



The Communications Committee presents:

The International Society for Biomedical Research on Alcoholism BULLETIN

Contributing to the advancement of alcohol research globally

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HIGHLIGHTS

- ✔ **“Interview with a Scientist”** ISBRA Bulletin interviews Dr. Markus Heilig.
- ✔ **Call for new members for the ISBRA Communication Committee.**
- ✔ Several **new job postings** for various career level openings.
- ✔ Research funding opportunities focused on **AUD and associated comorbidities.**
- ✔ New Directions column discusses **alcohol drinking and other mental and viral comorbidities.**

Publications You May Have Missed By Andrea Vásquez Ferreiro and Robert Leeman

It is no surprise that prolonged alcohol exposure can have substantial adverse health consequences. Alcohol-related comorbidity is this month’s column topic. Often, when a person is diagnosed with alcohol use disorder (AUD), they also suffer from other psychiatric or medical conditions. Therefore, greater emphasis should be placed on these co-occurring conditions to properly tailor AUD treatment. Unfortunately, the list of alcohol comorbidities is long and includes major depressive disorder and other mood disorders, general anxiety disorder, schizophrenia, liver disease, cancer, heart disease, stroke and other chronic diseases. The following articles cover some of these examples of alcohol-related comorbidity.

Publications You May Have Missed

By Andrea Vásquez Ferreiro and Robert Leeman

[Alcohol Addiction, Gut Microbiota, and Alcoholism Treatment: A Review](#)

In: International Journal of Molecular Sciences, 2020

By: Shao-Chang Wang, Yuan-Chuan Chen, Shaw Ji Chen, Chung-Hung Lee, & Ching-Ming Cheng.

The authors explained that gut microbiota problems due to alcohol misuse can alter enzyme levels and trigger nutrient deficiency, which can cause Wernicke-Korsakoff Syndrome, liver disease, and even other psychiatric conditions.

Fortunately, there are potential interventions such as probiotics and gene editing therapy though further research is needed.

[Symptoms of anxiety, depression, and borderline personality in alcohol use disorder with and without comorbid substance use disorder](#)

In: Alcohol, 2021

By: Lindy K. Howe, Lindsey R. Fisher, Emily A. Atkinson, & Peter R. Finn.

Researchers studied co-occurring AUD, other SUDs, and psychiatric conditions (e.g., major depressive disorder, anxiety disorders, and borderline personality disorder [BPD]). Participants (N = 671) were placed into four groups (healthy controls, individuals with only AUD, individuals with AUD and cannabis use disorder [CUD], and individuals with AUD and another SUD apart from CUD). Results indicated

that AUD comorbid with SUD was associated with more severe AUD symptoms, greater trait anxiety, depressive and BPD symptoms.

There were strong relationships between BPD symptomatology and internalizing symptoms associated with AUD and SUD.

[Olanzapine Plus Samidorphan \(ALKS 3831\) in Schizophrenia and Comorbid Alcohol Use Disorder: A Phase 2, Randomized Controlled Trial](#)

In: The J. of Clinical Psychiatry, 2020

By: May F. Brunette, Christoph U. Correll, Stephanie S. O'Malley, David McDonnell, Lauren DiPetrillo, L., Ying Jiang, Adam Simmons, A., Bernard L. Silverman, Leslie Citrome, L., & Alan I. Green.

There is a relatively high prevalence of AUD in people diagnosed with Schizophrenia. An efficacious medication is needed as an adjunct to psychosocial treatment. This article describes a phase 2 double-blind, randomized controlled trial testing the novel drug combination of olanzapine with 10 mg of samidorphan tablets in patients with schizophrenia (N = 234). The combination of medications aimed for an antipsychotic effect to counteract symptoms of schizophrenia and a reduction in alcohol drinking. No significant differences were found regarding treatment efficacy between control and intervention groups.

