact of an Institutional Intervention**

Leah Habersham<sup>1</sup>, Angela Bianco<sup>1</sup>, Candice Woolfolk<sup>2</sup>, Toni Stern<sup>1</sup>, Joanne Stone<sup>1</sup>, Yasmin Hurd<sup>1</sup>

<sup>1</sup>Icahn School of Medicine At Mount Sinai, <sup>2</sup>Washington University in St. Louis

**S113. Provider Perspectives on Facilitators and Barriers to Providing HIV Pre-Exposure Prophylaxis (PrEP) in Hospital-Based Addiction Treatment Bridge Clinics to Women Sex Workers who Use Drugs**

Miriam Harris<sup>1</sup>, Emma Weinberger<sup>2</sup>, Mary Althoff<sup>3</sup>, Samantha Paltraw-Krulwich<sup>4</sup>, Jessica Taylor<sup>5</sup>, Abigail Judge<sup>6</sup>, Jeffrey Samet<sup>5</sup>, Christine Gunn<sup>5</sup>, Alexander Walley<sup>5</sup>

<sup>1</sup>Boston University, <sup>2</sup>Boston Medical Center, <sup>3</sup>AIDS Action Committee, <sup>4</sup>Harvard School of Public Health, <sup>5</sup>Boston University School of Medicine, <sup>6</sup>Massachusetts General Hospital

**S114. Initial Results of the First Momentary-Assessment Study of U.S. Adults who Use Kratom**

Kirsten Smith<sup>1</sup>, Leigh Panlilio<sup>2</sup>, Jeffrey Feldman<sup>2</sup>, Kelly Dunn<sup>3</sup>, Albert Garcia-Romeu<sup>3</sup>, Oliver Grundmann<sup>4</sup>, Abhishek Sharma<sup>5</sup>, Jeffrey Rogers<sup>6</sup>, Christopher McCurdy<sup>5</sup>, David Epstein<sup>2</sup>

<sup>1</sup>National Institute on Drug Abuse, Intramural Research Program, <sup>2</sup>NIDA Intramural Research Program, <sup>3</sup>Johns Hopkins University School of Medicine, <sup>4</sup>College of Pharmacy, Dept. Medicinal Chemistry, Univ. FL, <sup>5</sup>University of Florida, <sup>6</sup>SDSU/UCSD Joint Program in Clinical Psychology

**S115. Screening Test for Drug Abuse Among Blood Donors in the West Bank, a Cross-Sectional Study**

Ashraf Awad<sup>1</sup>, Maytham Khatatbeh<sup>1</sup>, Mahmoud Matar<sup>1</sup>, Saed Abed<sup>1</sup>, Majdi Dwikat<sup>1</sup>, Basma Damiri<sup>2</sup>

<sup>1</sup>An-Najah National University, <sup>2</sup>School of Medicine and Health Sciences, An-Najah National University

**S116. Laws Limiting Access to SNAP Benefits for People With Felony Drug Convictions**

Hridika Shah<sup>1</sup>, Alex McCourt<sup>1</sup>, Sachini Bandara<sup>1</sup>

<sup>1</sup>Johns Hopkins Bloomberg School of Public Health

**S117. Exploring Substance Use Among LGB Adults Through the National Institutes of Health All of Us Research Program**

Stephen Lippi<sup>1</sup>, Matthew Perez<sup>1</sup>, Jennifer Potter<sup>1</sup>, Tara Karns-Wright<sup>1</sup>

<sup>1</sup>The University of Texas Health Science Center At San Antonio

**S118. Untargeted Umbilical Cord Testing to Detect Novel Psychoactive Substances**

Marcela Smid<sup>1</sup>, Joseph Worden<sup>2</sup>, Melissa Hughs<sup>3</sup>, Gwen McMillin<sup>4</sup>

<sup>1</sup>University of Utah Health, <sup>2</sup>University of Utah School of Medicine, <sup>3</sup>ARUP Lab, <sup>4</sup>ARUP

**S119. Safety and Tolerability of Ascending Doses of ENA-001: A Novel Respiratory Stimulant, for the Intended Management of Pharmacologically-Induced Respiratory Depression**

Errol Gould<sup>1</sup>, Thomas Miller<sup>1</sup>, Joseph Pergolizzi<sup>1</sup>

<sup>1</sup>Enalare Therapeutics

**S120. Sociodemographic Correlates of a Substance-Related Diagnosis and Associations With the Number of Emergency Department Visits Using Electronic Health Record Data From 2012-2019**

Wayne Kepner<sup>1</sup>, Natasia Courchesne<sup>2</sup>, Carla Marienfeld<sup>2</sup>

<sup>1</sup>SDSU/UCSD Joint Program, <sup>2</sup>University of California San Diego

**S121. The Application of Positive Psychology to Substance Use, Addiction, and Recovery Research: An Updated Systematic Review**

Hannah Carlon<sup>1</sup>

<sup>1</sup>University of New Mexico

**S122. Caregiver Recommendations for Contingency Management in Juvenile Probation**

Logan Jackson<sup>1</sup>, Meghan Morrison<sup>1</sup>, Phillippe B. Cunningham<sup>2</sup>, Jeff Randall<sup>2</sup>, Colleen Halliday-Boykins<sup>2</sup>, David Ledgerwood<sup>3</sup>, Stacy Ryan-Pettes<sup>1</sup>

<sup>1</sup>Baylor University, <sup>2</sup>Medical University of South Carolina, <sup>3</sup>Wayne State University

**S123. Associations Between Daily Coffee Consumption and Personal and Family Alcohol, Drug and Mental Health Problems in College Students: Looking Separately at Rapid and Slow Caffeine Metabolizers**

Dace Svikis<sup>1</sup>, Pamela Dillon<sup>1</sup>, Alexis Edwards<sup>1</sup>, Kathryn Polak<sup>1</sup>, Leroy Thacker<sup>1</sup>, David Pomm<sup>1</sup>, Danielle Dick<sup>2</sup>, Kenneth Kendler<sup>1</sup>

<sup>1</sup>Virginia Commonwealth University, <sup>2</sup>Rutgers University

**S124. Characteristics of People With Early Psychosis and Substance Use Problems**

Megan Liew<sup>1</sup>, Mary Grace Shinnars<sup>1</sup>, Justin Shepherd<sup>2</sup>, Roger Weiss<sup>3</sup>, Julie McCarthy<sup>3</sup>

<sup>1</sup>McLean Hospital, <sup>2</sup>McLean Hospital, University of Houston, <sup>3</sup>McLean Hospital, Harvard Medical School

**S125. Socioeconomic Marginalization and Overdose Risk: A Gender-Stratified Repeated Measures Latent Class Analysis Among Men and Women who Use Drugs**

Sanjana Mitra<sup>1</sup>, Lindsey Richardson<sup>2</sup>, Michelle Cui<sup>3</sup>, Mark Gilbert<sup>4</sup>, Kanna Hayashi<sup>5</sup>, M-J Milloy<sup>6</sup>, Thomas Kerr<sup>3</sup>

<sup>1</sup>Centre on Drug Policy Evaluation, <sup>2</sup>University of British Columbia, BC Centre on Substance Use, <sup>3</sup>British Columbia Centre on Substance Use, <sup>4</sup>BC Centre for Disease Control, <sup>5</sup>Simon Fraser University, <sup>6</sup>BC Centre on Substance Use

**S126. Exploring Future Research Needs for Pharmaceutical Pain Management Among Black/Hispanic Populations With Opioid Use Disorder and Liver Disease**

Autumn Barnes<sup>1</sup>, Lissette Saavedra<sup>1</sup>, Ty Ridenour<sup>1</sup>, Amber Jarnecke<sup>2</sup>

<sup>1</sup>RTI International, <sup>2</sup>Medical University of South Carolina

**S127. Substance Co-Exposure Among Women With Opioid Use During Pregnancy**

Michael Kuzniewicz<sup>1</sup>, Cynthia Campbell<sup>1</sup>, Sandra Comer<sup>2</sup>, Monique Hedderson<sup>1</sup>, Lisa Croen<sup>1</sup>, Eileen Walsh<sup>1</sup>, Sherian Li<sup>1</sup>, Sam Pimentel<sup>3</sup>, Lena Sun<sup>4</sup>

<sup>1</sup>Kaiser Permanente Northern California, <sup>2</sup>Columbia University Irving Medical Center and the New York State Psychiatric Institute, <sup>3</sup>University of California, Berkeley, <sup>4</sup>Columbia University

**S128. How Common is Fentanyl Contamination of Methamphetamine? Attitudes, Self-Reported Exposures, and Toxicology Data From Persons who Use Methamphetamine**

Raminta Daniulaityte<sup>1</sup>, Lance Ruhter<sup>1</sup>, Matthew Juhascik<sup>2</sup>, Sydney Silverstein<sup>3</sup>

<sup>1</sup>Arizona State University, <sup>2</sup>Montgomery Co. Coroner's Office, <sup>3</sup>Boonshoft School of Medicine Wright State University

**S129. Combinations of Drugs Among Maryland Overdose Decedents**

Catherine Tomko<sup>1</sup>, Kristin Schneider<sup>1</sup>, Masoumeh Amin-Esmaeili<sup>1</sup>, Ryoko Susukida<sup>1</sup>, Taylor Parnham<sup>1</sup>, Ju Nyeong Park<sup>2</sup>, Renee Johnson<sup>1</sup>

