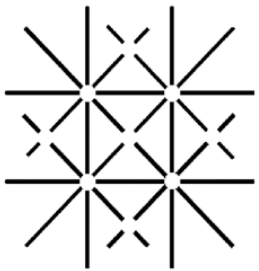


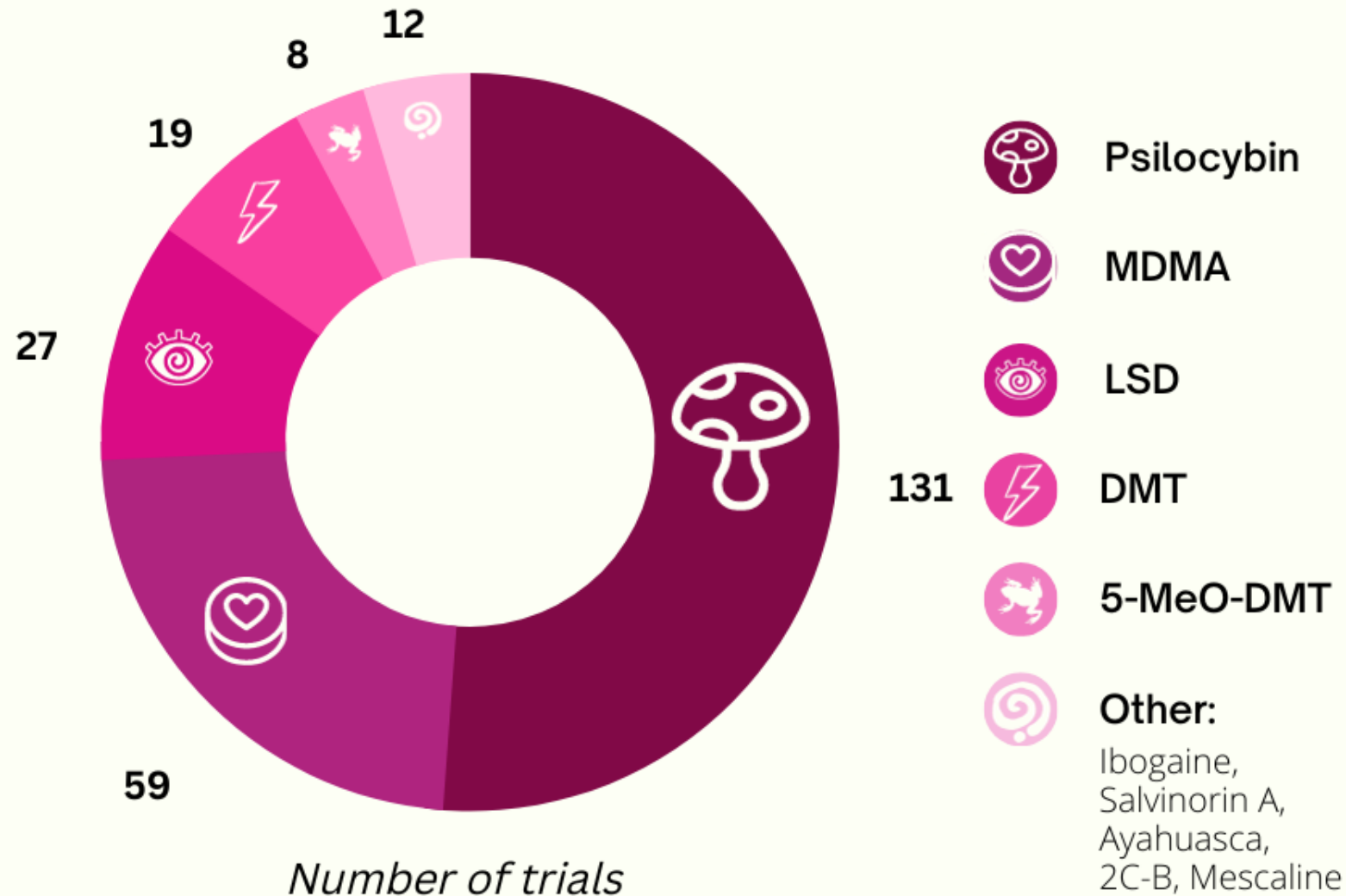
Klinische Pharmakologie & Zulassung

Matthias E. Liechti