Publications You May Have Missed

By Andrea Vásquez Ferreiro and Robert Leeman

[Confronting the Crisis of Comorbid Alcohol Use Disorder and Alcohol-Related Liver Disease with a Novel Multidisciplinary Clinic](#)

In: Psychosomatics, 2020

By: Gerald Scott Winder, Anne C. Fernandez, Kristin Klevering, Jessica L. Mellinger.

This manuscript describes the first year at the first clinic in the United States to implement a multidisciplinary approach to facilitate treatment and recovery in individuals with Alcohol-related liver disease (ALD). ALD is one of the leading causes of liver disease and liver transplants for people with AUD. The Michigan Multidisciplinary ALD clinic offers all of the specialties the past literature stated to be necessary for diagnosis and recovery (e.g., hepatology, psychiatry, psychology) to their patients (N = 51). The results are promising and corroborate that this approach is feasible and beneficial for patients.



Funding Opportunities By Vatsalya Vatsalya

National Institutes of Health, USA:

- The goal of the NIAAA/NIDA R25 program is to support educational activities that foster a better understanding of biomedical, behavioral, and clinical research on alcohol and other substance use disorders and their implications. Further details at: <https://grants.nih.gov/grants/guide/pa-files/PA-19-207.html> .
- The PA-18-863 NIAAA program explores whether and how alcohol and other illicit drugs or illicitly used prescription drugs interact to contribute to unintentional injuries and poisonings and how to prevent and/or reduce simultaneous use of alcohol or drugs singly or in combination. More reading at: <https://grants.nih.gov/grants/guide/pa-files/PA-18-863.html> .
- Funding opportunities are available from other institutes and NIAAA as participants. Such funding announcements cover comorbid conditions and pathologies.



Funding Opportunities By Vatsalya Vatsalya

Several funding opportunities are available: NIAAA and other Institutes

- NIAAA has issued a Notice of Special Interest (NOSI) for administrative supplements and competitive revisions focused on urgent research questions of significance to alcohol and the COVID-19 pandemic (NOT-AA-20-11). More information at: <https://www.niaaa.nih.gov/funding-opportunities/covid-funding>
- Alcohol-HIV/AIDS Program Project Comorbidities, Coinfections, and Complications Research: Intervention and Cross-Cutting Foundational Research (P01 Clinical Trial Optional) can be reviewed at: <https://grants.nih.gov/grants/guide/rfa-files/rfa-aa-20-009.html>

AlcoholChange, UK:

- High quality research into alcohol-related harm and to promoting a better understanding of the evidence focuses on mental health, illicit drugs, and cardiovascular diseases.

Further details at: <https://alcoholchange.org.uk/research-hub/alcohol-research-grants/our-funded-projects>

Center for Alcohol and Drug Research, Denmark:

- The Center for Alcohol and Drug Research (CRF) conducts broad and independent social science research on consumption and prevention and into treatment and policy in the field of drugs and alcohol. Read about CRF and their research projects/funding: <https://psy.au.dk/en/research/research-centres-and-units/centre-for-alcohol-and-drug-research/about-the-centre-for-alcohol-and-drug-research/>

Brazil's Center for Drug and Alcohol Research (CPAD), Brazil:

- CPAD has competitively obtained more than \$15 million in research funding, mostly from NIDA, the National Institute of Allergy and Infectious Diseases, Bloomberg Philanthropies, Brazil's National Research Council, and the Brazilian National Secretariat for Drug and Alcohol Policies, through a recently founded Collaborative Center. More information at: <https://www.cpad.org.br/>

Funding Opportunities **By Vatsalya Vatsalya**

World Health Organization:

- Funding mechanisms for the prevention and treatment of alcohol and substance use disorders have been developed for the WHO forum on Alcohol, Drugs and Addictive Behaviors. Comprehensive insights, innovative funding mechanisms and discussions at: https://www.who.int/substance_abuse/activities/fadab/msb_adab_funding.pdf

New Directions **By Ricardo Pautassi**

The ongoing COVID-19 pandemic has highlighted the impact of comorbidities on health-related outcomes. According to the Center for Disease Control, only 6% of COVID-19 related deaths feature the coronavirus as the sole cause of the demise. The remaining 94% are comorbidity cases, in which the coronavirus prompted the development of serious complications (e.g., respiratory failure, respiratory distress syndrome, etc) or interacted with a pre-existing condition (e.g., diabetes, cancer) that in turn worsened the prognosis associated with the course of COVID-19.

