<table>
<thead>
<tr>
<th>Author (Year of publication)/Journal/ Country/ FCOI</th>
<th>Study description</th>
<th>Study population</th>
<th>Administration of ketamine</th>
<th>Summary of results</th>
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</thead>
</table>
Diagnosis: unipolar or bipolar depression  
Concurrent antidepressants: no | Route: intravenous  
Dose: 0.5mg/kg over 40 min  
Frequency: one infusion per week for 2 weeks  
Study period: 17 days | Response rate: 50% |
Diagnosis: treatment-resistant depression  
Concurrent antidepressants: not mentioned | Route: intravenous  
Dose: 0.5mg/kg over 40 min  
Frequency: one infusion per week for 2 weeks  
Study period: 21 days | Response rate: 71% after day 1 |
Diagnosis: treatment-resistant depression  
Concurrent medication: yes (lamotrigine or placebo before ketamine, riluzole or placebo after ketamine) | Route: intravenous  
Dose: 0.5mg/kg over 40 min  
Frequency: single dose  
Follow-up: 4 weeks | Response rate: 54% at 72h after infusion  
After 1 month, 80% relapse on riluzole (v. 50% relapse on placebo) |
| Ibrahim et al (2012) Neuropsychopharmacology USA FCOI: no | RCT, placebo-controlled, open-label on ketamine and double-blind on riluzole v. placebo | N = 42  
Diagnosis: treatment-resistant depression  
Concurrent medication: yes (riluzole or placebo after ketamine) | Route: intravenous  
Dose: 0.5mg/kg over 40 min  
Frequency: single dose  
Follow-up: 4 weeks | Response rate: 62% at 6h after infusion  
After 1 month, 73% relapse  
Time to relapse: 17.2 days in ketamine–riluzole group (v. 9.8 days in placebo group) |
| Diazgranados et al (2010a) Archives of General Psychiatry USA FCOI: no | RCT, placebo-controlled, double-blind, cross-over, add-on | N = 18  
Diagnosis: treatment-resistant bipolar depression  
Concurrent medication: lithium, valproate | Route: intravenous  
Dose: 0.5mg/kg over 40 min  
Frequency: single dose  
Follow-up: 2 weeks | Response rate: 71% for ketamine v. 6% for placebo at some point during the trial |
| Diazgranados et al (2010b) Journal of Clinical Psychiatry USA FCOI: no | Single-arm, open-label | N = 33  
Diagnosis: major depressive disorder  
Concurrent medication: no | Route: intravenous  
Dose: 0.5mg/kg over 40 min  
Frequency: single dose  
Follow-up: 230 min | The authors claimed significant reduction in suicide scores, but most participants had low suicide scores at baseline |
| Zarate et al (2012) Biological Psychiatry USA FCOI: no | RCT, placebo-controlled, double-blind, cross-over | N = 15  
Diagnosis: treatment-resistant bipolar depression  
Concurrent medication: yes (mood stabilisers) | Route: intravenous  
Dose: 0.5mg/kg over 40 min  
Frequency: two doses (one dose per week for 2 weeks)  
Follow-up: 2 weeks | Response rate: 79% for ketamine v. 0% for placebo |
| Murrough et al (2013a) Biological Psychiatry USA FCOI: yesb | Open-label  
Phase I: ketamine was infused 3 times per week for 2 weeks  
Phase II: 83-day follow-up period | N = 24  
Diagnosis: treatment-resistant depression  
Concurrent medication: none during 2-week infusion period; not mentioned for 83-day follow-up | Route: intravenous  
Dose: 0.5mg/kg over 40 min  
Frequency: three times a week  
Treatment duration: 12 days  
Follow-up: 83 days | Response rate: 70.8% at day 12  
Median time to relapse: 18 days |
| Murrough et al (2013b) American Journal of Psychiatry USA FCOI: yesb | RCT, active placebo (midazolam), double-blind | N = 72  
Diagnosis: treatment-resistant depression  
Concurrent medication: no | Route: intravenous  
Dose: 0.5mg/kg over 40 min for ketamine; 0.045mg/kg over 40 min for midazolam  
Frequency: single dose  
Follow-up: 1 day | Response rate: 64% for ketamine v. 28% for midazolam |

(continued)
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<td>Lapidus et al (2014) Biological Psychiatry USA FCOI: yes^b</td>
<td>RCT, active placebo, double-blind, cross-over</td>
<td>(N = 20) Diagnosis: major depressive disorder Concurrent medication: yes</td>
<td>Route: intranasal; Dose: 50 mg; Frequency: weekly for 2 weeks; Treatment duration: 14 days; Follow-up period: 7 days after each treatment</td>
<td>Response rate: 44% for ketamine v. 6% for placebo</td>
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<td>Diamond (2014) Journal of Psychopharmacology UK FCOI: no</td>
<td>Open-label</td>
<td>(N = 28) Diagnosis: treatment-resistant unipolar or bipolar depression Other medication: multiple medications in several patients, including mood stabilisers, antipsychotics, antidepressants and benzodiazepine. For some responders doses were increased and new medications were even added during the study period.</td>
<td>Route: intravenous; Dose: 0.5 mg/kg over 40 min; Frequency: Phase I: once a week for three weeks; Phase II: twice a week for three weeks; Phase III: maintenance phase (results were reported elsewhere)</td>
<td>Response rate: 29% before the third infusion; 29% failed to complete all planned infusions</td>
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<tr>
<td>Ghasemi (2014) Psychiatry Research USA FCOI: no</td>
<td>RCT, single-blind, ECT v. ketamine</td>
<td>(N = 18) Diagnosis: major depressive disorder Concurrent medication: not mentioned</td>
<td>Route: intravenous; Dose: 0.5 mg/kg over 45 min; Frequency: three times (every other day); Follow-up period: 1 week</td>
<td>The ketamine group demonstrated lower depression scores compared with the ECT group at the first and second administration, but differences became narrow towards the end of 1 week</td>
</tr>
</tbody>
</table>

ECT, electroconvulsive therapy; FCOI, financial conflict of interest; major depressive disorder, major depressive disorder; RCT, randomised controlled trial.

^a At least one of the authors is a patent holder of will receive financial incentive if the Food and Drugs Administration approves ketamine as an antidepressant.

^b One of the authors and institute will receive financial incentive if the Food and Drugs Administration approves ketamine as an antidepressant.