Klinische Pharmakologie
University Universitätsspital Basel

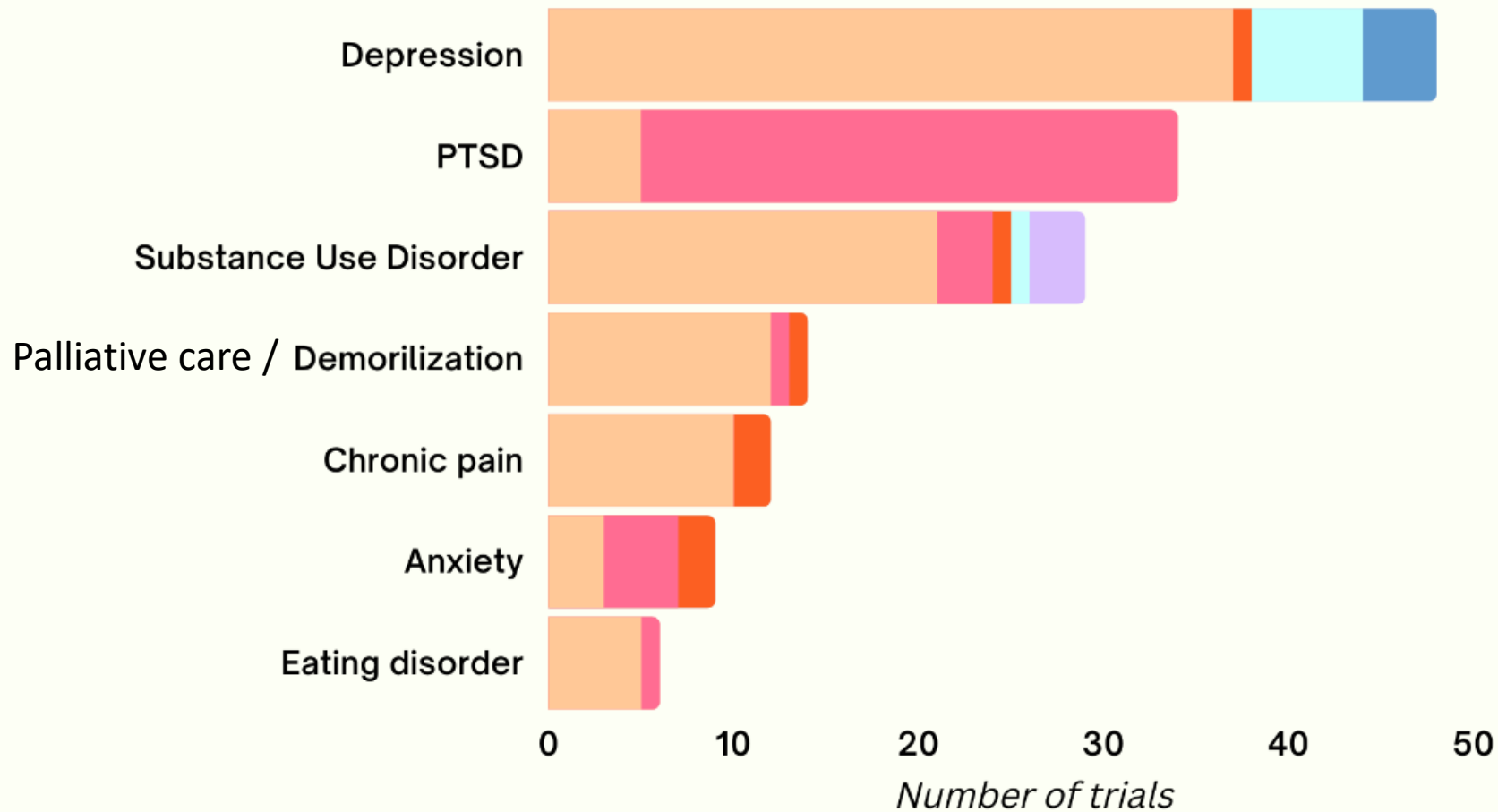


Uni Basel

Psychedelic Clinical Trials