The modulatory role of comorbidities on the course of alcohol disorders has been long recognized. Strikingly, alcohol use disorders (AUD) are higher in those already showing other psychopathology, such as depression, schizophrenia or bipolar disorders. Acknowledging these conditions is important because the effectiveness of psychotherapy or psychopharmacological treatments is differential (usually worse) as a function of exhibiting a comorbidity. Another layer of complexity comes from the fact that certain comorbidities are more common among specific populations. Notably, women are more likely to exhibit an anxiety disorder (AnD) than men, and an AnD diagnosis is more strongly associated with later development of an alcohol disorder in women than in men. In general, the rate of AUD is lower in women than in men, yet the progression from regular to pathological drinking occurs more rapidly in women than in men. This could be further exacerbated by comorbidities, such as an AnD, that increase the motivation to drink to alleviate negative mood or states (i.e., drinking to cope motives). Altogether, the information presented highlights the need to consider comorbidities in the design of clinical (and also pre-clinical) research and to do that with a gender perspective.

New Directions

By Ricardo Pautassi



More reading:

- [Center for Disease Control. Weekly Updates by Select Demographic and Geographic Characteristics. Provisional Death Counts for Coronavirus Disease 2019 \(COVID-19\).](#)
- Yang P, Tao R, He C, Liu S, Wang Y, Zhang X. [The Risk Factors of the Alcohol Use Disorders-Through Review of Its Comorbidities. Front Neurosci.](#) 2018;12:303. Published 2018 May 11.
- Gimeno Carmen, Dorado Marisa Luisa, Roncero Carlos, Szerman Nestor, Vega Pablo, Balanzá-Martínez Vicent, Alvarez F. Javier. [Treatment of Comorbid Alcohol Dependence and Anxiety Disorder: Review of the Scientific Evidence and Recommendations for Treatment.](#) Frontiers in Psychiatry 2017, 8:173
- Schneider U, Altmann A, Baumann M, Bernzen J, Bertz B, Bimber U, et al. [Comorbid anxiety and affective disorder in alcohol-dependent patients seeking treatment: the first multicentre study in Germany.](#) Alcohol Alcohol (2001) 36(3):219–23.

Global Jobs

By Robert Leeman

1. Call for ISBRA Members to Serve on the Communications Committee

The International Society for Biomedical Research on Alcoholism (ISBRA) is seeking new members for the Communications Committee. The Committee serves as an advisory capacity to the Board of Directors. As a society, we need to enhance ISBRA's online presence through social media platforms. The Communications Committee has made initial efforts to establish ISBRA on Twitter, LinkedIn and, most recently, ResearchGate but further efforts are needed.

We are hoping to attract creative volunteers for this committee who are willing to interact with the Board of Directors and other ISBRA members to keep our social media up to date, and to monitor and reply to posts from members and others.

This is a great opportunity to be an involved ISBRA member and reach out to others across the world. Please reply to Michelyn Lintz (isbra@isbra.com) if you have an interest in serving on this committee.

2. Assistant Professor Position in Molecular Cell Biology: University of California, Merced

The department of Molecular and Cell Biology in the School of Natural Sciences at the University of California, Merced is seeking one new faculty member at the Assistant Professor level (tenure-track) in the area of Molecular Cell Biology. Candidates working on any aspect of molecular and/or cell biology,

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from the biochemical to organismal level, are encouraged to apply. We seek outstanding scholars who will establish and maintain creative research programs, complement existing strengths in the Molecular and Cell Biology department, align with one or more of the School of Natural Sciences' areas of strategic focus (Computational & Data Science, Materials, Biomedical Sciences, Sustainability & Environment, and STEM Education), participate in the development of innovative interdisciplinary research projects, and teach effectively at the undergraduate and graduate levels.

