**TABLE 1:** Clinical trials available on ClinicalTrials.gov investigating the use of ketamine as a potential therapeutic approach for treatment-resistant depression and other psychiatric disorders. For completed trials, the references of published work were added if available either from the ClinicalTrials.gov website, or PubMed, upon searching the NCT identifier. If information was available on the main findings of the study, it was added. If the trial was not completed, or it was completed but no information was available in form of published original manuscript, we reported the main research question(s) the study aims to address.

| **Compound** | **Cohort** | **Regimen** | **Research question / Main findings** | **Status** | **Reference** |
| --- | --- | --- | --- | --- | --- |
| Ketamine | Treatment-Resistant Depression | 0.5 mg/kg by IV infusion,once | 67% antidepressant response rate sustained for 12 days. Reduced implicit and explicit suicidal ideation. Riluzole did not prevent relapse | Completed | ClinicalTrials.gov Identifier: NCT00419003(Mathew et al., 2010; Price et al., 2009; Wan et al., 2015) |
| Ketamine | Treatment-Resistant Depression | 0.1, 0.2, 0.5, 1 mg/kgby IV infusion,once | Ketamine is efficacious and relatively well-tolerated in TRD patients at the doses of 0.5 and 1.0 mg/kg | Completed | ClinicalTrials.gov Identifier: NCT01920555(Fava et al., 2018) |
| Ketamine | Treatment-Resistant Depression | 0.5 mg/kg by IV infusion, once | Optimal dose frequency of ketamine in TRD patients. Positive changes include cognitive benefits such as mental alertness, improved sleep, and better concentration | Completed | ClinicalTrials.gov Identifier: NCT01627782NCT01640080(Johnson et al., 2016; Lewis et al., 2019) |
| Ketamine | Treatment-Resistant Depression | 0.5 mg/kg by IV infusion,twice | Ketamine’s antidepressant effects require opioid system activation. Naltrexone blocks the antidepressant but not dissociative effects of ketamine  | Completed | ClinicalTrials.gov Identifier: NCT02911597(Williams et al., 2018) |
| Ketamine | Treatment-Resistant Depression | 0.5 mg/kg by IV infusion,once | Ketamine enhances neural responses to positive emotion within the right caudate | Completed | (Murrough et al., 2015a) |
| Ketamine | Treatment-Resistant Depression | 20-300 mg by IV infusion, 6-55 treatments  | Synergistic effects of transcranial magnetic stimulation to enhance the antidepressant effects of ketamine infusion | Completed | ClinicalTrials.gov Identifier: NCT01816958(Devore Best, 2014) |
| Ketamine | Treatment-Resistant Depression | 0.5 mg/kg by IV infusion,once | Post-ketamine decrease in connectivity between the amygdala and insula regardless of whether it was abnormal at baseline  | Completed | (Nugent et al., 2016) |
| Ketamine | Treatment-Resistant Depression | 0.5 mg/kg by IV infusion twice weekly for 3 weeks | Feasibility, safety and tolerability, efficacy and duration of ketamine augmentation of antidepressant treatment for chronic suicidal ideation TRD | Completed | ClinicalTrials.gov Identifier: NCT01582945(Cusin et al., 2017; Ionescu et al., 2016) |
| Ketamine  | Treatment-Resistant Depression  | 0.5 mg/kg by IV injection, once | Decrease of depression severity from 40 minutes post-injection until day 15. Significant decrease of suicidal ideation until day 7. Higher severity of depression and anxiety at baseline predict greater symptoms improvement | Completed | (Vidal et al., 2018) |
| Ketamine | Treatment-Resistant Depression | 0.5 mg/kg by IV infusion twice weekly for 3 weeks | Acute reduction in global depression scores and in severity of suicidal ideation | Completed | ClinicalTrials.gov Identifier: NCT01667926 |
| Ketamine | Treatment-Resistant Depression | N/A | Efficacy of ketamine administered interleaved to ECT | Completed | ClinicalTrials.gov Identifier: NCT02522377 |
| Ketamine | Treatment-Resistant Depression | N/A | Effects of ketamine on cognitive dysfunction in TRD patients  | Completed | ClinicalTrials.gov Identifier: NCT03134066 |
| Ketamine | Treatment-Resistant Depression | N/A | Emotional processing (MRI) in TRD patients receiving ketamine  | Completed | ClinicalTrials.gov Identifier: NCT02429011 |
| Ketamine | Treatment-Resistant Depression | N/A | Ketamine + Cognitive Behavioral Therapy augmentation | Completed | ClinicalTrials.gov Identifier: NCT03027362 |
| Ketamine | Treatment-Resistant Depression | 40 mg by nasal spray, twice weekly for 2 weeks, then once weekly for 2 weeks | Efficacy of brexpiprazole and ketamine augmentation to ongoing antidepressant therapy in TRD patients | Completed | ClinicalTrials.gov Identifier: NCT03149991 |
| Ketamine  | Treatment-Resistant Depression  | Phase 1: 0.5 mg/kg by IV injection, once. Phase 2: 0.5 mg/kg by IV injection thrice weekly for 2 weeks.Phase 3: 0.5 mg/kg by IV injection once weekly for 4 weeks | Repeated ketamine infusions have cumulative and sustained antidepressant effects. Reductions in depressive symptoms are maintained among responders through once-weekly infusions  | Completed | ClinicalTrials.gov Identifier: NCT01945047(Phillips et al., 2019) |
| Ketamine  | Adolescence Treatment-Resistant Depression  | 0.5 mg/kg by IV infusion thrice weekly for 2 weeks | Treatment-response correlates with greater nucleus accumbens entropy after ketamine. Greater insulin/mTOR/GSK3β signaling in treatment-responders | Completed | ClinicalTrials.gov Identifier: NCT02078817(Cullen et al., 2018) |
| Ketamine  | Adolescence Treatment-Resistant Depression and Anxiety | 0.5 mg/kg by IV infusion, once | Tolerability and short-term efficacy of a single ketamine infusion for the treatment of adolescents with treatment resistant MDD and anxiety | Completed | ClinicalTrials.gov Identifier: NCT02579928 |
| Ketamine  | Adolescence Treatment-Resistant Depression  | 0.5 mg/kg by IV infusion, twice weekly for 3 weeks. Maintenance infusions over 6 months for relapse in treatment-responders  | Antidepressant effects of ketamine on adolescents with treatment refractory MDD  | Active, not yet recruiting | ClinicalTrials.gov Identifier: NCT03889756 |