<sup>1</sup>Johns Hopkins Bloomberg School of Public Health, <sup>2</sup>Alpert Medical School, Brown University

**S130. Characterizing Methamphetamine Use Among Opioid Agonist Therapy-Seeking Adults With Prescription-Type Opioid Use Disorder in Canada**

Jenna Langlois<sup>1</sup>, Nadia Fairbairn<sup>1</sup>, Didier Jutras-Aswad<sup>2</sup>, Bernard Le Foll<sup>3</sup>, Ron Lim<sup>4</sup>, M. Eugenia Socias<sup>1</sup>

<sup>1</sup>University of British Columbia, <sup>2</sup>Université de Montréal, <sup>3</sup>University of Toronto, <sup>4</sup>University of Calgary

**S131. The Interplay of Temporal Contexts With Social and Physical Contexts on Alcohol and Marijuana Use and Related Consequences**

Brooke Arterberry<sup>1</sup>, Brian Calhoun<sup>2</sup>, Christine Lee<sup>2</sup>, Megan Patrick<sup>1</sup>

<sup>1</sup>University of Michigan, <sup>2</sup>University of Washington

**S132. HIV Pre-Exposure Prophylaxis Awareness, Use, Willingness, and Physician Engagement Across Sexually and Gender Diverse Veterans who Use Drugs**

Ariana Gross<sup>1</sup>, Olivia V. Fletcher<sup>2</sup>, Amy J. Kennedy<sup>3</sup>, Emily C. Williams<sup>4</sup>

<sup>1</sup>University of Washington School of Medicine, <sup>2</sup>Health Services Research and Development Center of Innovation for Veteran-Centered and Value-Driven Care, VA Puget Sound Health Care System, 1660 S Columbia Way, Seattle, WA, 98108, USA, <sup>3</sup>Veterans Affairs Puget Sound Health Care System, 1660 S Columbia Way, Seattle WA, 98102, <sup>4</sup>University of Washington School of Public Health, Department of Health Systems and Population Health

**S133. Time-To-COVID-19 Vaccination by HIV Viral Load Among People who Inject Drugs in Baltimore, Maryland**

Pieter Baker<sup>1</sup>, Javier Cepeda<sup>1</sup>, Becky Genberg<sup>1</sup>, Shruti H Mehta<sup>1</sup>, Gregory Kirk<sup>1</sup>, Kenneth Feder<sup>1</sup>, Jing Sun<sup>1</sup>, Jacqueline Rudolph<sup>1</sup>, Jacquie Astemborski<sup>1</sup>

<sup>1</sup>Johns Hopkins Bloomberg School of Public Health

**S134. A Pilot Trial of Integrated Intervention Strategies to Optimize Prep Care Among PWID in Rural Kentucky**

Hilary Surratt<sup>1</sup>, Cole Derossett<sup>1</sup>, Laura Fanucchi<sup>2</sup>, Christie Green<sup>3</sup>, Jennifer Havens<sup>2</sup>, Rebecca Rains<sup>3</sup>, Michele Staton<sup>2</sup>, Philip Westgate<sup>1</sup>

<sup>1</sup>University of Kentucky, <sup>2</sup>University of Kentucky, College of Medicine, <sup>3</sup>Cumberland Valley District Health Department, <sup>4</sup>Knox County Health Department

**S135. Differences in Hepatitis C Virus (HCV) Testing and Treatment by Opioid, Stimulant, and Polysubstance Injection Among People who Inject Drugs (PWID) in Rural U.S. Communities**

Angela Estadt<sup>1</sup>, William C. Miller<sup>2</sup>, David Kline<sup>3</sup>, Judith I. Tsui<sup>4</sup>, April M. Young<sup>5</sup>, Hannah Cooper<sup>6</sup>, P. Todd Korthuis<sup>7</sup>, Judith Feinberg<sup>8</sup>, Gordon Smith<sup>9</sup>, Mai T. Pho<sup>10</sup>, Wiley Jenkins<sup>11</sup>, Peter D. Friedmann<sup>12</sup>, Ryan P. Westergaard<sup>13</sup>, Vivian F. Go<sup>14</sup>, L. Sarah Mixson<sup>15</sup>, Daniel Brook<sup>16</sup>, Kelsa Lowe<sup>13</sup>, Christopher B. Hurt<sup>17</sup>, Dylan Rice<sup>18</sup>, Kathryn E. Lancaster<sup>2</sup>

<sup>1</sup>College of Public Health, The Ohio State University, <sup>2</sup>The Ohio State University, College of Public Health, Division of Epidemiology, <sup>3</sup>Wake Forest University School of Medicine, Division of Public Health Sciences, Department of Biostatistics and Data Science, <sup>4</sup>University of Washington, Division of General Internal Medicine, <sup>5</sup>University of Kentucky, Department of Epidemiology, Center on Drug and Alcohol Research, <sup>6</sup>Emory University, Rollins School of Public Health, <sup>7</sup>Oregon Health and Science University, Department of Medicine, Section of Addiction Medicine, <sup>8</sup>West Virginia University School of Medicine, Departments of Behavioral Medicine and Psychiatry and Medicine/Infectious Diseases, <sup>9</sup>West Virginia University School of Public Health, Department of Epidemiology and Biostatistics, <sup>10</sup>University of Chicago, Department of Medicine, <sup>11</sup>Southern Illinois University, School of Medicine, <sup>12</sup>University of Massachusetts Medical School-Baystate and Baystate Health, <sup>13</sup>University of Wisconsin-Madison School of Medicine and Public Health, Department of Medicine, Division of Infectious Disease, <sup>14</sup>University of North Carolina at Chapel Hill, Gillings School of Global Public Health, Department of Health Behavior, <sup>15</sup>University of Washington, Department of Medicine, <sup>16</sup>The Ohio State University, College of Medicine, <sup>17</sup>University of North Carolina at Chapel Hill School of Medicine, Institute for Global Health and Infectious Diseases, <sup>18</sup>University of Massachusetts Chan School of Medicine

**S136. Trends in Past-Month Alcohol and Tobacco Co-Use Among Older Adults in the US Between 2002-2019**

Pia Mauro<sup>1</sup>, Sarah Gutkind<sup>1</sup>, Benjamin Han<sup>2</sup>, Guadalupe Antonio-Lopez<sup>3</sup>, Silvia Martins<sup>1</sup>, Katherine Keyes<sup>1</sup>, Daniel Giovenco<sup>1</sup>

<sup>1</sup>Columbia University, <sup>2</sup>University of California - San Diego, <sup>3</sup>Mount Holyoke College

**S137. Examining Polysubstance Overdose Patterns and Demographic Correlates: A Latent Class Analysis in St. Louis, Missouri**

Julia Richardson<sup>1</sup>, Kanila Brown<sup>1</sup>, Melissa Nance<sup>1</sup>, Devin Banks<sup>1</sup>, Ryan Carpenter<sup>1</sup>, Rachel Winograd<sup>1</sup>

<sup>1</sup>University of Missouri-St. Louis

**S138. Preferences for Abstinence-Based Recovery and Public Stigma Toward Substance Use**

Diamond Meadows<sup>1</sup>, Bruce Taylor<sup>2</sup>, Kelly Moore<sup>1</sup>

<sup>1</sup>East Tennessee State University, <sup>2</sup>NORC at the University of Chicago

**S139. The Effect of Opioid-Stimulant Co-Use on Tonic and Cue Induced Cravings**

Martin Hochheimer<sup>1</sup>, Andrew Huhn<sup>2</sup>

<sup>1</sup>Department of Psychiatry, Johns Hopkins University School of Medicine, <sup>2</sup>Johns Hopkins University School of Medicine

**S140. I Crave Not to Feel Uncomfortable: Craving for Opioids and Cannabis Among Patients With Chronic Pain**

Johannes Thrun<sup>1</sup>, Courtney Nordeck<sup>2</sup>, Janardan Devkota<sup>1</sup>, Chung Jung Mun<sup>3</sup>, Kelly Dunn<sup>4</sup>, Vadim Zipunnikov<sup>1</sup>, Ryan Vandrey<sup>4</sup>, Patrick Finan<sup>5</sup>

<sup>1</sup>Johns Hopkins Bloomberg School of Public Health, <sup>2</sup>Friends Research Institute, <sup>3</sup>Arizona State University, <sup>4</sup>Johns Hopkins University School of Medicine, <sup>5</sup>University of Virginia

**S141. Trajectories of Substance Abuse Treatment Usage: A 9-Year Longitudinal Approach Using Latent Class Growth Analysis and Multichannel Sequence Analysis**

Ignacio Borquez<sup>1</sup>, Magdalena Cerda<sup>1</sup>, Andrés Gonzáles-Santa Cruz<sup>2</sup>, Ignacio Madero-Cabib<sup>3</sup>, Alvaro Castillo-Carniglia<sup>2</sup>

<sup>1</sup>Department of Population Health, NYU School of Medicine, <sup>2</sup>Universidad Mayor, <sup>3</sup>Instituto de Sociología and Departamento de Salud Pública, Pontificia Universidad Católica de Chile

**S142. Delay Discounting, Pain Catastrophizing, and Quality of Life Among Individuals in Recovery From Substance Use Disorder: A Reinforcer Pathology Perspective**