Qualifications: A Ph.D. in Molecular Biology, Cell Biology, Biochemistry, Neurobiology, Genetics, Immunology, Computational Biology, or a related field is required. Postdoctoral experience is highly desirable.

Applications must be submitted via this [LINK](#) and must include 1) a cover letter stating area of interest; 2) curriculum vitae; 3) statement of research; 4) statement of teaching; 5) statement of contributions to equity, diversity, and inclusion; and 6) a list of three references with contact information including mailing address, phone number and email address.

Open date: January 27th, 2021
Next review date: Saturday, Mar 27, 2021 at 11:59pm (Pacific Time)
Apply by this date to ensure full consideration by the committee. Final date: Thursday, May 13, 2021 at 11:59pm (Pacific Time).
Applications will continue to be accepted until this date, but those received after the review date will only be considered if the position has not yet been filled.

For additional information, please contact Professor Mike Cleary at mcleary4@ucmerced.edu

3. Adjunct Faculty Position in Psychology, American University in Cairo

The Department of Psychology at the American University in Cairo (AUC) is seeking to recruit adjunct faculty members from diverse specializations of psychology, including methodology (statistics, research), basic (social, developmental, cognitive, biopsychology, etc.), or applied psychology (testing/assessment, organizational, educational, health, forensic, personal growth, etc.), special topical areas (trauma, gender, addiction, etc.), counseling/clinical psychology, and community psychology (program evaluation, NGO consultation, etc.). Successful candidates will be listed in a database of potential instructors who may be invited to teach part-time in subsequent semesters depending on departmental needs. Requirements: Commitment to teaching and engagement of students. An active research or professional practice agenda related to the area of expertise is expected. Candidates can be at the level of Master's or doctoral degree holders. Instructors for upper-level and graduate courses should hold a doctoral degree.

Additional Information: Review of applications take place twice annually, usually in December/January and May/June. Only short-listed candidates will be contacted.

Application Instructions: All applicants must submit the following documents via the online system: a) A detailed CV including full publications list; b) A letter of interest; c) Any relevant supporting documents; d) One reference letter to send directly to psych@aucegypt.edu

Global Jobs

By Robert Leeman



4. Project Coordinator Position opening at the Yale Stress Center, Yale University School of Medicine

Immediate opening for a full time project coordinator and/or senior research assistant to help coordinate and implement ongoing studies at the Yale Stress Center that are focused on stress, emotions and addiction, with an emphasis on NIH-NIDA and NIAAA funded studies testing efficacy of pharmacologic treatments to reduce alcohol and substance use outcomes, using various cutting edge web-based and smartphone-based data collection tools as well as human experimental and neuroimaging procedures to identify biobehavioral markers of treatment response. There are three primary responsibilities for the position: (1) Study coordination and oversight, including but not limited to administering research assessments, overseeing recruitment, retention and tracking of study participants, and supervising and training post-graduate assistants, (2) Data collection, including self-report, interview, behavioral, biological, diagnostic and/or fMRI, and assessments at substance use treatment centers and public locations in the greater New Haven area, (3) Data entry, management, and analysis. The qualified candidate will have a Bachelor's or Master's degree from an accredited college with a specialization in psychology (or a related field) or any combination of subsequent education and experience. Experience/skills in consenting and administering assessments with research participants, working with clinical populations and individuals from diverse backgrounds, communicating effectively both orally and in writing, and working in a team setting is preferred. Interested candidates should contact Professor Rajita Sinha at rajita.sinha@yale.edu and submit a cover letter, CV/resume, and list of 3 references.

5. Post-Doctoral Fellowship in Personality and Addiction Position Description

The Mood, Anxiety, and Addiction Comorbidity research laboratory at Dalhousie University is currently seeking a full time (40 hrs/week) Clinical Postdoctoral Research Fellow to work on a multisite trial of a personality-targeted substance misuse prevention/mental health promotion program for university students called Univenture, led by Dr. Sherry Stewart (<http://maaclab.psychology.dal.ca/>). The successful candidate's primary focus will be to lead the clinical training component of the trial at Dalhousie.