| Ketamine  | Veterans with late-life Treatment-Resistant Depression | 0.1, 0.25, 0.5 mg/kg by IV infusion, once | Effectiveness of a single ketamine infusion to determine optimal dose. Assess how ketamine works in the body and brain in patients with late-life treatment resistant depression | Active, not recruiting | ClinicalTrials.gov Identifier: NCT02556606 |
| Ketamine | Treatment-Resistant Depression | 0.5 mg/kg by IV infusion, once | Assess the effects of ketamine on alcohol abuse in TRD. Assess the effects of ketamine and alcohol on vmPFC/vACC glutamate change  | Recruiting | ClinicalTrials.gov Identifier: NCT02122562 |
| Ketamine | Treatment-Resistant Depression | 0.5 mg/kg by IV infusion, twice weekly for 4 weeks;2.0-2.5 mg/kg via intranasal spray twice weekly for 4 weeks;2.5 mg per OS 2.0-2.5 mg/kg, twice weekly for 4 weeks  | Assess optimal dose, treatment frequency, duration of treatment, and side effects | Recruiting | ClinicalTrials.gov Identifier: NCT04226963 |
| Ketamine | Treatment-Resistant Depression | Twice orally, twice IV infusion. Dose N/A | Assess AMPAR involvement in the antidepressant effects of ketamine. Changes in slow-wave neural activity, changes in synaptic plasticity  | Recruiting | ClinicalTrials.gov Identifier: NCT03973268 |
| Ketamine | Treatment-Resistant Depression | 40 mg via intranasal spray, once | Brain activity and biological predictors of antidepressant response of intranasal ketamine  | Recruiting | ClinicalTrials.gov Identifier: NCT04216888 |
| Ketamine | Treatment-Resistant Depression | 0.5 mg/kg by IV infusion, repeated (frequency not reported)  | Evaluation of schemes of administration of intravenous ketamine in depression. ACC neurotransmitters evaluation | Recruiting | ClinicalTrials.gov Identifier: NCT03742557 |
| Ketamine | Treatment-Resistant Depression | 0.3-1.5 mg/kg, IM/SC, up to 3 times weekly | Assess long-term safety, tolerability and effectiveness of repeated administration of ketamine for TRD | Recruiting | ClinicalTrials.gov Identifier: NCT04021433 |
| Ketamine | Treatment-Resistant Depression | N/A | Long-term (5 years) follow up study on depressive symptoms and time to relapse after treatment | Recruiting | ClinicalTrials.gov Identifier: NCT04238039 |
| Ketamine | Treatment-Resistant Depression | Arm 1: 0.75 mg/kg as part of ECT anesthesia, eight sessions Arm 2: 0.5 mg/kg, on 8 successive weekdays | Comparison of ketamine anesthesia + ECT therapy or high intensity ketamine | Recruiting | ClinicalTrials.gov Identifier: NCT03272698 |
| Ketamine | Treatment-Resistant Depression | N/A | Efficacy of intravenous ketamine on neurocognitive markers. Efficacy of a synergistic intervention for depression combining intravenous ketamine with neurocognitive training | Recruiting | ClinicalTrials.gov Identifier: NCT03237286 |
| Ketamine | Treatment-Resistant Depression | 0.75 mg/kg, IM, thrice weekly for 4 weeks  | Compare ketamine intramuscular (IM) versus aripiprazole and escitalopram in TRD. Safety and tolerability of ketamine IM. Evaluate changes in life quality, cognition and suicide risk  | Enrolling by invitation | ClinicalTrials.gov Identifier: NCT04234776 |
| Ketamine | Treatment-Resistant Depression | 0.00225 mg/kg/min/100 hours | Assess whether a 100 hours infusion of ketamine is feasible in TRD. Assess whether co-administration of clonidine mitigates psychotomimetic effects | Active, not recruiting | ClinicalTrials.gov Identifier: NCT01179009 |
| Ketamine | Treatment-Resistant Depression | 0.5 mg/kg, IV infusion, up to 6 treatments over 3-5 weeks. Dose can be modified per investigator and patient discretion | Antidepressant effects of ketamine vs. electroconvulsive therapy | Active, not recruiting | ClinicalTrials.gov Identifier: NCT03113968 |
| Ketamine | Treatment-Resistant Depression | 60 mg via nasal spray, twice weekly for 4 weeks  | Adjunctive to buprenorphine for concurrent opioid addiction and TRD | Not yet recruiting | ClinicalTrials.gov Identifier: NCT04177706 |
| Ketamine | Treatment-Resistant Depression | N/A  | Assess the effects of ketamine and electroconvulsive therapy on infra-slow waves  | Not yet recruiting | ClinicalTrials.gov Identifier: NCT04022226 |
| Ketamine | Treatment-Resistant Depression | N/A | Assess the synergistic effects of ketamine and repetitive transcranial magnetic stimulation  | Not yet recruiting | ClinicalTrials.gov Identifier: NCT04352621 |
| Ketamine  | Treatment-Resistant Depression  | 75-1000 mg, IV | Neuroanatomical and mood effects of ketamine on treatment resistant depression patients (fMRI) | Withdrawn (Sponsor is no longer interested in funding the study) | ClinicalTrials.gov Identifier: NCT04205890 |
| Ketamine | Treatment-Resistant Depression | N/A | Subacute (24h) effects of ketamine on resting state functional connectivity, cognitive control, and reward learning | Not yet recruiting | ClinicalTrials.gov Identifier: NCT04239963 |
| Ketamine | Treatment-Resistant Depression | 0.5-1 mg/kg by IV infusion, once | Antidepressant and anti-suicidal effects of low dose ketamine infusion for refractory and non-refractory depression | Not yet recruiting | ClinicalTrials.gov Identifier: NCT04283058 |
| **SUICIDALITY** |
| Ketamine | Treatment-Resistant Depression, Suicidal Ideation or Behavior | N/A | Effects of ketamine on suicidal ideation in suicide attempters and embodied emotions in individuals who underwent a romantic relationship break-up  | Recruiting | ClinicalTrials.gov Identifier: NCT02037503 |
| Ketamine | Treatment-Resistant Depression / suicidality | 0.5 mg/kg by IV infusion, twice | Antidepressant effects / improvements in suicidal ideation | Not yet recruiting | ClinicalTrials.gov Identifier: NCT04101474 |