Candice Dwyer<sup>1</sup>, William Craft<sup>2</sup>, Liqa Athamneh<sup>3</sup>, Yu-Hua Yeh<sup>2</sup>, Warren Bickel<sup>4</sup>

<sup>1</sup>Virginia Tech, <sup>2</sup>Fralin Biomedical Research Institute at Virginia Tech Carilion, <sup>3</sup>Fralin Biomedical Research Institution, <sup>4</sup>Fralin Biomedical Research Institute at VTC

**S143. Traumatic Events, Chronic Pain, and Multiple Substance Use in Women With Poly-Substance Use Disorder**

Nia Fogelman<sup>1</sup>, Marshall Tate<sup>1</sup>, Stephanie Wemm<sup>1</sup>, Erin Vacey<sup>2</sup>, Suraj Bera<sup>2</sup>, Gretchen Hermes<sup>1</sup>, James Swain<sup>2</sup>, Helen Fox<sup>2</sup>, Rajita Sinha<sup>1</sup>

<sup>1</sup>Yale University School of Medicine, <sup>2</sup>Stony Brook University School of Medicine

**S144. Motivation to Seek Mental Health Services Young Black Men**

Carolyn Bazan<sup>1</sup>, Alexandria Bauer<sup>1</sup>

<sup>1</sup>Rutgers University

**S145. The Potential of Virtual Reality to Treat Substance Use Disorders**

Sarah Clingan<sup>1</sup>, Lin Chungqing<sup>1</sup>, Guo Freeman<sup>2</sup>, Larissa Mooney<sup>1</sup>, Yih-Ing Hser<sup>1</sup>

<sup>1</sup>Department of Psychiatry and Biobehavioral Sciences at the David Geffen School of Medicine, University of California, Los Angeles, <sup>2</sup>Human-Centered Computing Division, School of Computing, Clemson University

**S146. A Multi-Phased Study to Develop a Novel Measure of Polysubstance Use**

Amanda Bunting<sup>1</sup>

<sup>1</sup>New York University School of Medicine

**S147. Characteristics of Substance Use Disorder Treatment Facilities That Provide Tailored Mental Health Treatment**

Orrin Ware<sup>1</sup>, Kelly Dunn<sup>2</sup>

<sup>1</sup>University of North Carolina at Chapel Hill, <sup>2</sup>Johns Hopkins University School of Medicine

**S148. Changes in Cannabis Use, Nicotine Dependence, and Cigarette Cessation Among U.S. Adult Cigarette Smokers by State-Level Legalization of Non-Medical Cannabis, 2013-2019**

Peter Driezen<sup>1</sup>, Karin Kasza<sup>2</sup>, Shannon Gravely<sup>3</sup>, Andrew Hyland<sup>2</sup>, David Hammond<sup>4</sup>, Richard O'Connor<sup>2</sup>, Geoffrey Fong<sup>1</sup>, Mary Thompson<sup>1</sup>, Nicolas Schlienz<sup>5</sup>, Danielle Smith<sup>2</sup>

<sup>1</sup>University of Waterloo, <sup>2</sup>Roswell Park Comprehensive Cancer Center, <sup>3</sup>University of Waterloo, Canada, <sup>4</sup>University of Waterloo, <sup>5</sup>State University of New York at Buffalo

**S149. Perceived Stigma on the Emotional Wellbeing Among Latinx With Substance Use Disorders: The Mediated Roles of Self-Stigma and Self-Efficacy**

Coralee Perez-Pedrogo<sup>1</sup>, Bianca Y. Planas-Garcia<sup>2</sup>, Jose Noel Caraballo<sup>3</sup>, Carmen E. Albizu-Garcia<sup>3</sup>

<sup>1</sup>University of Puerto Rico, Medical Sciences Campus and Albizu University, <sup>2</sup>University of Puerto Rico, Medical Sciences Campus and Albizu University, <sup>3</sup>University of Puerto Rico, Medical Sciences Campus



**S150. Barriers to Enrolling Monolingual Spanish-Speaking Primary Care Patients in a Screening and Brief Intervention (SBI) RCT to Reduce Risky Drug Use: Lessons Learned From the Quit-Mobile Study**

Leticia Cazares<sup>1</sup>, Dallas Swendeman<sup>2</sup>, Lillian Gelberg<sup>3</sup>, Stephanie Sumstine<sup>4</sup>, Amanda Sirisoma<sup>2</sup>, Cristina Batarese<sup>2</sup>, Cristina Hernandez<sup>2</sup>, Melvin Rico<sup>1</sup>, Mani Vahidi<sup>1</sup>, Andrea Bañuelos Mota<sup>1</sup>

<sup>1</sup>David Geffen School of Medicine at UCLA, <sup>2</sup>University of California Los Angeles, <sup>3</sup>University of California Los Angeles, Department of Family Medicine, <sup>4</sup>University of California Los Angeles, Department of Psychiatry and Biobehavioral Sciences

**S151. Optimizing Recovery Funding: A National Look at Strategies for State Funding of Recovery Support Services for Substance Use Disorders**

Zoe Murphy<sup>1</sup>, Rebecca Boss<sup>2</sup>, Neil Campbell<sup>2</sup>, Victor Capoccia<sup>2</sup>, Colette Croze<sup>2</sup>, Jordan Gulley<sup>2</sup>, Crystal Jeffers<sup>3</sup>, Adam Viera<sup>3</sup>, Laurie Krom<sup>3</sup>

<sup>1</sup>University of Missouri- Kansas City, <sup>2</sup>Technical Assistance Collaborative, <sup>3</sup>University of Missouri-Kansas City

**S152. Associations of Sleep Quality and Perceived Stress With Discounting and Quality of Life in Substance Use Disorder Recovery**

Yu-Hua Yeh<sup>1</sup>, Michelle Zheng<sup>2</sup>, Allison Tegge<sup>1</sup>, Liqa Athamneh<sup>1</sup>, Roberta Freitas-Lemos<sup>1</sup>, Candice Dwyer<sup>1</sup>, Warren Bickel<sup>1</sup>

<sup>1</sup>Fralin Biomedical Research Institute at Virginia Tech Carilion, <sup>2</sup>Civil and Environmental Engineering Department, University of California, Los Angeles

**S153. Examining Quality of Life in a Sample of U.S. Veterans Seeking Treatment for Substance Use**

Cory Stanton<sup>1</sup>, Austin Hahn<sup>2</sup>, Stefan Kertesz<sup>3</sup>, Elizabeth Santa Ana<sup>4</sup>

<sup>1</sup>Ralph H. Johnson VA Medical Center, <sup>2</sup>Medical University of South Carolina, <sup>3</sup>Birmingham VA Medical Center, <sup>4</sup>Medical University of South Carolina and Charleston VAMC

**S154. Health Justice Coordination for Increased Access to Health and Social Services for People With Drug Use Disorders in Contact With the Criminal Justice System**

Anja Busse<sup>1</sup>, Sanita Suhartono<sup>1</sup>, Nicola Singleton<sup>2</sup>, Dagmar Hedrich<sup>3</sup>, Jee Aei Lee<sup>1</sup>, Sven Pfeiffer<sup>1</sup>, Giovanna Campello<sup>1</sup>

<sup>1</sup>United Nations Office on Drugs and Crime, <sup>2</sup>King's College London, <sup>3</sup>Freelance Consulting Drug Policy and Demand Reduction

**S155. Recovery Support Services Research Priorities Developed by People With Lived Expertise**

Eden Buell<sup>1</sup>, Patrick Hibbard<sup>1</sup>, Ashli Sheidow<sup>1</sup>, Michael McCart<sup>1</sup>, Tess Drazdowski<sup>1</sup>

<sup>1</sup>Oregon Social Learning Center

**S156. Lifetime Depression and Psilocybin Mushroom Use in U.S. Adults, 2008-2019**

Lauren Gorfinkel<sup>1</sup>, Julia Bujno<sup>2</sup>, Claire Walsh<sup>2</sup>, Dvora Shmulewitz<sup>3</sup>, Deborah Hasin<sup>3</sup>

<sup>1</sup>The University of British Columbia, <sup>2</sup>New York State Psychiatric Institute, <sup>3</sup>Columbia University

**S157. Developing Core Consensus Measures for Assessment of Psilocybin Services**

P. Todd Korthuis<sup>1</sup>, Kim Hoffman<sup>1</sup>, Adrienne Wilson-Poe<sup>2</sup>, Jason Luoma<sup>3</sup>, Alissa Bazinet<sup>4</sup>, David Morgan<sup>5</sup>, Sarann Bielavitz<sup>1</sup>, Dennis McCarty<sup>1</sup>, Christopher Stauffer<sup>6</sup>

<sup>1</sup>Oregon Health and Science University, <sup>2</sup>Legacy Research Institute, Legacy Health, <sup>3</sup>Portland Psychotherapy Clinic, Research, and Training Center, <sup>4</sup>Sequoia Center, <sup>5</sup>Department of Sociology, Portland State University, <sup>6</sup>Portland VA Medical Center; Oregon Health and Science University

**S158. Psychedelic Drug Abuse Potential Assessment Challenges to Scientific Validity and Real World Predictiveness: Current Approaches and Research Gaps**

Jack Henningfield<sup>1</sup>, August Buchhalter<sup>2</sup>, Caitlyn Durgin<sup>3</sup>, Ryan Lanier<sup>4</sup>, Judy Ashworth<sup>1</sup>  
<sup>1</sup>Pinney Associates, Inc., <sup>2</sup>PinneyAssociates, Inc., <sup>3</sup>PinneyAssociates, Inc., <sup>4</sup>Pinney Associates