Qualifications/Requirements: Highly motivated candidates holding a PhD degree in clinical psychology or a closely related field (e.g., counselling psychology) are encouraged to apply. The ideal candidate will qualify for registration with the Nova Scotia Board of Examiners in Psychology (NSBEP) or registration on the candidate register. A Postdoc with a clinical background will be given opportunities to participate in the clinical assessment and treatment portion of the Univenture trial. Experience delivering cognitive-behavioral interventions to emerging adult clients with anxiety-related disorders is highly desirable, but training will be offered on an as needed basis for clinical postdoctoral fellows. Experience with distance delivery of treatment interventions and experience in training other clinicians in the delivery of treatment interventions is an asset. The ability to work effectively in a fast-paced research environment with minimal supervision is essential, as is the ability to effectively lead and direct students and staff. The highest preference will be given to candidates with strong

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clinical skills and experience. Clinical trials experience would be an asset. A demonstrated record of independent scientific productivity, (i.e., peer reviewed publications) is preferred.

Relevant Deadlines: The candidate will start no later than July 1, 2021. The trial ends March 31, 2024. Salary commensurate with experience.

Interested candidates should send their CV, names of 3 references, and a cover letter describing clinical and research interests and accomplishments to:

pam.collins@dal.ca

6. Post-Doctoral Fellowship in Neurobiology of Alcohol Addiction in Brazil

The Laboratory of Behavioral and Molecular Neuroscience of Escola Paulista de Medicina, UNIFESP, Brazil is seeking for talented and highly gifted candidates to apply a Post-Doctoral Fellowship to identifying and characterizing electrophysiologically neuronal ensembles associated with alcohol or cocaine taking and seeking behaviors. Experience with molecular, cell biology, electrophysiology, and animal models of addiction is required. The highest preference will be given to candidates with electrophysiology skills and experience. Applicants should have a Ph.D. in Pharmacology, Neuroscience, or a related field. The candidate must also possess excellent written and oral communication skills. To apply: please send a CV, a brief statement of research interests, and two reference letters to Fabio Cruz f.cruz@unifesp.br. The application deadline is 22 March, 2021.

News and Events

By Fengyuan (Linda) Li

Research News

January 19, 2021

Alcohol consumption linked to the proportion of cancer incidence and mortality. A new study finds that, in the US, alcohol consumption accounts for a considerable portion of cancer incidence and mortality in all 50 states and the District of Columbia. Read the full article at [Alcohol and U.S. cancer cases](#)

January 19, 2021

Anxiety, Depression and Drinking: An Unhealthy Combo During the Pandemic

People with anxiety and depression are more likely to report an increase in drinking during the COVID-19 pandemic than those without mental health issues, according to a new study by researchers at NYU School of Global Public Health published in the journal Preventive Medicine. Learn more about this study at [Alcohol use during the COVID-19 pandemic.](#)

January 27, 2021

Alcohol causes immediate effects linked to heart malady. A new study published on JACC: Clinical Electrophysiology assessed atrial electrophysiological changes





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induced by intravenous alcohol in a randomized, double-blind, placebo-controlled trial. Learn more about this study at [Alcohol and heart malady.](#)

Past Events

The annual NIDA-NIAAA Frontiers in Addiction Research Mini-Convention

January 7-8, 2021. Two Mini-Symposia were presented: (1) Mapping the Addiction Neurocircuitry. (2) AI-based Approaches to Addiction Pathophysiology and Novel Therapeutics.