| Ketamine | Treatment-Resistant Depression and comorbid Alcohol Disorder | 0.5 mg/kg by IV infusion, once weekly for 4 weeks | Evaluate if naltrexone plus ketamine is effective in reducing depression and comorbid alcohol abuse | Completed | ClinicalTrials.gov Identifier: NCT03658330 |
| Ketamine | Treatment-Resistant Depression or Bipolar Depression  | 0.5 mg/kg by IV infusion, 6 infusions over 12 days  | Decreased depression scores and suicidal ideation | Completed | ClinicalTrials.gov Identifier: NCT02593643(Sinyor et al., 2018) |
| Ketamine | Suicidal ideation | 0.2 mg/kg by IV infusion, once | Ketamine relieves suicidal thoughts in 88% of patients within 90 minutes | Completed | ClinicalTrials.gov Identifier: NCT01887990(Domany et al., 2020) |
| Ketamine | Suicidal ideation  | 0.5 mg/kg by IV infusion, twice  | Relief of suicidal ideation in patients hospitalized for suicide risk | Completed | ClinicalTrials.gov Identifier: NCT02299440 |
| Ketamine | Unipolar Depression with current Major Depressive Episode and suicidal ideation | 0.5 mg/kg by IV infusion, once | Assess the relief of suicidal thoughts elicited by ketamine, effects of ketamine on cortisol awakening response, and neuropsychological effects | Completed | ClinicalTrials.gov Identifier: NCT01700829(Grunebaum et al., 2018) |
| Ketamine | Suicidal Ideation or Behavior | Dose N/A,up to 5 administrations over 2 weeks | Neurobiological substrates of suicide (MRI)  | Recruiting | ClinicalTrials.gov Identifier: NCT02543983 |
| Ketamine  | Severe depression and suicidal ideation  | 0.5 mg/kg by IV infusion, once | Anti-suicide and antidepressant effects of ketamine | Recruiting | ClinicalTrials.gov Identifier: NCT03666390 |
| Ketamine | Suicidal ideation | 0.5 mg/kg by IV infusion, once | Acceptability and efficacy of ketamine as emergency treatment for patients who voluntarily present to the Emergency Department with suicidal ideation  | Recruiting | ClinicalTrials.gov Identifier: NCT04099771 |
| Ketamine  | Veterans with Suicidal Ideation  | 40 mg via intranasal spray, 8 doses (frequency N/A)  | Safety, efficacy, and feasibility of multiple doses of intranasal ketamine for suicidal ideation Veterans | Recruiting | ClinicalTrials.gov Identifier: NCT03788694 |
| Ketamine  | Acute Suicidal Behavior or Ideation in Bipolar Disorder  | 0.5 mg/kg by IV infusion, once | Effects of ketamine infusion in Bipolar Disorder patients with acute suicidal behavior or ideation | Recruiting | ClinicalTrials.gov Identifier: NCT03396601 |
| Ketamine | Suicidal Ideation | 0.5 mg/kg by IV infusion, once | Acute and sustained impact of ketamine on suicidal ideation and impact of a computer-based training protocol. Assess whether ketamine can prime the brain for helpful forms of learning | Enrolling by invitation | ClinicalTrials.gov Identifier: NCT04154150 |
| Ketamine | Depression or suicidal ideation in the ED | 0.5 mg/kg by IV infusion, once | Low-dose ketamine for depression or suicidal ideation at the Emergency Department | Enrolling by invitation | ClinicalTrials.gov Identifier: NCT04266288 |
| Ketamine | Acutely suicidal military personnel in the ED | 0.5 mg/kg by IV infusion, once | Assess the efficacy of acute low-dose ketamine infusion on suicidal ideation and behavior  | Enrolling by invitation | ClinicalTrials.gov Identifier: NCT04260607 |
| Ketamine | Suicidal Ideation | 0.5 mg/kg by IV infusion, once | Assess whether buprenorphine augments ketamine’s positive effects on suicidal ideation | Not yet recruiting | ClinicalTrials.gov Identifier: NCT04116528 |
| **MAJOR DEPRESSIVE DISORDER** |
| Ketamine | Major Depressive Disorder | 0.5 mg/kg by IV infusion, once | The initial site of antidepressant action for NMDA antagonists may be the anterior cingulate cortex | Completed | ClinicalTrials.gov Identifier: NCT01046630(Downey et al., 2016) |
| Ketamine | Major Depressive Disorder | 0.5 mg/kg by IV infusion, once | Rapid and sustained antidepressant effects. Patients with anxious depression respond better to ketamine than non-anxious patients and have longer time to relapse. Reduced NMDA and AMPA connectivity estimates in discrete extrinsic connections within the somatosensory cortical network. Ketamine corrects abnormal inflammatory bone markers  | Completed | ClinicalTrials.gov Identifier: NCT00088699(Cusin et al., 2017; Ionescu et al., 2014; Zarate et al., 2006)(Nugent et al., 2019)(Evans et al., 2018a)(Evans et al., 2018b) |
| Ketamine | Major Depressive Disorder | 0.5 mg/kg by IV infusion, once | Detect cortical plasticity biomarkers to predict responders vs. not responders MDD patients | Terminated (results from Cohort 1 did not support conducting Cohort 2.) | ClinicalTrials.gov Identifier: NCT01957410 |
| Ketamine | Major Depressive Disorder | 0.5 mg/kg by IV infusion, once | Efficacy of ketamine + venlafaxine compared to venlafaxine alone  | Completed | ClinicalTrials.gov Identifier: NCT01557712 |
| Ketamine | Major Depressive Disorder | IV infusion of ketamine 0.23 mg/kg bolus over 1 minute followed by 0.58 mg/kg/hr over 30 minutes then 0.29 mg/kg/hr over 64 minutes | Left dorsolateral PFC activation in response to ketamine. Changes correlate with severity of negative symptoms | Completed | ClinicalTrials.gov Identifier: NCT02134951(Javitt et al., 2018) |
| Ketamine | Major Depressive Disorder | 0.25 mg/kg by IV infusion, once | Functional connectivity between prefrontal cortex and subgenual cingulate predicts antidepressant effects of ketamine | Completed | ClinicalTrials.gov Identifier: NCT03609190NCT02099630(Aust et al., 2019; Gartner et al., 2019) |
| Ketamine | Major Depressive Disorder | 0.5 mg/kg by IV infusion, once | Increased blood flow in the cingulate, primary and higher-order visual association regions after first ketamine treatment. Increased blood flow in the fusiform gyrus, and acute changes in visual areas related to symptom improvement after single and repeated ketamine treatment. Serial infusion therapy decreases blood flow in the bilateral hippocampus and right insula. Repeated exposure to ketamine engages deeper limbic structures and insula | Completed | ClinicalTrials.gov Identifier: NCT02165449(Sahib et al., 2020) |