Conditions being investigated



Psilocybin



MDMA



LSD



DMT

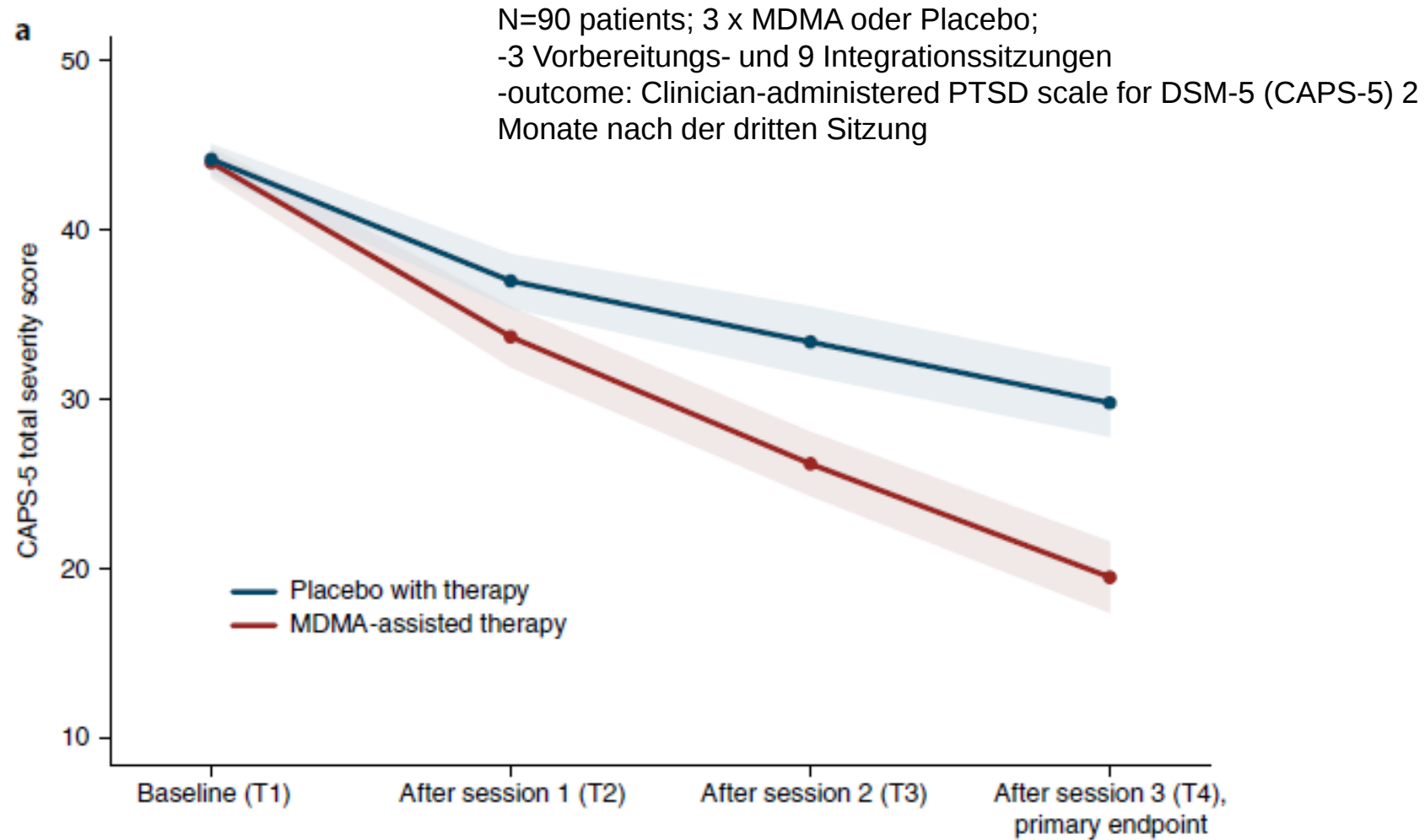


5-MeO-DMT