**S159. Ayahuasca-Assisted Addiction Treatment in Peru: Results, Challenges, and Promises From a Multi-Year, Mixed-Methods Study at Takiwasi Center**

Olivia Marcus<sup>1</sup>, Sara García Arce<sup>2</sup>, Ariane Spitalier<sup>3</sup>, Anja Loizaga-Velder<sup>4</sup>, Fernando Mendive<sup>5</sup>, Brian Rush<sup>6</sup>  
<sup>1</sup>New York University, <sup>2</sup>Independent researcher, <sup>3</sup>Autonomous University of Barcelona, <sup>4</sup>National Autonomous University of Mexico, <sup>5</sup>Independent Researcher, <sup>6</sup>University of Toronto

**S160. Sex Differences Are Associated With Perceived Changes in Baseline and Post-Acute Religious Beliefs Among Ayahuasca Users**

Yitong Xin<sup>1</sup>, Roland Griffiths<sup>2</sup>, Alan K. Davis<sup>1</sup>  
<sup>1</sup>The Ohio State University, <sup>2</sup>Johns Hopkins University

**S161. Physical Dependence-Like Effects of Acute Benzodiazepine Treatment in Rhesus Monkeys**

Eliseu Moreira<sup>1</sup>, Joseph T. Talley Talley<sup>2</sup>, Heather H. Hembree Hembree<sup>2</sup>, Lais Berro<sup>2</sup>, James Rowlett<sup>2</sup>  
<sup>1</sup>University of Mississippi Medical Center, Dept. of Psychiatry and Human Behavior, <sup>2</sup>University of Mississippi Medical Center

**S163. A Comparison of Non-Fatal Opioid Overdose, Acute Methamphetamine Toxicity, and Mixed Stimulant/Opioid Overdose Presentations: Implications for Measurement of Methamphetamine-Related Morbidity**

Karla Wagner<sup>1</sup>, Phillip Coffin<sup>2</sup>, Phillip Fiuty<sup>3</sup>, Leo Beletsky<sup>4</sup>, Kimberly Page<sup>5</sup>  
<sup>1</sup>University of Nevada School of Public Health, <sup>2</sup>San Francisco Department of Public Health, <sup>3</sup>The Mountain Center Harm Reduction Center, <sup>4</sup>Northeastern University, <sup>5</sup>University of New Mexico

**S164. Comparison Between Original and Adaptive Form of Cocaine Purchase Task**

Fatima Quddos<sup>1</sup>, Devin Tomlinson<sup>1</sup>, Kirstin Gatchalian<sup>1</sup>, Warren Bickel<sup>1</sup>  
<sup>1</sup>Frail Biomedical Research Institute at VTC

**S165. Resting-State Electroencephalogram Markers of Sleep Quality in Cocaine Use Disorder**

Heather Webber<sup>1</sup>, Danielle Kessler<sup>2</sup>, Joy Schmitz<sup>1</sup>, Robert Suchting<sup>1</sup>, Scott Lane<sup>1</sup>  
<sup>1</sup>University of Texas Health Science Center, <sup>2</sup>Drexel University College of Medicine at Tower Health

**S166. Randomized Controlled Trial Testing the Efficacy of a Remote Caffeine Reduction Intervention**

Dustin Lee<sup>1</sup>, Labos Breanna<sup>1</sup>, Roland Griffiths<sup>2</sup>  
<sup>1</sup>Johns Hopkins University School of Medicine, <sup>2</sup>Johns Hopkins University

**S167. Resilience as a Mediator of Amphetamine Dependence and Psychiatric Symptoms in Deferred Prosecuted Individuals who Use Amphetamine in Taiwan**

Chia-Chun Hung<sup>1</sup>, Ming-Chyi Huang<sup>2</sup>, Lian-Yu Chen<sup>2</sup>, Kuen-Hong Wu<sup>3</sup>, Cheng-Yi Huang<sup>4</sup>, Yung-Lien Lai<sup>5</sup>, Su-Chen Fang<sup>6</sup>, Chuan-Hsi Chen<sup>7</sup>, Chun Lin<sup>2</sup>, Yang-Lin Lin<sup>3</sup>, Yi-Jia Wu<sup>2</sup>, En Chao<sup>1</sup>, Lien-Wen Su<sup>8</sup>, Tony Szu-Hsien Lee<sup>1</sup>  
<sup>1</sup>National Taiwan Normal University, <sup>2</sup>Taipei City Hospital, <sup>3</sup>Taoyuan Psychiatric Center, <sup>4</sup>Bali Psychiatric Center, <sup>5</sup>Central Police University, <sup>6</sup>Mackay Medical College, <sup>7</sup>National Taipei University, <sup>8</sup>Taipei Medical University-Shuang Ho Hospital

**S168. Estimating Human Doses of Stimulant-Like New Psychoactive Substances Based on *In Vitro* Monoamine Transporter Data**

Matthew Baggott<sup>1</sup>, Donna Walther<sup>2</sup>, Dino Luethi<sup>3</sup>, Jeremy Coyle<sup>1</sup>, Matthias Liechti<sup>4</sup>, Michael Baumann<sup>5</sup>  
<sup>1</sup>Tactogen Inc, <sup>2</sup>NIDA Intramural Research Program, <sup>3</sup>University Hospital Base, University of Basel, and  
 Medical University of Vienna, <sup>4</sup>University Hospital Basel and University of Basel, <sup>5</sup>NIDA, Intramural Research  
 Program

**S169. Vitamin D Deficiency in a Series of Heavy Drinkers Admitted for Hospital Treatment**

Daniel Fuster<sup>1</sup>, Julia Casado<sup>2</sup>, Anna Hernández-Rubio<sup>2</sup>, Xavier Garcia-Calvo<sup>2</sup>, Robert Muga<sup>1</sup>, Paola Zuluaga<sup>2</sup>  
<sup>1</sup>Hospital Universitari Germans Trias i Pujol, <sup>2</sup>Internal Medicine Service, Hospital Universitari Germans Trias i  
 Pujol

**S162. Open Board**

## MONDAY, JUNE 19, 2023

## POSTER SESSION 2

**M1. Increased Risk of Mortality From Polysubstance Use Among Hospitalized Patients With Opioid Use Disorder**

Karli Hochstatter<sup>1</sup>, Courtney Nordeck<sup>1</sup>, Shannon Mitchell<sup>1</sup>, Robert Schwartz<sup>1</sup>, Christopher Welsh<sup>2</sup>, Jan  
 Gryczynski<sup>1</sup>  
<sup>1</sup>Friends Research Institute, <sup>2</sup>University of Maryland School of Medicine

**M2. Pupillometer to Predict Postoperative Opioid-Induced Respiratory Depression in Children**

Jeffrey Oliver<sup>1</sup>, Charles Abramson<sup>1</sup>, Claudio Privitera<sup>1</sup>, Senthilkumar Sadhasivam<sup>2</sup>  
<sup>1</sup>NeuroOptics Inc, <sup>2</sup>UPMC, University of Pittsburgh

**M3. A Virtual Reality Recovery Support Intervention for Opioid Use DISORDER: Efficacy Testing and Development**

Brandon Oberlin<sup>1</sup>, Andrew Nelson<sup>2</sup>, Megayn Lewandowski<sup>1</sup>, Yitong Shen<sup>1</sup>  
<sup>1</sup>Indiana University School of Medicine, <sup>2</sup>Half Full Nelson, LLC; Relate XR, LLC

**M4. Small Business Program: Implementation of a Technological Solution to Support Treatment for Opioid Use Disorder in the Primary Care Setting**

Mariah Kalmin<sup>1</sup>, Bengisu Tulu<sup>2</sup>, Omar Nieto<sup>3</sup>, Alycia Quick<sup>4</sup>, Allison Rosen<sup>5</sup>, Li Li<sup>5</sup>, Dominic Trupiano<sup>4</sup>, Steve  
 Jenkins<sup>4</sup>, Steve Shoptaw<sup>5</sup>  
<sup>1</sup>RAND Corporation, <sup>2</sup>Worcester Polytechnic Institute, <sup>3</sup>UCLA, <sup>4</sup>Q2i, <sup>5</sup>University of California Los Angeles

**M5. Transcutaneous Auricular Neurostimulation (tAN): An Emerging Treatment Strategy to Combat the Opioid Crisis**

Navid Khodaparast<sup>1</sup>, Melanie McWade<sup>1</sup>, Caroline Benner<sup>1</sup>, Alejandro Covalin<sup>1</sup>  
<sup>1</sup>Spark Biomedical, Inc.