The virtual event has ended but you can still learn more about the speakers and read abstracts of their presentations at [NIDA-NIAAA Mini-Convention.](#)

156th Meeting of the National Advisory Council on Alcohol Abuse and Alcoholism

February 4, 2021. This event featured advice and recommendations on research programs and policy matters in the field of alcohol abuse and alcoholism. View the full agenda at the [156th Council Meeting](#). The event recordings will be available on NIH videocast in the Past Events section, check back at [NIH Videocast-Past Events.](#)

Seminar series: Women and Alcohol

February 16, 2021. Online. This online webinar event will feature presentations on ways in which the experience of alcohol differs for women, including alcohol-related harms, targeting by the alcohol industry, societal attitudes toward women's drinking and barriers to support and recovery. LINK here [Women and Alcohol.](#)

International society of substance use professionals (ISSUP)

presents a webinar: Forensic testing for alcohol and drugs in relation to substance abuse detection and validation February 16, 2021. South Africa. Substance abuse detection is of prime importance in modern-day life due to the ever-increasing demands and pressure on society. It is essential for a substance abuse professional to be aware of the scientific techniques and protocols. This aids in the analysis of human biological matrices such as urine, blood, and hair when interpreting the test results. LINK here [ISSUP-Africa chapter.](#)

Upcoming Events

International Medicine in Addiction Conference 2021 (IMiA21)

February 26-28, 2021. Online. This year's theme of 'Connecting the Disconnected' acknowledges that

News and Events

By Fengyuan (Linda) Li

doctors work with patients and communities who use substances that can cause complex issues, disconnection and marginalization, and that they need to respond to unique situations and issues. To hear from keynote speakers and view the full program, click here: [Connecting the Disconnected-IMiA21](#).

44th Annual Research Society on Alcoholism Meeting/Joint Meeting with ISBRA

June 19-23, 2021. Virtual. The RSA/ISBRA joint meeting provides a forum for alcohol researchers – from all disciplines – to present their latest findings and to learn about new research developments in an environment that will promote interaction at both the professional and personal level. Find more information about the 2021 RSA/ISBRA joint meeting at [RSA/ISBRA 2021](#).



Interview with a Scientist

By Rosana Camarini

Dr. Markus Heilig



How did your interest grow in the area of alcohol research?

It all started out from an interest in how stress influences people. This was an era when novel neuropeptides were discovered almost every day. It was clear that some, such as the corticotropin releasing hormone (CRH, or CRF), were critical to mount adaptive responses to stress. I was in medical school, but in parallel did a PhD in neurochemistry. The experimental work was on neuropeptide Y (NPY), amygdala function, and mechanisms of stress and fear.



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Dr. Markus Heilig

We discovered that while CRF looked like an on-switch for stress-responses, NPY showed many characteristics of an off-switch. Of course both stress responses and the neuropeptides that mediated them spanned the divide between the CNS and the periphery. The same molecules seemed to act both on the body and the brain, frequently in concert. So for a while, I got distracted into endocrinology, which was great fun, and almost got me to become an internist. In fact, a major reason I took a break in my residency and went off to do a postdoc in the US was to put off the choice between internal medicine and my original interest in psychiatry. Through a series of serendipitous circumstances, I had the great fortune of ending up in George Koob's lab, and that became a truly formative experience. Here, addiction and stress really were beginning to come together in full force. More than any of the research on brain reward systems, this seemed to capture the realities of patients with addictive disorders. With alcohol addiction, the stress connection seemed particularly important. I was inoculated, but there was a certain incubation time, and I didn't really venture into real alcohol research until I started setting up my own lab in Sweden.

What were the challenges you found during the early stage of your career as a scientist, and how did you overcome them?

When I got back from my post-doc, it was quite challenging to complete clinical training, start a basic research lab, and develop a clinical research program, all at the same time. Without the support of Jörgen Engel, a pharmacology professor and a wonderful alcohol researcher himself, I don't think it would have been possible. I thought it was going to get easier once I completed my residency and got recruited to Karolinska. But with that came clinical and leadership

responsibilities that really only meant the pressures shifted. Not to mention little things like meeting my wife, setting up a home together and having kids... I got a lot of advice at that time that I am very happy I did not follow. The term translational research didn't exist yet. People, some of them quite prominent, told me to drop either basic or clinical research, and focus. The classical recipe for academic success, then as now, was to find a niche, and become identified as an expert in that niche. But I really felt that the disconnect between basic and clinical science needed to be bridged, in psychiatry in particular. So I persisted. I am honestly not quite sure how it all came together. Great coworkers – Wolfgang Sommer, Annika Thorsell and others – were clearly a critical element. So was Helena, my beautiful wife, who was willing to follow me wherever science took us. And having a great mentor like George was critical. He taught me, by example, the hallmarks of good research – stringent hypotheses, solid and interpretable experimental designs, and good quality in data. He also set the standards for hard work. I remember him once showing me a note by Walle Nauta, the famous neuroanatomist. I think it went something like "great efforts overcome great obstacles". That stuck with me. So I guess passion, discipline and hard work were key elements, as well.