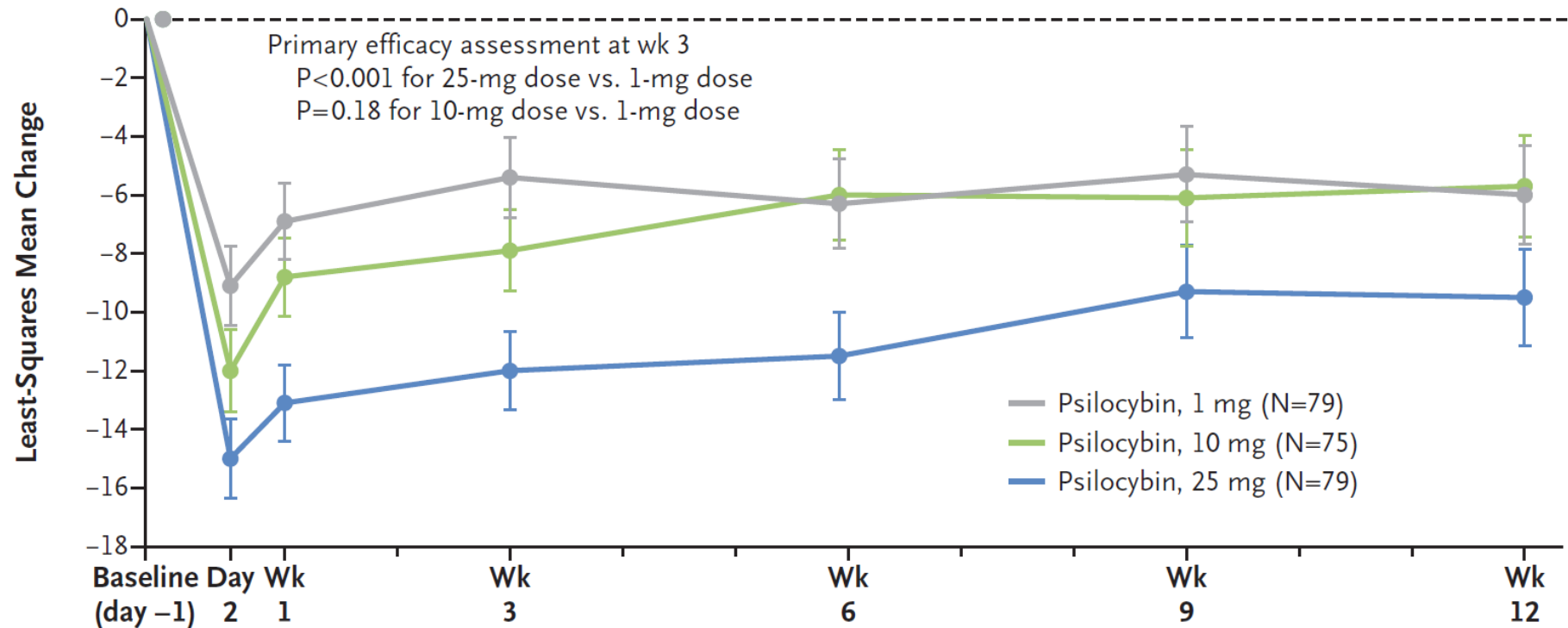


Ibogaine

MDMA reduces PTSD symptoms in phase 3 study



Single-Dose Psilocybin for a Treatment-Resistant Episode