| Ketamine | Major Depressive Disorder | 0.5 mg/kg by IV bolus, once | Electroconvulsive therapy + ketamine had slight greater improvement in depressive symptoms. D2R C957T heterozygotes had greater odds of remission compared with CC homozygotes. Men (not women) carriers of the COMT Val/Val had greater depressive symptom reduction compared with Met/Met carriers.  | Completed | ClinicalTrials.gov Identifier: NCT00680433(Bousman et al., 2015)(Loo et al., 2012) |
| Ketamine | Major Depressive Disorder | 0.5 mg/kg by IV infusion, once | Antidepressant effects comparable to those of electroconvulsive therapy, but with faster onset. Ketamine improves neurocognitive functions, especially attention and executive function, while electroconvulsive therapy slightly worsens them | Completed | ClinicalTrials.gov Identifier: NCT02099630(Basso et al., 2020) |
| Ketamine | Major Depressive Disorder | 0.5 mg/kg by IV infusion, once | Significant improvement in depressive symptoms within 72 hours after ketamine | Completed | (Berman et al., 2000) |
| Ketamine  | Major Depressive Disorder | 0.5 mg/kg by IV infusion, once | Depressive symptoms improvements in MDD patients. Modest but significant increases in depressive symptoms in healthy volunteers for up to 1 day. Increased resting gamma power following ketamine. Higher post-ketamine gamma power associated with response in MDD subjects with low baseline gamma power, with an inverted relationship in MDD subjects with higher baseline gamma  | Completed | (Nugent et al., 2019; Reed et al., 2019) |
| Ketamine | Major Depressive Disorder | 1 mg/kg by IV infusion, once, as part of ECT anesthesia  | Ketamine compared to methohexital anesthesia in MDD patients undergoing electroconvulsive therapy. Decreased nausea and increased visual disturbance and confusion with ketamine | Completed | ClinicalTrials.gov Identifier: NCT01367119 |
| Ketamine | Major Depressive Disorder | 0.5 mg/kg by IV infusion, once | Ketamine-nitroprusside combination for MDD patients | Completed | ClinicalTrials.gov Identifier: NCT03102736 |
| Ketamine | Major Depressive Disorder | 0.1, 0.2, 0.3, 0.4 and 0.5 mg/kg by IV infusion, once.Non-responders to lower doses will be given the option of a second infusion of 0.5 mg/kg once. | Assess Glu and GABA levels before-after ketamine infusion with MRI | Completed | ClinicalTrials.gov Identifier: NCT01558063 |
| Ketamine | Major Depressive Disorder | 0.25 mg/kg by IV infusion, once | Antidepressant efficacy of ketamine for individuals presenting to the Emergency Department with severe depression. Effects on IL1, IL2, IL6, IL8, IL10, IL12 and TNF-α | Completed | ClinicalTrials.gov Identifier: NCT02106325 |
| Ketamine | Major Depressive Disorder | 0.5 mg/kg by IV infusion, thrice weekly until remission, or up to 4 weeks | Antidepressant effects and time to remission of ketamine compared to electroconvulsive therapy | Completed | ClinicalTrials.gov Identifier: NCT02659085 |
| Ketamine | Major Depressive Disorder | 1-2 mg/kg as anesthesia for electroconvulsive therapy, thrice weekly for up to 3-4 weeks  | Ketamine versus methohexital anesthesia as augmentation strategy in MDD patients undergoing electroconvulsive therapy | Completed | ClinicalTrials.gov Identifier: NCT01881763 |
| Ketamine | Major Depressive Disorder | 0.5 mg/kg by IV infusion, twice weekly for up to 6 weeks  | Synergistic effects of twice weekly ketamine + electroconvulsive therapy. Long-term (6 weeks and 3 months) follow-up | Recruiting | ClinicalTrials.gov Identifier: NCT04082858 |
| Ketamine | Major Depressive Disorder | 0.5 mg/kg by IV infusion, once or repeated (frequency N/A) | Study the effects of ketamine and electroconvulsive therapy in MDD with fMRI + EEG + MEG. To study how ketamine effects CSF chemistry and metabolites. Identification of peripheral biomarkers of acute treatment response | Recruiting | ClinicalTrials.gov Identifier: NCT03065335 |
| Ketamine | Major Depressive Disorder | Low-dose ketamine (dose and route N/A)  | SV2A (synaptic vesicle protein 2A) density in MDD and PTSD as a correlate of synaptic density. Assess if ketamine reverses synaptic loss  | Recruiting | ClinicalTrials.gov Identifier: NCT02734602 |
| Ketamine | Major Depressive Disorder | 0.3, 0.5, 0.7 mg/kg by IV infusion, once | Effects of hydroxynorketamine in the antidepressant effects of ketamine  | Recruiting | ClinicalTrials.gov Identifier: NCT03977675 |
| Ketamine | Major Depressive Disorder | 1 mg/kg, oral formulation (not further specified), thrice weekly for two weeks  | Antidepressant efficacy of oral ketamine treatment in patients suffering from a major depressive episode | Recruiting | ClinicalTrials.gov Identifier: NCT02992496 |
| Ketamine | Major Depressive Disorder | Arm 1: 0.25 mg/kg by IV infusion, once.Arm 2: 0.1 mg/kg bolus over 5 minutes and 0.30 mg/kg over 130 minutes | Ketamine decreases SERT occupancy by 10%. Therefore, SERT does not seem to be involved in the antidepressant effects of ketamine | Recruiting | ClinicalTrials.gov Identifier: NCT02717052(Spies et al., 2018) |
| Ketamine | Major Depressive Disorder | 0.5 mg/kg by IV infusion, once | Identification of novel biomarkers of suicidality and ketamine-induced therapeutic outcomes (neural-derived exosomal miRNAs) | Recruiting | ClinicalTrials.gov Identifier: NCT02418195 |
| Ketamine | Major Depressive Disorder  | IV infusion, once (dose N/A) | Assess AMPAR involvement in the antidepressant effects of ketamine  | Recruiting | ClinicalTrials.gov Identifier: NCT03367533 |
| Ketamine | Major Depressive Disorder | 20 and 40 mg, transdermal patch | Antidepressant efficacy of a ketamine transdermal patch  | Active, not recruiting | ClinicalTrials.gov Identifier: NCT03721900 |
| Ketamine | Major Depressive Disorder  | 0.2 mg/kg by IV push,plus 50 mg via intranasal administration, 5 doses.Possibility of additional twice weekly 0.5 mg/kg by IV infusion for two weeks in non-responders to first phase | Efficacy of intranasal vs. intravenous ketamine administration | Active, not recruiting | ClinicalTrials.gov Identifier: NCT02644629 |