**M6. Proof of Concept of Regional Oximetry to Detect Opioid Induced Respiratory Depression, Signifying Possible Overdose**

Desislava Hite<sup>1</sup>, Michael Hite<sup>1</sup>  
<sup>1</sup>Ayuda Medical

**M7. Development and Validation of a Reasons for Electronic Cigarette Use Questionnaire**

David Ledgerwood<sup>1</sup>, Danishi Bedi<sup>1</sup>, Mannat Bedi<sup>1</sup>, Ciara Cannoy<sup>1</sup>, Krithika Prakash<sup>2</sup>, Alanna Foulon<sup>1</sup>, ShayLin Excell<sup>1</sup>, Leslie Lundahl<sup>1</sup>

<sup>1</sup>Wayne State University, <sup>2</sup>Eastern Michigan University

**M8. Digital Motivation and Prediction Platform to Improve Treatment Retention and Reduce Relapse in Opioid Use Disorder**

Jeremy Guttman<sup>1</sup>, Debarati Bhanja<sup>2</sup>, Jane Liebschutz<sup>3</sup>, Carolanne Semancik<sup>4</sup>, Kamaneeya Kalaga<sup>5</sup>, Bilal Stambouli<sup>1</sup>

<sup>1</sup>Biomotivate, <sup>2</sup>Penn State College of Medicine, <sup>3</sup>University of Pittsburgh, <sup>4</sup>Glenbeigh Hospital, <sup>5</sup>Carnegie Mellon University

**M9. Reduce Return to Use: Personalized AI for Individuals in Recovery**

Ellie Gordon<sup>1</sup>, Whitney Menarcheck<sup>1</sup>

<sup>1</sup>Behavior

**M10. Small Business Program: Scalable Cue-Induced Craving Neurofeedback for Opioid Use Disorder Treatments**

Scott Burwell<sup>1</sup>, Flavio Da Silva<sup>1</sup>, Justin Anker<sup>2</sup>

<sup>1</sup>Neurotype Inc., <sup>2</sup>University of Minnesota

**M11. OpiAID: A Data Driven Approach to Treating Opioid Dependence**

Christopher Evonko<sup>1</sup>, David Reeser<sup>2</sup>, Tyler Sugden<sup>2</sup>, Jesse Shaw<sup>2</sup>, Wendy Washington<sup>1</sup>, David MacQueen<sup>1</sup>

<sup>1</sup>University of North Carolina Wilmington, <sup>2</sup>OpiAID

**M12. Development, Calibration, and Delivery of Personalized Cognitive-Behavioral Interventions Through Software**

Gregg Siegel<sup>1</sup>, Richard Priesmeyer<sup>2</sup>, Leslie Siegel<sup>1</sup>, Tara Karns-Wright<sup>3</sup>, Van King<sup>4</sup>, Katherine Dondanville<sup>4</sup>, Jennifer Potter<sup>4</sup>

<sup>1</sup>Biomedical Development Corporation, <sup>2</sup>St. Mary's University, <sup>3</sup>The University of Texas Health Science Center At San Antonio, <sup>4</sup>University of Texas Health San Antonio

**M13. Innovations in Small Business Telehealth Technologies for Opioid Use Disorder: Automated Assessments, Electronic Health Record integrations, and Medication Shipping**

Cynthia James<sup>1</sup>, Marlene Lira<sup>1</sup>, M. Justin Coffey<sup>1</sup>

<sup>1</sup>Workit Health

**M14. NIDA-Funded Small Business Companies Successfully Contribute to NIH Heal Initiative**

Jia Bei Wang<sup>1</sup>, Leonardo Angelone<sup>1</sup>, Stacie Gutowski<sup>1</sup>, Tam Nguyen<sup>1</sup>, Yordan Kostov<sup>1</sup>, Elena Koustova<sup>1</sup>, Sara Lioj<sup>1</sup>

<sup>1</sup>NIDA, NIH

**M15. A Digital Health App for Opioid Treatment Programs: The Sonara Health Platform for Video Observed Methadone Take-Homes**

Michael Giles<sup>1</sup>, Kshitij Verma<sup>1</sup>, Omer Kaplan<sup>1</sup>, Dongseok Choi<sup>2</sup>, Kim Hoffman<sup>2</sup>, Katharina Wiest<sup>3</sup>, Dennis McCarty<sup>2</sup>

<sup>1</sup>Sonara Health, <sup>2</sup>Oregon Health and Science University, <sup>3</sup>Pacific Vascular Specialists

**M16. Wearable Immunosensor Array for Rapid Opioids Detection**

Igor Levitsky<sup>1</sup>, Nantaniel Cady<sup>2</sup>, Natalia Tokranova<sup>3</sup>, Albert Lampher<sup>1</sup>  
<sup>1</sup>Emitech, Inc., <sup>2</sup>Albany Polytechnic institute, <sup>3</sup>Albany Polytechnic Institute

**M17. Development of a Community-Based Wastewater Surveillance System to Measure Opioid, Stimulant and Medications for Opioid Use Disorder in the COVID-19 Pandemic**

Peter Chai<sup>1</sup>, Gordon Getzinger<sup>2</sup>, Joji Suzuki<sup>1</sup>, Alex Buben<sup>2</sup>, Matthew Boyce<sup>2</sup>, Kait Hess<sup>2</sup>, Kelly Wahl<sup>2</sup>, Mariana Matus<sup>2</sup>, Timothy Erickson<sup>1</sup>  
<sup>1</sup>Brigham and Women's Hospital, Harvard Medical School, <sup>2</sup>Biobot Analytics

**M18. Targeting a Non-Opioid Signaling Pathway to Reverse Opioid-Induced Respiratory Depression**

Andy Chang<sup>1</sup>, Alexandra Scharr<sup>2</sup>, Ethan Garcia<sup>1</sup>, Terra Lin<sup>1</sup>, Deomar Arizabal<sup>1</sup>  
<sup>1</sup>University of California, San Francisco, <sup>2</sup>Olfa Thera, Inc.

**M19. Novel Maintenance Therapeutic for Opioid Use Disorder**

Don Gehlert<sup>1</sup>, Douglas Crawford<sup>1</sup>, William Schmidt<sup>1</sup>, Neil Schwartz<sup>1</sup>  
<sup>1</sup>Epiodyne

**M20. Brief Xenon Gas Inhalation Attenuates Naltrexone-Precipitated Morphine Withdrawal Symptoms in Morphine-Dependent Mice**

Marc Kaufman<sup>1</sup>, Edward Meloni<sup>1</sup>, Dilin Meloni<sup>1</sup>, Carol Paronis<sup>1</sup>, Vlad Bogin<sup>2</sup>  
<sup>1</sup>McLean Hospital, Harvard Medical School, <sup>2</sup>Nobilis Therapeutics, Inc., Portland OR

**M21. Development of Dual MOR Agonist/DOR Antagonists as Novel Treatments for Opioid Use Disorder**

Annie Pasternak<sup>1</sup>, Jeffrey Reich<sup>2</sup>  
<sup>1</sup>Sparian Biosciences, <sup>2</sup>Sparian Biosciences, Inc.

**M22. Incentivized Collaborative Care to Disseminate Contingency Management via Buprenorphine Treatment**

Sean Regnier<sup>1</sup>, Rosemarie Davidson<sup>2</sup>, Hayley Brown<sup>2</sup>, David Gastfriend<sup>3</sup>, Anthony DeFulio<sup>2</sup>  
<sup>1</sup>University of Kentucky, College of Medicine, <sup>2</sup>Western Michigan University, <sup>3</sup>DynamiCare Health, Inc.

**M23. Trends of Prenatal Substance Exposure: A 10 Year Evaluation of Umbilical Cord Test Outcomes**

Joseph Jones<sup>1</sup>  
<sup>1</sup>United States Drug Testing Laboratories

**M24. A Novel Hand-Held Personalized Dual Biometrically Controlled Device for At-Home Dispensation of Methadone**

John Timberlake<sup>1</sup>, Kenneth Stoller<sup>2</sup>, Thomas King<sup>1</sup>, Christy Corey<sup>1</sup>  
<sup>1</sup>Berkshire Biomedical, <sup>2</sup>Johns Hopkins University School of Medicine

**M25. The Computerized Oral Prescription Administration System (COPA™): An Innovative Hand-Held Oral Liquid Medication Dispensing Device With Remote Monitoring and Dual Biometrics With the Potential to Streamline Clinical Trials**

Thomas King<sup>1</sup>, Christy Corey<sup>1</sup>, Kenneth Stoller<sup>2</sup>, John Timberlake<sup>1</sup>  
<sup>1</sup>Berkshire Biomedical, <sup>2</sup>Johns Hopkins School of Medicine

**M26. Identification of Epigenetic Biomarkers Associated With Prenatal Exposure to Substances of Abuse**

Aileen Baldwin<sup>1</sup>, Joseph Jones<sup>1</sup>

<sup>1</sup>United States Drug Testing Laboratories, Inc.