of Major Depression

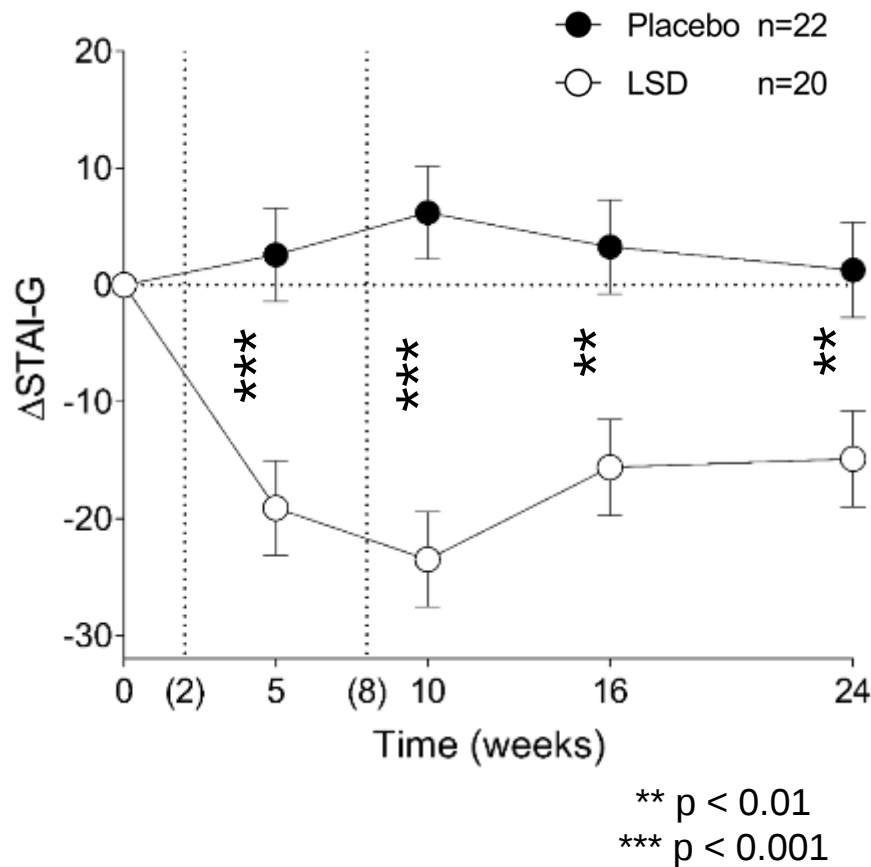


N=233; Psilocybin 25 mg vs. 10 mg vs. 1 mg

N Engl J Med 2022;387:1637-48.