| Ketamine | Major Depressive Disorder | 0.5 mg/kg as part of anesthetic induction (route N/A) | Ketamine co-induction for gynecological procedures in MDD patients | Not yet recruiting | ClinicalTrials.gov Identifier: NCT03666494 |
| Ketamine | Major Depressive DisorderBipolar Disorder | 1-1.5 mg/kg for anaesthesia induction  | Assess if electroconvulsive therapy patient recovery time and re-orientation is shorter using ketamine for induction rather than methohexital. No effects on recovery time. Higher adverse effects with ketamine | Completed | ClinicalTrials.gov Identifier: NCT01567852(Yen et al., 2015) |
| Ketamine | Major Depressive Disorder | Twice weekly for 2 weeks (dose N/A) | Synaptic density change as a mediator of antidepressant outcome  | Not yet recruiting | ClinicalTrials.gov Identifier: NCT04091971 |
| Ketamine  | Major Depressive Disorder (Anxious Depression)  | 0.5 mg/kg by IV infusion, once | Identify physiological and cognitive biomarkers for ketamine’s antidepressant effects for anxious depression | Terminated  | ClinicalTrials.gov Identifier: NCT02669043 |
| Ketamine | Major Depressive Disorder and Alcohol Use Disorder | 0.5 mg/kg by IV infusion, once a week for 4 weeks | Assess the efficacy of ketamine in MDD-AUD comorbidity  | Recruiting | ClinicalTrials.gov Identifier: NCT02461927 |
| Ketamine | Major Depressive Disorder/Bipolar Disorder and comorbid Alcohol Use Disorder | 10 mg via intranasal spray, 5 applications over 15 minutes (total 50 mg) | Assess rapid anti-suicidal effects of ketamine for Major Depressive Disorder-Alcohol Use Disorder in depressed-bipolar patients with or without recent comorbid alcohol abuse | Recruiting | ClinicalTrials.gov Identifier: NCT03539887 |
| Ketamine | Military personnel with MDD or BD 1 or 2 | 1-2 mg/kg by IV infusion to induce anaesthesia, for the duration of ECT therapy (2-3 weeks) | Plasma BDNF levels increase only in the ketamine-ECT group. Ketamine anesthesia does not affect post-ECT agitation.Ketamine anesthesia for ECT does not significantly improve depression  | Completed | ClinicalTrials.gov Identifier: NCT02752724(Carspecken et al., 2018) |
| Ketamine | Veterans with Major Depressive Disorder | 0.5 mg/kg by IV infusion, once a week for 2 weeks | The mTORC1 inhibitor rapamycin prolongs the antidepressant effects of ketamine  | Completed | ClinicalTrials.gov Identifier: NCT02487485(Abdallah et al., 2020) |
| Ketamine | Veterans with Major Depressive Disorder | 0.5 mg/kg by IV infusion, once or twice a week for 6 weeks (max 6 infusions) | Efficacy of ketamine, and follow-up at 1, 3, and 6 months | Active, not recruiting | ClinicalTrials.gov Identifier: NCT03053830 |
| Ketamine | Veterans with Major Depressive Disorder | Arm 1: 0.5 mg/kg by IV infusion, onceArm 2: 0.5 mg/kg by IV infusion, thrice weekly for 2 weeks | Assess if multiple infusions of ketamine provide greater and longer antidepressant effects than a single infusion | Completed | ClinicalTrials.gov Identifier: NCT02360280 |
| Ketamine | Major Depressive Disorder, Anxiety and Suicidal Ideation in the Emergency Department | 0.2 mg/kg by IV push, once | Feasibility, tolerability and efficacy of single-dose ketamine in depressed patients who present to the Emergency Department with suicidal ideation | Completed | ClinicalTrials.gov Identifier: NCT01209845 |
| Ketamine | Major Depressive Disorder / Bipolar Depression | 0.5 mg/kg by IV infusion, thrice weekly for 3-4 weeks after ECT treatment. Responders can receive maintenance infusions once weekly for 4 weeks, once every 2 weeks for 4 weeks, and once monthly for three months  | Ketamine versus electroconvulsive therapy in depression | Recruiting | ClinicalTrials.gov Identifier: NCT03674671 |
| Ketamine | Comorbid Major Depressive Disorder and Bipolar Disorder | 0.05 mg/kg by IV infusion, once weekly for 4 weeks | Efficacy of ketamine as adjunctive therapy for MDD-BD comorbidity | Completed | ClinicalTrials.gov Identifier: NCT03256162 |
| Ketamine | Bipolar Depression  | 0.5 mg/kg by IV infusion, once  | Efficacy of ketamine in relieving suicidal thoughts in BD patients | Completed | ClinicalTrials.gov Identifier: NCT01944293 |
| Ketamine | Non-Psychotic Major Depressive Disorder and Bipolar I or II Depression | 0.5 mg/kg by IV infusion, thrice (frequency N/A | Predictive and response biomarkers development for ketamine’s effects in non-psychotic unipolar major depression and bipolar I or II depression | Enrolling by invitation | ClinicalTrials.gov Identifier: NCT03156504 |
| Ketamine  | Major Depressive Disorder, Bipolar Disorder I and II, Suicidal Ideation | Acute phase: 0.3-0.5 mg/kg by IV infusion, thrice weekly for up to 2 weeks.Maintenance phase for responders: 0.3 mg/kg by IV infusion, once weekly for 4 weeks  | 41.7% of patients remitted and 58.3% responded to acute ketamine. Remitted patients experienced further improvements during continuation-phase treatment. Mild and transient side effects. One subject developed behavioral outbursts and suicide threats during follow-up while hospitalized. One subject died of suicide several weeks after end of follow-up sessions. | Completed | ClinicalTrials.gov Identifier: NCT02094898(Vande Voort et al., 2016) |
| Ketamine | Major Depressive DisorderTreatment-Resistant DepressionSuicidal ideation  | 0.5 mg/kg by IV infusion, once.0.5 mg/kg by IV infusion, once weekly for 4 weeks.50 mg via intranasal spray, once | Safety and tolerability of ketamine for TRD. Rapid beneficial effects on suicidal ideation. Rapid antidepressant effects. Ketamine rapidly (4h) decreases IL6 and IL1α. No changes at 24h.Lithium continuation does not prolong the antidepressants effects of ketamine | Completed | ClinicalTrials.gov Identifier: NCT00548964NCT00419003NCT00768430NCT01304147NCT01507181NCT01880593NCT00548964NCT01880593(aan het Rot et al., 2010; Costi et al., 2019; Kiraly et al., 2017; Lapidus et al., 2014; Murrough et al., 2013; Murrough et al., 2015b; Price et al., 2009; Wan et al., 2015)  |