**M27. The NIDA Cause of Death Elucidated (CODE) Initiative: Developing Innovative Postmortem Toxicology Testing Devices to Reduce the Undercounting of Drug Overdose Deaths**

Tam Nguyen<sup>1</sup>, Yordan Kostov<sup>1</sup>, Sara Lioi<sup>1</sup>, Leonardo Angelone<sup>1</sup>, Elena Koustova<sup>1</sup>

<sup>1</sup>DHHS/National Institute on Drug Abuse

**M28. RAE cHealth: A Digital Tool to Support Peer Recovery-Based Treatment for Substance Use Disorder and to Reduce Digital Inequity**

Stephanie Carreiro<sup>1</sup>, Rebecca Leach<sup>1</sup>, Melissa Taylor<sup>1</sup>, Joshua Stapp<sup>2</sup>, Nicole Gilbertson<sup>2</sup>, Megan Reinhardt<sup>2</sup>, Premananda Indic<sup>3</sup>

<sup>1</sup>University of Massachusetts Medical School, <sup>2</sup>RAE Health, <sup>3</sup>Department of Electrical Engineering, The University of Texas at Tyler

**M29. The Vox Venturi Device: Portable Breath-Based THC and Opioid Detection**

Jake Golde<sup>1</sup>, Scott Lukas<sup>2</sup>, Arash Aslani<sup>1</sup>, Ken Markoski<sup>1</sup>, Joe Santos<sup>3</sup>, Jane McNeil<sup>2</sup>

<sup>1</sup>Vox Biomedical, <sup>2</sup>McLean Hospital, Harvard Medical School, <sup>3</sup>DRAPER

**M30. A Three Phase Program of Research Investigating a Digital Intervention for Substance Use Delivered via a Relational Agent, "Woebot"**

Athena Robinson<sup>1</sup>, Maddison Pirner<sup>1</sup>, Sarah Pajarito<sup>1</sup>, Amy Chieng<sup>2</sup>, Erin Vogel<sup>2</sup>, Jessie Moore<sup>2</sup>, Alison Darcy<sup>1</sup>, Judith Prochaska<sup>2</sup>

<sup>1</sup>Woebot Health, <sup>2</sup>Stanford University Stanford Prevention Research Center

**M31. Novel 'Agnostic' Pharmacologic Approach to Polysubstance Overdose**

Thomas Miller<sup>1</sup>, Amanda Bunting<sup>2</sup>, Michael Schatman<sup>3</sup>, Joseph Pergolizzi<sup>1</sup>, Alfred Schweikert<sup>1</sup>, Frank Diana<sup>1</sup>, Robert Colucci<sup>4</sup>, Herm Cukier<sup>1</sup>, Daniel Motto<sup>1</sup>, Marty Lutz<sup>1</sup>, Errol Gould<sup>1</sup>, Robert Raffa<sup>1</sup>

<sup>1</sup>Enalare Therapeutics, <sup>2</sup>NYU Langone Health, <sup>3</sup>NYU Grossman School of Medicine, <sup>4</sup>NEMA Research

**M32. A Novel Approach to Treat Fentanyl Intoxication**

Shekar Shetty<sup>1</sup>, Xinhua Li<sup>2</sup>, Mitchell Zakin<sup>2</sup>, Piercen Oliver<sup>2</sup>

<sup>1</sup>Clear Scientific Inc., <sup>2</sup>Clear Scientific Inc

**M33. Using MegaSyn Generative Machine Learning to Identify Psychoplastogens for Opioid Abuse Treatment**

Joshua Harris<sup>1</sup>, Jacob Gerlach<sup>1</sup>, Fabio Urbina<sup>1</sup>, Sean Ekins<sup>1</sup>

<sup>1</sup>Collaborations Pharmaceuticals, Inc.

**M34. AI/ML-Driven in Silico Identification of Blood-Brain Barrier Permeable Compounds**

Maksim Khotimchenko<sup>1</sup>, Kaushik Chakravarty<sup>1</sup>, Courtney Miller<sup>2</sup>, Yogesh Bunday<sup>1</sup>, Roshan Bhawe<sup>1</sup>, Szczepan Baran<sup>1</sup>, Jyotika Varshney<sup>1</sup>

<sup>1</sup>Verisim Life, <sup>2</sup>The Scripps Research Institute, Department of Neuroscience

**M35. Facilitating Supervised Self-Management of Stimulant Medications Among Adolescents: Improving Adherence, Supporting Caregivers, and Reducing the Risk of Misuse**

Artin Perse<sup>1</sup>, Catherine Stanger<sup>2</sup>, Bridget Skidmore<sup>3</sup>, Erin Winstanley<sup>4</sup>

<sup>1</sup>Levi, <sup>2</sup>Dartmouth College, Geisel School of Medicine, Department of Psychiatry, <sup>3</sup>West Virginia University, WVU Medicine Children's Hospital, <sup>4</sup>West Virginia University, Department of Behavioral Medicine and Psychiatry

**M36. Novel Neurotherapeutic for MR Imaging of Dopamine Transporters (DAT) and Treatment of Dopaminergic Neurodegeneration in Methamphetamine Use Disorder (MUD)**

Gordana Vitaliano<sup>1</sup>, Christopher Adam<sup>2</sup>, Gonzalo Zeballos<sup>2</sup>, Kyoko Ohashi<sup>1</sup>, Franco Vitaliano<sup>3</sup>

<sup>1</sup>McLean Hospital, Harvard Medical School, <sup>2</sup>McLean Hospital, <sup>3</sup>EXQOR

**M37. Development of Dual "Atypical" DAT Inhibitor/Sigma Receptor Antagonists as Novel Treatments for Stimulant Use Disorder**

Jeffrey Reich<sup>1</sup>, Christopher McCurdy<sup>2</sup>

<sup>1</sup>Sparian Biosciences, Inc., <sup>2</sup>University of Florida

**M38. You Can See that the Culture is Definitely Changing: Peer-Facilitated Telemedicine Hepatitis-C Treatment for People who Use Drugs**

Kim Hoffman<sup>1</sup>, Soomin Shin<sup>2</sup>, Gillian Leichtling<sup>2</sup>, Hunter Spencer<sup>1</sup>, Tonhi Gailey<sup>1</sup>, Andrew Seaman<sup>1</sup>, P. Todd Korthis<sup>1</sup>

<sup>1</sup>Oregon Health and Science University, <sup>2</sup>Comagine Health

**M39. Patient- And Clinician-Level Factors for Virtual and In-Person Substance Use Disorder Treatment Retention**

Michael Parks<sup>1</sup>, Justine Welsh<sup>2</sup>, Lance Waller<sup>3</sup>, Siara Sitar<sup>4</sup>, Jackie Braughton<sup>1</sup>, Samantha Patton<sup>5</sup>, Quyen Ngo<sup>1</sup>

<sup>1</sup>Hazelden Betty Ford Foundation, <sup>2</sup>Emory University School of Medicine Department of Psychiatry and Behavioral Services, <sup>3</sup>Emory University Rollins School of Public Health Department of Biostatistics and Bioinformatics, <sup>4</sup>Emory University School of Medicine, Department of Psychiatry and Behavioral Services, <sup>5</sup>Emory University, Department of Psychiatry and Behavioral Sciences

**M40. Persistent Anxiety is Associated With Reporting At-Risk Drinking During COVID-19 Among Women in a Community Setting**

Alyssa Berger<sup>1</sup>, Linda Cottler<sup>1</sup>

<sup>1</sup>University of Florida

**M41. Open Board**

**M42. Substance Use Patterns and Access to Services in Humanitarian Settings: A Formative Research Study**

Stephanie Haddad<sup>1</sup>, Mbaita Shawa<sup>2</sup>, Jeremy Kane<sup>1</sup>, Bertha Bwalya<sup>3</sup>, Megan Sienkiewicz<sup>1</sup>, Grace Kilbane<sup>1</sup>, Veronica Chibemba<sup>2</sup>, Princess Chiluba<sup>2</sup>, Nkumbu Mtongo<sup>2</sup>, Kristina Metz<sup>4</sup>, Mildred Chibwe<sup>2</sup>, Namuchana Mushabati<sup>2</sup>, Allan Zulu<sup>3</sup>, Ravi Paul<sup>5</sup>, Zaliwe Banda<sup>6</sup>, Henry Loongo<sup>3</sup>, Muzi Kamanga<sup>2</sup>, M. Claire Greene<sup>1</sup>

<sup>1</sup>Columbia University Mailman School of Public Health, <sup>2</sup>Women in Law and Development in Africa, Lusaka, Zambia, <sup>3</sup>CARE Zambia, Lusaka, Zambia, <sup>4</sup>Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, USA, <sup>5</sup>University of Zambia, <sup>6</sup>Zambia Ministry of Health, Lusaka, Zambia

**M43. Preliminary Evidence That Individuals With Remitted Alcohol Use Disorder and Major Depressive Disorder Exhibit Enhanced Neural Responses to Reward: An EEG Study**

Natania Crane<sup>1</sup>, Lillian Li<sup>2</sup>, Julia Brooks<sup>3</sup>, Stewart Shankman<sup>2</sup>

<sup>1</sup>Psychiatric Institute, University of Illinois At Chicago, <sup>2</sup>Northwestern University, <sup>3</sup>University of Illinois At Chicago

**M44. Fluoxetine in the Relapse Prevention of Alcoholism**

John Sullivan<sup>1</sup>, Donald Jasinski<sup>2</sup>

<sup>1</sup>none, <sup>2</sup>Johns Hopkins Bayview Medical Center

**M45. Differences in Psychopathology, Substance Use, and Social Support Among Adolescents With Versus Without Lifetime Alcohol Use**

Carol Vidal<sup>1</sup>, Caroline Brooks<sup>2</sup>, Eric Strain<sup>3</sup>

<sup>1</sup>Department of Psychiatry, Johns Hopkins University School of Medicine, <sup>2</sup>Department of Psychiatry, Johns Hopkins University, <sup>3</sup>Johns Hopkins University School of Medicine

**M46. Ageing With an Alcohol Problem is Not What I Envision: Reclaiming Agency in Shaping Personal Ageing Trajectory and Recovery From an Alcohol Problem**

Wossenseged Birhane Jemberie<sup>1</sup>, Fredrik Snellman<sup>1</sup>, Malin Eriksson<sup>1</sup>, Anders Hammarberg<sup>2</sup>

<sup>1</sup>Umea University, Faculty of Social Sciences, <sup>2</sup>Karolinska Institutet, Department of Clinical Neuroscience

**M47. Parent Influence and Alcohol Use by Youth With Chronic Medical Conditions**

Jessica Calihan<sup>1</sup>, Machiko Minegishi<sup>2</sup>, Elissa Weitzman<sup>3</sup>

<sup>1</sup>HHMI, Children's Hospital - Boston, <sup>2</sup>Division of Adolescent/Young Adult Medicine, Boston Children's Hospital, <sup>3</sup>Department of Pediatrics, Harvard Medical School, Boston, Massachusetts; Division of Adolescent/Young Adult Medicine, Boston Children's Hospital, Boston, Massachusetts; Computational Health Informatics Program, Boston Children's Hospital, Boston, Massachusetts.