What were the benchmark studies (bench to bedside and vice versa) that caught your attention during your career in alcohol research?

There are so many, some of them not necessarily alcohol studies themselves. I was fascinated by the early discoveries from Hughes and Kosterlitz, Snyder, Terenius and others, who made us realize how opioids produce their effects and also become addictive by tapping into an

Interview with a Scientist By Rosana Camarini

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endogenous neuromodulator system. Another eyeopener were the early papers from George Koob's lab, showing how CRH mediated the anxiety-like consequences of alcohol withdrawal, and the motivation to consume alcohol during withdrawal. These discoveries were fascinating but also somewhat frustrating, because they were on one hand mechanistically so elegant, but on the other hand in a way seemed to live in a universe quite separate from that of clinical psychiatry. The work of Dole, Kreek and Gunne on methadone maintenance was what convinced me that addiction can be effectively treated clinically with pharmacology. This was widely neglected or even opposed in those days, in particular in Sweden. When buprenorphine arrived, we introduced it in Sweden, and evaluated it in what became a Lancet paper. The results were so good they still serve as an inspiration and set the bar for our work. Meanwhile, Chuck O'Brien's and Stephanie O'Malley's naltrexone work was obviously crucial, by showing that pharmacological treatment could also be successful in alcohol addiction. This was a beautiful translation of basic science, and Chuck and Stephanie remain my heroes. It is sad that naltrexone is so vastly underutilized. It is a cheap, safe, and well tolerated medication that is highly effective in the right patient. We have good clinical predictors of response. The main reason naltrexone is not being used enough is a very sad one – no one stands to make enough money off this old medication, so no one educates prescribers about its use.

Preclinical modes of AUD have assessed several cellular and molecular targets, yet with little success for clinical translation. What are the main obstacles between preclinical and clinical studies in AUD? What methodological issues have hampered the translation of basic research findings into clinical studies?

Tell me about it. When we finally got our hands on CRH1 antagonists that were safe and well tolerated in humans, I was fantasizing about the champagne George and I would drink together to celebrate this novel, groundbreaking, mechanistically based treatment. Then, in our hands at least, we didn't see the expected effects. These were by no means definitive studies, but the mechanism has not been successfully translated in other stress-related psychiatric disorders, such as depression, anxiety or PTSD, either. Clinical development in big pharma has stopped pretty much everywhere. We had a similar story with neurokinin-1 (NK1) receptor blockers. When I moved back to Sweden 5 years ago, I felt I had to go back to the drawing board, and try to figure out what we might have been missing. I think there are a number of lessons. First, we have to stop pretending that self-administration equals addiction. Controlled use is very different from becoming addicted. Only a vulnerable minority of alcohol users develop the maladaptive behaviors that are characteristic of addiction, such as choosing alcohol over natural rewards, or continuing to use despite adverse consequences. We need to find out the mechanisms of that individual vulnerability. One of the things we have focused on at our new center have been the molecular underpinnings of choosing alcohol over natural rewards. That has helped us identify a GABA-ergic mechanism in the amygdala that on first look at least seems to be involved both in vulnerable rats and in alcohol addicted people. But addiction is a complex syndrome, and we are currently trying to pick it apart into its elements.



Interview with a Scientist By Rosana Camarini

Dr. Markus Heilig

How do you foresee the direction of alcohol research in the coming decades?