| Ketamine | Major Depressive Disorder patients undergoing spinal surgery  | 0.5 mg/kg by IV infusion, once | Assess the postoperative antidepressant effects of ketamine when given preoperative to spinal surgery in MDD patients  | Not yet recruiting  | ClinicalTrials.gov Identifier: NCT04220125 |
| Ketamine  | Preoperative Major Depressive Disorder patients | 0.5 mg/kg by IV infusion, once, at anaesthesia induction | Assess whether ketamine as anaesthetic has antidepressant effects on depressed patients undergoing surgery | Terminated | ClinicalTrials.gov Identifier: NCT02422303 |
| Ketamine | MDD patients undergoing primary total joint arthroplasty | 0.5 mg/kg by IV infusion, once | Perioperative ketamine on postoperative depression symptoms  | Recruiting | ClinicalTrials.gov Identifier: NCT03861988 |
| **POST-TRAUMATIC STRESS DISORDER** |
| Ketamine | Post-Traumatic Stress Disorder | 0.5 mg/kg by IV infusion, once | Rapid and sustained PTSD symptom reduction  | Completed | ClinicalTrials.gov Identifier: NCT00749203(Feder et al., 2014) |
| Ketamine | Veterans with Post-Traumatic Stress Disorder  | Low-dose IV infusion, 6 infusions (dose and frequency N/A) | Efficacy of ketamine on combat-related PTSD | Completed | ClinicalTrials.gov Identifier: NCT03088384 |
| Ketamine | Comorbid Post-Traumatic Stress Disorder and Major Depressive Disorder | N/A | Assess binding of ketamine to mGluR5 | Completed | ClinicalTrials.gov Identifier: NCT01691092 |
| Ketamine | Comorbid Post-Traumatic Stress Disorder and chronic pain | 0.5 mg/kg by IV infusion, once | Assess PTSD and pain symptom reduction  | Completed | ClinicalTrials.gov Identifier: NCT04322968 |
| Ketamine  | Paramedics with Post Traumatic Stress Disorder | Six IV infusions over 3 weeks (dose N/A)  | Psychological screening of paramedics with PTSD before-after ketamine to assess effects on PTSD and suicidal symptoms | Recruiting | ClinicalTrials.gov Identifier: NCT03947099 |
| Ketamine | Post-Traumatic Stress Disorder | 0.5 mg/kg by IV infusion, once weekly for 3 weeks | Efficacy of ketamine in combination with Prolonged Exposure Therapy for PTSD | Recruiting | ClinicalTrials.gov Identifier: NCT03960658 |
| Ketamine | Military personnel with treatment-Resistant Post-Traumatic Stress Disorder | 0.2-0.5 mg/kg by IV infusion, twice weekly for 4 weeks | Safety and efficacy of ketamine in reducing PTSD symptoms in active duty military and veteran population | Recruiting | ClinicalTrials.gov Identifier: NCT02655692 |
| Ketamine  | Injured military personnel with emerging PTSD symptoms | N/A | Determine the relationship between ketamine administration for combat-related pain and emerging symptoms of PTSD, anxiety, sleep disruption, and alcohol abuse  | Completed | ClinicalTrials.gov Identifier: NCT04053400 |
| Ketamine | Veterans with comorbid Post-Traumatic Stress Disorder and Major Depressive Disorder | 0.5 mg/kg by IV infusion, twice weekly for 3 weeks | Assess neuroanatomy and executive functioning resulting from repeated ketamine infusion in veterans with treatment-resistant Post-Traumatic Stress Disorder and Major Depressive Disorder | Recruiting | ClinicalTrials.gov Identifier: NCT04032301 |
| Ketamine | Comorbid Post-Traumatic Stress Disorder and Major Depressive Disorder | 0.5 mg/kg by IV infusion, thrice weekly for 2 weeks | Rapid and sustained improvement in PTSD and depression symptoms. Remission rate for PTSD 80.0%. Response rate for TRD 93.3%. Median time to PTSD relapse 41 days | Completed | ClinicalTrials.gov Identifier: NCT02577250(Albott et al., 2018) |
| **POSTPARTUM DEPRESSION** |
| Ketamine | Healthy Lactating Women  | 0.5-1 mg/kg IM on 2 separate days at least 5 days apart | Pharmacodynamics of ketamine in breast milk for post-partum depression and general ketamine pharmacotherapy in women | Recruiting by invitation | ClinicalTrials.gov Identifier: NCT04285684 |
| Ketamine  | Postpartum Depression  | 0.2-0.5 mg/kg by IV infusion, twice | Assess the safety, pharmacokinetics and antidepressant efficacy of ketamine in perinatal depression | Recruiting  | ClinicalTrials.gov Identifier: NCT04011592 |
| Ketamine | Postpartum Depression | 0.5 mg/kg by IV infusion, once after childbirth during cesarean delivery | Ketamine for preventing Postpartum Depression after cesarean section | Not yet recruiting | ClinicalTrials.gov Identifier: NCT04227704 |
| Ketamine | Postpartum depression  | 0.2-0.5 mg/kg by IV infusion, once after childbirth during cesarean delievry | Assess the efficacy of low-dose ketamine during cesarean section and after childbirth in preventing postpartum depression in parturients with prenatal depression | Not yet recruiting | ClinicalTrials.gov Identifier: NCT03927378NCT03336541 |
| **AUTISM SPECTRUM DISORDER** |
| Ketamine  | Autism Spectrum Disorder | Two ascending doses of intranasal ketamine (dose N/A) | Safety, tolerability and efficacy of intranasal ketamine on social impairment in ASD individuals. Pharmacokinetic, molecular pharmacodynamic, and electrophysiological assessments of intranasal ketamine in ASD individuals | Completed | ClinicalTrials.gov Identifier: NCT02611921 |
| Ketamine  | Children with Autism Spectrum Disorder | Intranasal ketamine (dose N/A) | Efficacy and safety of intranasal ketamine with dexmedetomidine for children with ASD  | Recruiting | ClinicalTrials.gov Identifier: NCT03434366 |
| **OBSESSIVE-COMPULSIVE DISORDER** |
| Ketamine | Treatment-resistant Obsessive-Compulsive Disorder | 0.5 mg/kg by IV infusion, once | Percentage reduction in depressive symptoms was greater than the mild reduction in OCD symptoms | Completed | ClinicalTrials.gov Identifier: NCT01349231(Bloch et al., 2012) |
