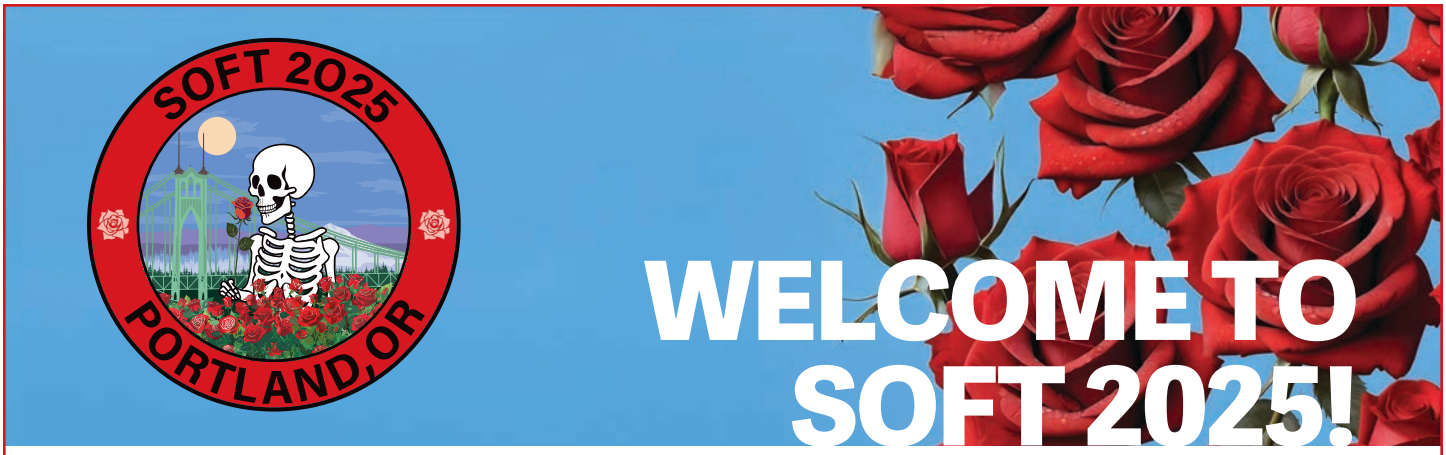
PROGRAM & ABSTRACTS



Dear SOFT 2025 Attendees,

Welcome to the 2025 Society of Forensic Toxicologists Annual Meeting! We are delighted to welcome you to beautiful Portland, Oregon, a city known for its creativity, natural beauty, and vibrant community. Whether you're joining us for the first time or returning for another year of connection and collaboration, we're so glad you're here.

As your hosts, we want to express our deepest appreciation to the outstanding Planning Committee. Their dedication, professionalism, and teamwork have made this meeting possible. It has been a true pleasure working alongside such a talented and passionate group. Their efforts have shaped an exceptional program filled with cutting-edge science, engaging workshops, and memorable social events.

We're especially excited about the robust workshop program and dynamic scientific sessions lined up this year. From hands-on training opportunities to presentations showcasing the latest advancements in forensic toxicology, the content reflects the innovation and expertise that define our field. We're confident you'll find inspiration, practical insights, and plenty of opportunities to engage with colleagues and thought leaders.

We are grateful for the many exhibitors that continue to support SOFT and this year is no different. They are here to address our analytical needs and demonstrate the latest technology to help us achieve our goals.

As in last year's meeting, we will be offering free yoga to begin your day in a centered way. For those who enjoy getting outside early in the morning, the Fun Run route is a great way to run (or walk) along and across the Willamette River, taking in different views of the city and its historic bridges.

The offsite event at The Redd on Salmon Street will be a unique venue to unwind with fellow attendees, savor great food, and enjoy entertainment by AWOL Dance Collective aerialists. How many of you can say you've attended a dinner while performers dazzle us from the ceiling?!

We hope you take full advantage of the opportunities to learn, share, and grow throughout the week. And while you're here, we encourage you to explore Portland's unique charm, from its lush parks and eclectic neighborhoods to its renowned food scene and welcoming spirit.

