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RECENT DEVELOPMENTS IN DECODING NEUROBIOLOGICAL PATHWAYS AND TREATMENT TARGETS IN ALCOHOL DEPENDENCE

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Multiple neurochemical pathways have been identified to be involved in mediating craving and relapse to alcohol and, further, animal models greatly assist in investigating pharmacological interventions of relapse behaviour. Opioidergic and glutamatergic systems play a key role in alcoholism as demonstrated by the clinically effective compounds naltrexone and acamprosate acting through these systems. Although the dopaminergic system has been in the focus of alcohol research for many years, clinical trials interfering with several components of this system displayed rather disappointing results. This situation, however, could change in light of the discovery that dopamine D3 receptor antagonism produces very consistent and robust results in preclinical studies. Corticotropin-releasing factor signalling and the endocannabinoid system integrate stress-related events and thereby mediate relapse behaviour. Thus, many new targets have been identified and several new compounds are currently undergoing clinical testing. However, given the heterogeneity in treatment response, genetic and protein markers as well as endophenotypes are currently characterised for individualised pharmacotherapy.