| Ketamine | Obsessive-Compulsive Disorder | 0.5 mg/kg by IV infusion, once | Rapid and sustained anti-OCD effects. Cognitive behavioural therapy may help prolong ketamine’s positive effects on OCD | Completed | ClinicalTrials.gov Identifier: NCT01100255(Rodriguez et al., 2013; Rodriguez et al., 2015; Rodriguez et al., 2016b) |
| Ketamine | Obsessive-Compulsive Disorder | 0.5 mg/kg by IV infusion, once | Identify molecules, circuits, and network synchrony to determine how NMDA receptor antagonism modifies the underlying pathology of OCD  | Recruiting | ClinicalTrials.gov Identifier: NCT02624596 |
| Ketamine | Pediatric-Refractory Obsessive-Compulsive Disorder  | 0.5 mg/kg by IV infusion, once | Acceptability, feasibility and efficacy of single ketamine infusion for the rapid treatment of OCD symptoms in adolescents and young adults | Completed | ClinicalTrials.gov Identifier: NCT02422290 |
| Ketamine | Obsessive-Compulsive Disorder | 0.5 mg/kg by IV infusion, once | Rapid OCD symptoms reduction with ketamine.Ketamine non-responders do not respond to subsequent memantine.  | Completed | ClinicalTrials.gov Identifier: NCT00956085(Rodriguez et al., 2016a) |
| **SUBSTANCE ABUSE** |
| Ketamine  | Cocaine Use Disorder | 0.5 mg/kg by IV infusion, once | A single ketamine infusion promotes abstinence, diminishes craving, and reduces the risk of relapse | Terminated (Running final participants unnecessary) | ClinicalTrials.gov Identifier: NCT01535937(Dakwar et al., 2019) |
| Ketamine  | Cocaine Use Disorder | 0.41-0.71-2 mg/kg by IV infusion, once | Positive effects on motivation to quit cocaine and on cue-induced craving | Completed | ClinicalTrials.gov Identifier: NCT01790490NCT02596022(Dakwar et al., 2017; Dakwar et al., 2014) |
| Ketamine  | Tobacco Use Disorder | 0.5 mg/kg by IV infusion, once | Efficacy, tolerability and acceptability of single ketamine administration on cigarette craving and smoking behaviour | Recruiting | ClinicalTrials.gov Identifier: NCT03813121 |
| Ketamine | Alcohol Use Disorder | 0.71 mg/kg by IV infusion, once | Ketamine significantly increased the likelihood of alcohol abstinence, delayed the time to relapse, and reduced the likelihood of heavy drinking days compared with midazolam | Completed | ClinicalTrials.gov Identifier: NCT02539511(Dakwar et al., 2020) |
| Ketamine | Major Depressive Disorder and Alcohol Use Disorder | 0.5 mg/kg by IV infusion, once | Antidepressant effects of ketamine in subjects with a comorbid major depressive episode and alcohol dependence | Completed | ClinicalTrials.gov Identifier: NCT01551329 |
| Ketamine | Treatment-Resistant Bipolar Depression | 0.5 mg/kg by IV infusion, once | Ketamine followed by daily D-cycloserine leads to a mean reduction of 48% in bipolar symptoms | Completed | ClinicalTrials.gov Identifier: NCT01833897(Kantrowitz et al., 2015) |
| **PALLIATIVE CARE** |
| Ketamine | Depressed cancer patients  | 1 mg/kg, oral mixed with syrup, once daily for 12 weeks | Acceptability ad feasibility of ketamine as an antidepressant, anxiolytic and analgesic during cancer therapy  | Completed | ClinicalTrials.gov Identifier: NCT02836288 |
| Ketamine | Depressed cancer patients receiving palliative care | 3 intranasal doses: 50 mg on day 1, 50-100 mg on day 4, 50-150 mg on day 7  | Antidepressant effects of intranasal ketamine in cancer patients receiving palliative care | Active, not recruiting | ClinicalTrials.gov Identifier: NCT03410446 |
| Ketamine | Depressed cancer patients receiving palliative care | 0.5 mg/kg by IV infusion, once | Assess the effects of ketamine and milnacipran in combination for palliative care | Recruiting | ClinicalTrials.gov Identifier: NCT02783430 |
| Ketamine | Depressed cancer patients undergoing craniotomy and tumor resection | 0.5 mg/kg by IV infusion, once at dural opening | Efficacy of perioperative ketamine in postoperative depressive symptoms, anxiety, pain and delirium  | Completed  | ClinicalTrials.gov Identifier: NCT03086148 |
| **OTHERS** |
| Ketamine  | Opioid-tolerant patients with chronic back pain undergoing spinal laminectomy/fusion surgery  | 1 mg/kg by IV infusion after anaesthesia induction.Subsequently, 0.2 mg/kg/hr for 48 hours | Assess whether perioperative ketamine increases postoperative pain tolerance and reduces opiate use, while reducing emotional distress related to depression and anxiety  | Recruiting | ClinicalTrials.gov Identifier: NCT04220489 |
| Ketamine | Recreational polydrug users  | 0.5 mg/kg by IV infusion, once.84-112 mg per intranasal spray  | Assess the abuse potential of intranasal esketamine compared to intravenous ketamine in nondependent recreational users  | Completed | ClinicalTrials.gov Identifier: NCT02682225 |
| Ketamine | Schizophrenic Patients | IV infusion to achieve plasma concentration of 100 ng/ml | Determine the effects of ketamine and risperidone antagonism on cognitive performance. Assess whether healthy volunteers receiving ketamine and SCZ patients perform similarly in a biomarker test battery | Completed | ClinicalTrials.gov Identifier: NCT01140620 |
| Ketamine | Schizophrenic Patients | N/A | Assess the effect of emotions on cognition by examining the effect of reward processing on working memory in SCZ patients | Recruiting | ClinicalTrials.gov Identifier: NCT03842800 |
| Ketamine | Non-Suicidal Self-Injuries (NSSI) urges or behavior in hospitalized women with history of childhood abuse  | 0.5 mg/kg by IV infusion, once | Assess whether ketamine decreases Non-Suicidal Self-Injuries in women with a history of childhood sexual abuse | Recruiting | ClinicalTrials.gov Identifier: NCT04242914 |
| Ketamine | Depressed elderly patients undergoing ophthalmologic surgery  | 0.5 mg/kg by IV infusion, once | Antidepressant effects of ketamine in depressed elderly patients undergoing ophthalmologic surgery | Completed | ClinicalTrials.gov Identifier: NCT03473431 |
| Ketamine  | Carriers of CYP2B6 polymorphisms  | 0.4 mg/kg by IV infusion, once  | CYP2B6\*6 polymorphism diminishes ketamine metabolism *in vitro*, but not *in vivo* | Completed | ClinicalTrials.gov Identifier: NCT01988922(Rao et al., 2016) |