**M48. Chronic Alcohol Self Administration Induces Extracellular Matrix Abnormalities in the Hippocampus of Non-Human Primates**

Jake Valeri<sup>1</sup>, Charlotte Stiplosek<sup>1</sup>, Donna Platt<sup>1</sup>, Kathleen A Grant<sup>2</sup>, Barbara Gisabella<sup>1</sup>, Harry Pantazopoulos<sup>1</sup>

<sup>1</sup>University of Mississippi Medical Center, <sup>2</sup>Oregon National Primate Research Center

**M49. Molecular Signaling Pathways in the Hippocampus of Rhesus Monkeys With Chronic Alcohol Use**

Tanya Pareek<sup>1</sup>, Donna Platt<sup>1</sup>, Kathleen Grant<sup>2</sup>, Barbara Gisabella<sup>1</sup>, Harry Pantazopoulos<sup>1</sup>

<sup>1</sup>University of Mississippi Medical Center, <sup>2</sup>Oregon Health and Science University

**M50. Common and Distinct Associations Between Baseline Impulsivity and Longitudinal Development of Positive and Negative Alcohol Expectancies in the Adolescent Brain Cognitive Development (ABCD) Cohort**

Faith Adams<sup>1</sup>, Iliyan Ivanov<sup>1</sup>, Muhammad Parvaz<sup>1</sup>

<sup>1</sup>Icahn School of Medicine At Mount Sinai

**M51. Gender, Mental Health, and Cannabis Use Amongst Students in the United States During the Pandemic: Results From the COVID-19 Cannabis Health Study**

Ana Borja<sup>1</sup>, Marvin Reid<sup>2</sup>, Layan Ibrahim<sup>3</sup>, Nicole O'Dell<sup>4</sup>, Deanna Uddin<sup>5</sup>, Denise Vidot<sup>5</sup>

<sup>1</sup>Syracuse University, <sup>2</sup>The University of the West Indies, Mona, <sup>3</sup>Vanderbilt University School of Medicine,

<sup>4</sup>University of Miami Miller School of Medicine, <sup>5</sup>University of Miami School of Nursing and Health Studies



**M52. Effects of Cannabidiol and Morphine on Antinociception Across Multiple Modalities**

Leslie Lundahl<sup>1</sup>, Mark Greenwald<sup>2</sup>

<sup>1</sup>Wayne State University School of Medicine, <sup>2</sup>Wayne State University, Dept of Psychiatry and Behavioral Neurosciences

**M53. White Matter Structural Organization Alterations in People Living With HIV With Heavy Cannabis Use**

Ryan Bell<sup>1</sup>, Sheri Towe<sup>1</sup>, Syam Gadde<sup>1</sup>, Amelia Costello<sup>2</sup>, Christina Meade<sup>1</sup>

<sup>1</sup>Duke University School of Medicine, <sup>2</sup>Duke University

**M54. Chronic Disease Symptoms Self-Managed with Cannabis during the COVID-19 Pandemic: Results From the COVID-19 Cannabis Health Study**

Nicole O'Dell<sup>1</sup>, Marvin Reid<sup>2</sup>, Jessica Islam<sup>3</sup>, Marlene Camacho-Rivera<sup>4</sup>, Denise Vidot<sup>5</sup>

<sup>1</sup>University of Miami Miller School of Medicine, <sup>2</sup>The University of the West Indies, Mona, <sup>3</sup>Moffitt Cancer Center, <sup>4</sup>SUNY Downstate Health Sciences University, <sup>5</sup>University of Miami School of Nursing and Health Studies

**M55. Primary Form of Cannabis Use and Recent Negative Affect Symptoms**

Anita Cservenka<sup>1</sup>

<sup>1</sup>Oregon State University

**M56. Characteristics Associated With Cannabis Dispensary Purchasing Among a Representative Sample of Adults in the United States who Use Cannabis**

Matthew Myers<sup>1</sup>, Kipling Bohnert<sup>2</sup>

<sup>1</sup>Michigan State University College of Human Medicine, <sup>2</sup>University of Michigan and Department of Veterans Affairs

**M57. Age and Pandemic-Related Stress among Cannabis Consumers in First Year of COVID-19 Pandemic: Preliminary Results from the COVID-19 Cannabis Health Study**

Layan Ibrahim<sup>1</sup>, Marvin Reid<sup>2</sup>, Nicole O'Dell<sup>3</sup>, Audrey Harkness<sup>4</sup>, Denise Vidot<sup>4</sup>

<sup>1</sup>Vanderbilt University School of Medicine, <sup>2</sup>The University of the West Indies, Mona, <sup>3</sup>University of Miami Miller School of Medicine, <sup>4</sup>University of Miami School of Nursing and Health Studies

**M58. Applying the Observational-Implementation Hybrid Approach to Collect Implementation Data on the Use of Evidence-Based Practices to Support Reductions in Cannabis Use among Black Sexual Minority Men and Transgender Women**

Justin Knox<sup>1</sup>, Silvia Martins<sup>1</sup>, Elvin Geng<sup>2</sup>

<sup>1</sup>Columbia University, <sup>2</sup>Washington University in St Louis

**M59. Cannabis Use in Adolescence and the Later Onset of Bipolar Disorder: A Systematic Review and Meta-Analysis of Prospective Cohort Studies**

Naonori Yasuma<sup>1</sup>, Kotaro Imamura<sup>2</sup>, Kazuhiro Watanabe<sup>3</sup>, Mako Iida<sup>4</sup>, Ayumi Takano<sup>5</sup>

<sup>1</sup>Ageonomori clinic, <sup>2</sup>Department of Digital Mental Health, Graduate School of Medicine, The University of Tokyo, Bunkyo-ku, Tokyo, Japan, <sup>3</sup>Department of Public Health, Kitasato University School of Medicine, Sagami-hara, Kanagawa, Japan, <sup>4</sup>Department of Psychiatric Nursing, Graduate School of Medicine, The University of Tokyo, Bunkyo-ku, Tokyo, Japan, <sup>5</sup>Department of Mental Health and Psychiatric Nursing, Tokyo Medical and Dental University, Bunkyo-ku, Tokyo, Japan

**M60. Cannabis Use Disorder Symptom Profiles Among Individuals Reporting Past-year Cannabis Use in the United States**

Angela DeVeugh-Geiss<sup>1</sup>, John Mariani<sup>2</sup>, Beth Reboussin<sup>3</sup>, Howard Chilcoat<sup>4</sup>

<sup>1</sup>Indivior, Inc., <sup>2</sup>Columbia University Irving Medical Center, New York State Psychiatric Institute, <sup>3</sup>Wake Forest University School of Medicine, <sup>4</sup>Indivior, Inc; Johns Hopkins Bloomberg School of Public Health

**M61. Sex Differences in Prospective Trajectories of Alcohol but Not Marijuana Use Following Trauma**

Robyn Ellis<sup>1</sup>, R. Kathryn McHugh<sup>1</sup>, William Davie<sup>2</sup>, Charis Wiltshire<sup>2</sup>, Samuel McLean<sup>3</sup>, Kerry Ressler<sup>1</sup>, Tanja Jovanovic<sup>2</sup>, Antonia Seligowski<sup>1</sup>

<sup>1</sup>McLean Hospital - Harvard Medical School, <sup>2</sup>Wayne State University School of Medicine, <sup>3</sup>University of North Carolina-Chapel Hill

**M62. Pilot Trial of a Behavioral Economic Intervention to Promote Cannabis-Free Activities for Non-Treatment Seeking Adults With Cannabis Use Disorder**

Lara Coughlin<sup>1</sup>, Erin Bonar<sup>1</sup>, Joshua Wieringa<sup>1</sup>, Alyssa Augustiniak<sup>1</sup>, Grant Goodman<sup>1</sup>, Rachel Girard<sup>2</sup>, Lewei (Allison) Lin<sup>1</sup>

<sup>1</sup>University of Michigan, <sup>2</sup>University of Rhode Island

**M63. Mobile EEG Correlates of Frequent Cannabis Use are Sex- and Age-Dependent**

Conor Murray<sup>1</sup>, Ziva Cooper<sup>1</sup>

<sup>1</sup>University of California, Los Angeles

**M64. Cannabis Reduction is Associated With Improved Functional Outcomes: An Aggregated Analysis From Seven Cannabis Treatment Trials**

Erin McClure<sup>1</sup>, Brian Neelon<sup>1</sup>, Rachel Tomko<sup>1</sup>, Kevin Gray<sup>1</sup>, Aimee McRae-Clark<sup>1</sup>, Nathaniel Baker<sup>1</sup>