Thank you for being part of SOFT 2025. We look forward to an inspiring and enjoyable week with all of you!

Warm regards,
Sara Short & Amy Miles
SOFT 2025 Hosts

S-50

Assessing Real-Time Impairment Using the DRUID® App Following Alcohol and Cannabis Use in a Controlled Study.

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Abstract

Introduction/Objectives: Over the past few years, several technologies have been developed to detect cognitive and psychomotor impairment due to substance use and other causes. Traditional toxicology tests detect presence, not performance, while Standardized Field Sobriety Tests (SFSTs) can be time-consuming, subjective, and logistically demanding. A need exists for a quick, mobile, and reliable screening tool to assess impairment in real-time. This IRB-approved investigation evaluated the DRUID® mobile application's ability to detect substance-induced impairment in a controlled study environment following alcohol and cannabis use. DRUID app uses video game-like tasks to assess reaction time, decision-making, divided attention, balance, hand-eye coordination, and time perception.

Methods: A total of 21 healthy adult participants between the ages of 23-65 years (8 females, 13 males) were recruited. Inclusion criteria included prior experience with cannabis and/or alcohol, absence of medical conditions, no experience with the DRUID app within the last one year, and a requirement to abstain from alcohol, cannabis, nicotine, and caffeine for at least 24 hours prior to the study. Participants self-selected into either the alcohol (n=10) or cannabis (n=11) portion of the study. Three subjects enrolled in both alcohol and cannabis portions. Each group had one control participant who did not consume either substance.

In the alcohol group (n=10), participants consumed 80-proof vodka ad libitum until they reached a breath alcohol concentration (BrAC) of 0.10% or higher, as confirmed using a calibrated breathalyzer. BrAC was measured at ten intervals, spaced 30 minutes apart, beginning after the target BrAC was reached. DRUID assessments were conducted at baseline (prior to drinking) and during each interval following consumption.

In the cannabis group (n=11), participants consumed cannabis ad libitum by smoking or vaping until they reached their desired level of intoxication. DRUID assessments were conducted before consumption to establish an individualized baseline, immediately after consuming the product, and then repeated at 30-minute intervals for ten testing rounds post-consumption. A Certified Drug Recognition Expert (DRE) conducted a full impairment evaluation immediately after the first post-consumption DRUID test.

For this study, a 5-point or greater increase from baseline on the DRUID scale was used as the threshold for significant impairment. This threshold was established based on prior DRUID research and Green Lab findings.

Results/Discussion: In the cannabis group, DRUID and DRE assessments aligned for 9 of 11 participants (82%) with an average DRUID score-difference of 12.3 (range 5.6 – 20.9) points from baseline at peak impairment. In the two cases where DRUID and DRE determinations did not match, DRE indicated impairment while the DRUID scores were 3.8 and 2.2 points over the individual baselines and did not meet the 5-point requirement for establishing a significantly impaired state.

Prior studies by Spindle et al. (2021), Karoly et al. (2022), and Zamarripa et al. (2025) have all demonstrated DRUID's sensitivity to cannabis-induced impairment.

Among the alcohol-consuming participants, 7 of 9 showed DRUID score increases of 5 points or more from the baseline, with an average increase of 18.0 points (range: 5.7–35.3). The remaining two participants had increases just below the cutoff, at 4.8 and 4.6 points. Further, the scores for alcohol participants tracked closely with BrAC. As BrAC declined over time, DRUID scores similarly decreased, with average scores returning to baseline when average BrAC dropped below 0.04. This suggests a relationship between DRUID performance and the level of alcohol-induced impairment. These findings are consistent with previously published research by Richman and May (2019) that showed DRUID scores rising proportionally with alcohol intoxication.

Conclusion

DRUID was able to detect impairment following both alcohol and cannabis use in a controlled setting, with strong alignment to DRE evaluations and BrAC, respectively. These results suggest DRUID as a viable rapid screening tool for real-time impairment detection across these two substances.

Disclosure

Yes, I, or a member of my immediate family, has a financial interest to disclose.

Conflict of Interest

I serve on the Advisory board of the company Impairment Science Inc. and the study involves the application of their impairment assessment app.