| Ketamine  | Children | N/A | Safety and effectiveness of dexmedetomidine, an FDA approved alpha-2 adrenergic agonist, in preventing ketamine-induced mental symptoms in children | Completed | ClinicalTrials.gov Identifier: NCT00205712 |
| Ketamine  | Aneurysmal subarachnoid hemorrhage- (aSAH) induced neurologic deficit | 5 µg/kg/min for 4 hours | Physiological, anti-inflammatory and neuroprotective effects of ketamine following aSAH in intensive care unit | Recruiting | ClinicalTrials.gov Identifier: NCT02636218 |
| Ketamine | Rett Syndrome  | 0.75-1.5-3-4.5 mg/kg, oral, twice daily for 5 days  | Safety, tolerability and efficacy of oral ketamine in patients with Rett Syndrome | Recruiting | ClinicalTrials.gov Identifier: NCT03633058 |
| Ketamine | Borderline Personality Disorder | 0.5 mg/kg by IV infusion, once | Efficacy of ketamine on suicidal ideation in BPD. Other outcome measures: pain, social cognition, neuroplasticity | Suspended (recruitment on hold due to COVID-19 risk) | ClinicalTrials.gov Identifier: NCT03395314 |
| **HEALTHY VOLUNTEERS** |
| Ketamine | Healthy Volunteers | 0.3 mg/kg by IV infusion, once, or 100 mg per OS | Investigate whether the mGluR2 positive allosteric modulator JNJ-40411813 reduces the psychosis-like symptoms induced by ketamine. JNJ-40411813 ameliorates smoking withdrawal-induced changes in attention and memory | Completed | ClinicalTrials.gov Identifier: NCT01101659(Salih et al., 2015)(Kleinloog et al., 2015) |
| Ketamine | Healthy Volunteers | IV infusion to reach plasma concentration of 200 ng/ml. (between 42.5 and 46.2 mg) | Assess the effects of enhancing noradrenergic neurotransmission with atomoxetine to decrease striatal ketamine uptake | Completed | ClinicalTrials.gov Identifier: NCT01794975(Lehto et al., 2015) |
| Ketamine | Healthy volunteers | 0.12 mg/kg via IV bolus followed by continuous infusion of 0.31 mg/kg/hr for 150 minutes  | Efficacy of TAK-063 on preventing ketamine-induced brain activity changes and psychotic-like symptoms. Ketamine induces blood flow in the anterior and posterior cingulate cortex, striatum, amygdala, substantia nigra, thalamus, ventro- and dorsolateral prefrontal cortex, subgenual cingulate/Ba25, and paracingulate gyrus/Ba32 | Completed | ClinicalTrials.gov Identifier: NCT01892189(Yurgelun-Todd et al., 2020) |
| Ketamine | Healthy volunteers  | 0.11 mg/kg via IV bolus followed by maintenance infusion of 0.12 mg/kg for 19 minutes | Neural activation observed in the midcingulate cortex, the dorsal part of the ACC, the insula, and the thalamus. A significant decrease in a cluster within the subgenual/subcallosal part of the ACC, the orbitofrontal cortex and the gyrus rectus. Ketamine increases cortico-thalamic connectivity of the somatosensory and temporal cortices | Completed | ClinicalTrials.gov Identifier: NCT01394757(Hoflich et al., 2017b)(Hoflich et al., 2017a; Hoflich et al., 2015) |
| Ketamine | Healthy volunteers  | 0.23 mg/kg bolus over 1 min, followed by 0.58 mg/kg per hr per 30 min, followed by 0.29 mg/kg per hr per 69 min | The glycine transporter-1 inhibitor Org 25935 reduces the psychotomimetic effects of ketamine Nicotine does not attenuate ketamine-induced cognitive deficits and psychotomimetic effects | Completed | ClinicalTrials.gov Identifier: NCT00690170(D'Souza et al., 2010; D'Souza et al., 2012) |
| Ketamine | Healthy Volunteers | 0.8 mg/kg by IV infusion, once  | No alteration in striatal [11C] raclopride binding. Ketamine does not bind D2 or induce dopamine release in the striatum | Completed | (Aalto et al., 2002) |
| Ketamine  | Healthy volunteers | 0.5 mg/kg by IV infusion, once | Identification of brain areas that predict ketamine’s antidepressants effects | Completed | ClinicalTrials.gov Identifier: NCT02544607 |
| Ketamine | Healthy volunteers  | 0.23 mg/kg over 1 minute, followed by 0.58 mg/kg/hour for 30 minutes, followed by 0.29 mg/kg/hour for 50 minutes. | Assess common features of electrophysiological measures in schizophrenia and ketamine in healthy volunteers | Completed | ClinicalTrials.gov Identifier: NCT02675530 |
| Ketamine | Healthy volunteers  | N/A | Safety, tolerability, pharmacokinetics, and pharmacodynamic of SAGE-718- ketamine challenge (MRI) | Completed | ClinicalTrials.gov Identifier: NCT03770780 |
| Ketamine | Healthy volunteers  | 0.23 mg/kg over 1 minute, followed by a maintenance rate of 0.58 mg/kg/hr for 75 minutes | Assess if PF-04958242 can attenuate the ketamine-induced cognitive impairment in verbal learning and memory, episodic memory and spatial working memory  | Completed | ClinicalTrials.gov Identifier: NCT01749098 |
| Ketamine | Healthy volunteers  | 0.5 mg/kg by IV infusion, once | Preventive effects of ketamine on laboratory-induced stress. Effects on the HPA axis  | Recruiting | ClinicalTrials.gov Identifier: NCT04173962 |
| Ketamine | Healthy volunteers  | 0.05 and 0.5 mg/kg by IV infusion, once | Assess how ketamine affects the reward circuitries of the human brain  | Recruiting | ClinicalTrials.gov Identifier: NCT03475277 |
| Ketamine | Healthy volunteers  | 0.2 mg/kg by IV infusion, once | Assess the effects of ketamine and THC in relation to neural oscillations and psychosis | Recruiting | ClinicalTrials.gov Identifier: NCT04199468 |
| Ketamine  | Healthy volunteers | N/A | EEG studies of ketamine general anesthesia | Active, not recruiting | ClinicalTrials.gov Identifier: NCT03553758 |
| Ketamine | Healthy volunteers  | 0.12 mg/kg by IV bolus followed by 0.31 mg/kg/h over 40 min | Assess ketamine-induced functional brain changes and whether it involves glutamatergic signaling (attenuated by lamotrigine) | Not yet recruiting | ClinicalTrials.gov Identifier: NCT04156035 |
| Ketamine | Healthy volunteers  | Dose escalation, intranasal spray  | Evaluate the safety and pharmacokinetics of HR071603 ketamine nasal spray in healthy subjects | Not yet recruiting | ClinicalTrials.gov Identifier: NCT04108234 |