<sup>1</sup>Medical University of South Carolina

**M65. Examining the Effects of Marijuana Use on Cognition in Persons With and Without HIV**

Sheri Towe<sup>1</sup>, Christina Meade<sup>1</sup>

<sup>1</sup>Duke University School of Medicine

**M66. Hippocampal Subfield Volume as a Function of Cannabis Use and Cannabis Use Disorder**

Alexandre Guerin<sup>1</sup>, Xuejun Hao<sup>2</sup>, Margaret Haney<sup>3</sup>, Suzette Evans<sup>4</sup>, Gillinder Bedi<sup>5</sup>

<sup>1</sup>University of Melbourne, <sup>2</sup>Columbia University Medical Center, <sup>3</sup>Columbia University Irving Medical Center,

<sup>4</sup>NYSPI and Research Foundation for Mental Hygiene, <sup>5</sup>The University of Melbourne

**M67. Open Board**

**M68. Individuals with Cannabis Use Disorder Display Altered Parasympathetic Hrv during Waking and Sleeping Hours Relative to Light Cannabis Users.**

Morgan Pearlman<sup>1</sup>, Stephanie Wemm<sup>1</sup>, Morgan Pearlman<sup>1</sup>, Jennifer Liston<sup>1</sup>, Rajita Sinha<sup>1</sup>

<sup>1</sup>Yale University School of Medicine

**M69. Extended-Release Mixed Amphetamine Salts for Comorbid Adult Attention-Deficit/Hyperactivity Disorder and Cannabis Use Disorder: A Pilot, Randomized Double-Blind, Placebo-Controlled Trial**

Frances Levin<sup>1</sup>, John Mariani<sup>2</sup>, Martina Pavlicova<sup>3</sup>, C. Jean Choi<sup>4</sup>, Cale Basaraba<sup>4</sup>, Amy Mahony<sup>4</sup>, Daniel Brooks<sup>4</sup>, Christina Brezing<sup>5</sup>, Nasir Naqvi<sup>5</sup>

<sup>1</sup>Columbia University Irving Medical Center/ New York State Psychiatric Institute, <sup>2</sup>Columbia University and New York Psychiatric Institute, <sup>3</sup>Columbia University, <sup>4</sup>New York State Psychiatric Institute, <sup>5</sup>Columbia University and NYSPI

**M70. Cannabis Use Frequency's Positive Associations With Blood Pressure Among Young Adult African American Students**

Alexis Morris<sup>1</sup>, Larry Keen<sup>1</sup>

<sup>1</sup>Virginia State University

**M71. Marijuana Use Among Asian American Adolescents: An Analysis of Specific Ethnic Groups**

Ting Luo<sup>1</sup>, Jijiang Wang<sup>1</sup>, Yue-Lin Zhuang<sup>1</sup>, Shu-Hong Zhu<sup>1</sup>

<sup>1</sup>University of California - San Diego

**M72. State Cannabis Legalization and Changes in Cannabis Use as Determined by Biologic Testing in Emergency Department Patients in the U.S. Veterans Health Administration, 2008 to 2019**

David Fink<sup>1</sup>, Hillary Samples<sup>2</sup>, Andrew Saxon<sup>3</sup>, Carol Malte<sup>4</sup>, Melanie Wall<sup>5</sup>, Deborah Hasin<sup>6</sup>

<sup>1</sup>New York State Psychiatric Institute, <sup>2</sup>Center for Pharmacoepidemiology and Treatment Science, Rutgers Institute for Health, Health Care Policy and Aging Research, <sup>3</sup>Veterans Affairs Puget Sound Health Care System, Seattle, <sup>4</sup>Center of Excellence in Substance Abuse Treatment and Education, Veterans Affairs Puget Sound Health Care System, <sup>5</sup>Columbia University and NYSPI, <sup>6</sup>Columbia University

**M73. Preliminary Evidence for Altered Sleep Patterns in Cannabis Users**

Tracy Brown<sup>1</sup>, Alessandra Stagni<sup>1</sup>, Shakti Anand<sup>1</sup>, Mihir Shah<sup>1</sup>, Francesca Filbey<sup>1</sup>

<sup>1</sup>University of Texas at Dallas

**M74. The Adolescent Path? Anhedonia and Cannavaping Use**

Cynthia Ortiz<sup>1</sup>, Peter Hendricks<sup>1</sup>

<sup>1</sup>The University of Alabama At Birmingham

**M75. Co-Occurrence of Cannabis Use and Cigarette Smoking Accelerates Epigenetic Age**

Brooklyn Bradley<sup>1</sup>, Youshu Cheng<sup>1</sup>, Xiaoyu Liang<sup>2</sup>, Rajita Sinha<sup>1</sup>, Ke Xu<sup>1</sup>

<sup>1</sup>Department of Psychiatry, Yale University, New Haven, CT, <sup>2</sup>Department of Epidemiology and Biostatistics, Michigan State University, East Lansing, MI

**M76. Place Conditioning With  $\Delta 9$ -THC Following Chronic  $\Delta 9$ -THC Exposure During Adolescence**

Sarah Withey<sup>1</sup>, Stephen Kohut<sup>1</sup>, Brian Kangas<sup>1</sup>, Jack Bergman<sup>1</sup>

<sup>1</sup>McLean Hospital / Harvard Med School

**M77. An Overview of New Psychoactive Substances (NPS) Analysis and Trends in Taiwan, 2008-2022**

Kai-Hsiang Kang<sup>1</sup>, Wei-Ting Chen<sup>2</sup>, Yuan-Chun Liao<sup>2</sup>, Wei J. Chen<sup>3</sup>

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**M78. Emotion Regulation Expectancies and Smoking Cessation Factors: An Ecological Momentary Assessment Study During a Practice Quit Attempt**

Raina Pang<sup>1</sup>, Shirlene Wang<sup>1</sup>, Chyna Tucker<sup>1</sup>, Lori Zadoorian<sup>1</sup>, Andrea Weinberger<sup>2</sup>, Lina D'Orazio<sup>1</sup>, Matt Kirkpatrick<sup>1</sup>

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**M79. Pharmacological Manipulation of Temporal Brain State Dynamics During Rest**

Justine Hill<sup>1</sup>, Betty Jo Salmeron<sup>1</sup>, Thomas Ross<sup>1</sup>, Amy Janes<sup>2</sup>

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**M80. Opioid Withdrawal Symptoms and Reasons for Discontinuation of Low-Dose Buprenorphine Induction for Treatment of Opioid Use Disorder in Hospitalized Patients**

Catherine Chen<sup>1</sup>, Chelsea Markle<sup>1</sup>, Judith Tsui<sup>1</sup>, Elenore Bhatraju<sup>1</sup>

<sup>1</sup>University of Washington/Harborview Medical Center

**M81. Examining the Relationship of Concurrent Obesity and Tobacco Use Disorder on the Development of Substance Use Disorders and Psychiatric Conditions: Findings From the NESARC-III**

Logan Fields<sup>1</sup>, Walter Roberts<sup>2</sup>, Isabella Schwing<sup>1</sup>, Michael McCoy<sup>1</sup>, Sherry McKee<sup>3</sup>

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**M82. Preference for Waterpipes Among Female Patrons of Open-Air Bars in Lagos, Nigeria**

Olanrewaju Onigbogi<sup>1</sup>, Omobola Ojo<sup>2</sup>, Modupe Onigbogi<sup>3</sup>

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**M83. Effects of Nicotine Dose in Cigarettes on Symptoms of Depression and Anxiety**

Diann Gaalema<sup>1</sup>, Jennifer Tidey<sup>2</sup>, Stacey Sigmon<sup>1</sup>, Sarah Heil<sup>1</sup>, Dustin Lee<sup>3</sup>, Michael DeSarno<sup>1</sup>, Stephen Higgins<sup>1</sup>

<sup>1</sup>University of Vermont, <sup>2</sup>Brown University, <sup>3</sup>Johns Hopkins University School of Medicine

**M84. Latinx Combustible Cigarette Smokers Versus Dual Users: Differences in Alcohol and Drug Use Problem Severity**

Justin Shepherd<sup>1</sup>, Bryce Clausen<sup>1</sup>, Michael Zvolensky<sup>1</sup>

<sup>1</sup>University of Houston

**M85. Gender Differences in Smoking Dependence Motives**

Dominique Black<sup>1</sup>, Andrew Bontemps<sup>1</sup>, Karen Gamble<sup>1</sup>, S. Justin Thomas<sup>1</sup>, Karen Cropsey<sup>1</sup>

<sup>1</sup>The University of Alabama At Birmingham

**M86. Identifying Vape-Related Content on TikTok Using Automatic Clustering**

Grace Kong<sup>1</sup>, Tanvi Anand<sup>2</sup>, Rachel Ouellette<sup>1</sup>, Juhan Lee<sup>1</sup>, Dhiraj Murthy<sup>3</sup>

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**M87. Relationships Between Socioeconomic Position and Quitting Smoking Among Pregnant Women: A Longitudinal Assessment From Waves 1-5 of the Population Assessment of Tobacco and Health Study**

Loren Kock<sup>1</sup>, Stephen Higgins<sup>1</sup>, Fang Fang Chen<sup>1</sup>, Sarah Heil<sup>1</sup>

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