It is very difficult to say. Neuroscience has expanded its toolbox in a fascinating way. The ability to identify and control neural circuits afforded by opto- and chemogenetics is something few of us would have been willing to believe until it actually happened. It allows us to establish the causal role of neural circuits for specific behaviors, rather than just observed correlations. This type of work is intellectually exceptionally appealing, and is certainly one of the ways things will go. But unless this is thoughtfully integrated with in-depth behavioral analysis, and probed with good pharmacology, it may never influence the lives of real patients. And beyond all this loom the questions of what encodes the persistent changes in brain function in alcohol addiction that maintain the clinical condition. Certainly identifying epigenetic mechanisms that reprogram the transcriptome in specific neuronal populations is one of the directions I hope the field will go. This has the potential of identifying molecular targets for disease-modifying treatments, i.e. treatments that could normalize the pathophysiology rather than just counteracting it. But none of this will go anywhere unless we find ways of engaging the pharmaceutical industry. For that, we need experimental medicine approaches that can de-risk novel mechanisms without the need for investment in full-scale clinical trials. And we need translational biomarkers, be they behavioral, molecular or imaging-based.

What is the take home message you want to convey to the young investigators?

Life in science is at times very rewarding, but can also be extremely challenging. Unfortunately, the rewards are typically transient, while the challenges tend to be

enduring. Make sure that you know what you are getting yourself into, and that you are really willing to live this kind of life. It is not for everyone. Make sure that the questions you ask are important enough to justify the pain. The ecology of academia is driven too much by publishing and grants, and too little by a desire to address important questions. Make sure you are in an environment that pushes and inspires you. That usually means there needs to be a critical mass of people from different backgrounds, academically, ethnically, gender-wise and in every other way. Don't let yourself become pigeonholed into a narrow methodological niche. Find a mentor at least half as good as the one I had. And never stop. A brutal reality is that scientific discovery to some extent requires luck. You can ask all the right questions, do high quality work, and work really hard, yet have mother Nature simply tell you "that's not how it works". But at least, luck is more likely to happen to a prepared mind.

Looking for Leadership Opportunities?

Be part of an organization that is dedicated to building community amongst ISBRA's diverse population; that is committed to bringing news about career building resources and events to ISBRA members; to being a voice regarding issues that are of importance to ISBRA members. Contact any of the committee officers to find out about being a part of the Communications Committee.



Conference Report By Richa Singhal

Report on Advisory Council Meeting of National Institute on Alcohol Abuse and Alcoholism

The National Advisory Council on Alcohol Abuse and Alcoholism (NIAAA) convened for its 156th meeting on Thursday, February 4, 2021; via NIH Webcast from 12.15 pm to 5.00 pm.

The meeting was open to the public and commenced with NIAAA Director Dr. George Koob's report presentation.

Key scientific lectures during the meeting were presented by Dr. George Kunos on "The peripheral endocannabinoid/cb1 receptor system as an emerging therapeutic target for metabolic and addictive disorders", and by Dr. Laura O'Dell on "Utilizing science as a platform for promoting diversity and understanding nicotine use in vulnerable populations".

The Council further discussed the following: i) Public Policy Effects on Alcohol- and Substance-Related Behaviors and Outcomes, ii) Collaborative Initiative on Fetal alcohol spectrum disorder, iii) National Consortium on Alcohol and Neurodevelopment in Adolescence, iv) Covid-specific funding opportunities and v) Department of Defense report.

The webcast of this meeting will be shortly available once listed as a past event session at the following link: <https://videocast.nih.gov/watch=41350>.

Upcoming meeting dates of the Advisory Council will be May 11th, 2021; and September 9th, 2021.

We are on the Web!

Web address: <https://isbra.com/>

Email: isbraisbra@gmail.com

We are on LinkedIn: [Communication Committee ISBRA](#)

Find us on Twitter at: <https://twitter.com/ISBRAComm>

We are now on ResearchGate: <https://www.researchgate.net/project/International-Society-for-Biomedical-Research-on-Alcoholism>



The International Society of Biomedical Research on Alcoholism BULLETIN

Contributing to the advancement of alcohol research globally

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