Moving the Alcohol Addiction RDoC Forward

Kenneth J. Sher [Curators' Professor of Psychology]
Department of Psychological Sciences, University of Missouri, Columbia.

Litten et al. (in press) lay out an important research agenda for advancing personalized treatment for alcohol use disorders (AUDs), extending the RDoC framework (Cuthbert, 2014) to address alcohol and addiction constructs. Current diagnostic approaches (e.g., DSM-5, American Psychiatric Association, 2013), tell us little about the specific nature of a given individual's disorder or what underlying components to address in treatment. By identifying specific mechanisms that are causing or maintaining AUDs and by targeting them with interventions designed to normalize or stabilize those mechanisms, we should be able to develop novel treatments and to employ existing ones more effectively. As noted by Litten et al., it will also enhance our ability to identify patients with complex syndromes involving multiple dysfunctions and rationally implement combined interventions (e.g., polypharmacy, combined behavioral therapies) involving multiple targets and inform our understanding of comorbidities and their treatment.

Actualizing this vision requires basic research that continues to map the overlap and boundaries among dissociable (e.g., allostasis, incentive-sensitization, habit, response inhibition) yet interrelated (e.g., Lovic et al., 2011) mechanisms. Ultimately, we should be able to translate these mechanisms into tractable clinical assessments that can guide clinical decision-making. This will require considerably more work on measure development. Although much progress has been made in assessing both approach and inhibitory processes associated with addiction (e.g., Stacy & Wiers, 2010), many of these measures' psychometrics indicates further refinement is necessary for reliable and valid application. Even venerable, "tried and true" measures of response inhibition (e.g., go/no-go, stop-signal, anti-saccade tasks) often correlate poorly with each other and have questionable psychometrics (Fillmore & Weafer, 2013). Consequently, improving basic, objective measurement (including both behavioral and biological markers) of key processes will increase the likelihood that the Alcohol Addiction RDoC initiative will fulfill its considerable promise for advancing addiction research and improving patient care.

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Corresponding Author Kenneth J. Sher, Department of Psychological Sciences, University of Missouri, Columbia, 210 McAlester Hall, Columbia, MO 65211, telephone: 573-882-4279, fax: 573-884-5588, sherk@missouri.edu.

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