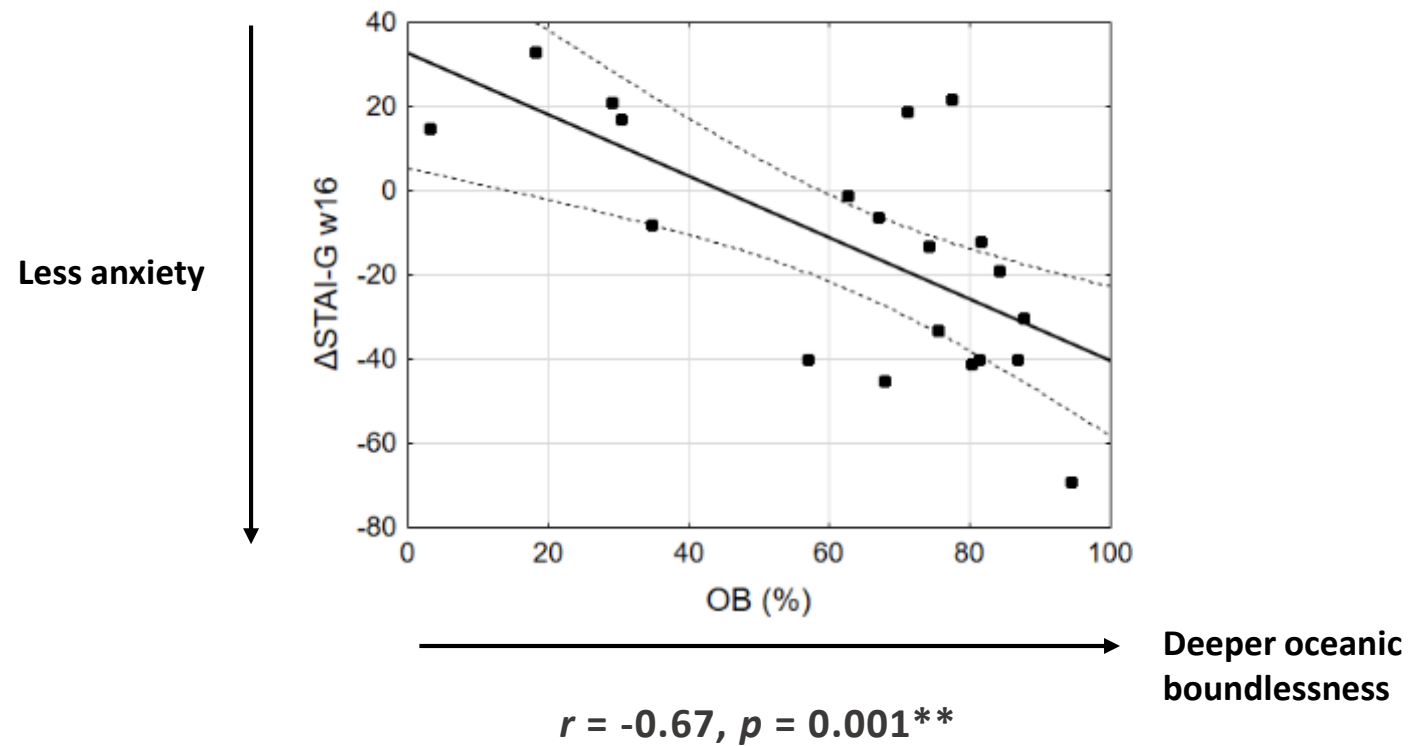
LSD reduziert die Angst bei Patienten mit Angststörung rasch und anhaltend

LSD 200 µg 2x



- Rapid, long-lasting and significant reductions in anxiety at 16 weeks post-treatment in LSD group
 - Mean change from baseline difference = -16.2
 - 95% confidence interval [CI] = -27.8 to -4.5
 - $p = 0.007$
- Clinical response ($\geq 30\%$ reduction of STAI-G scores):
 - 65% in LSD group vs 9% in placebo group ($p = 0.003$)

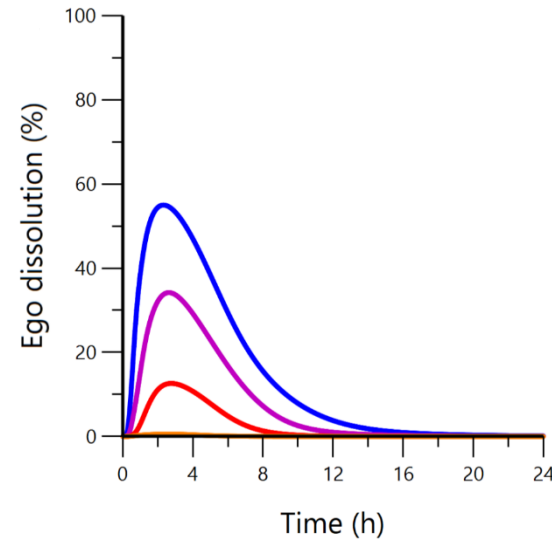
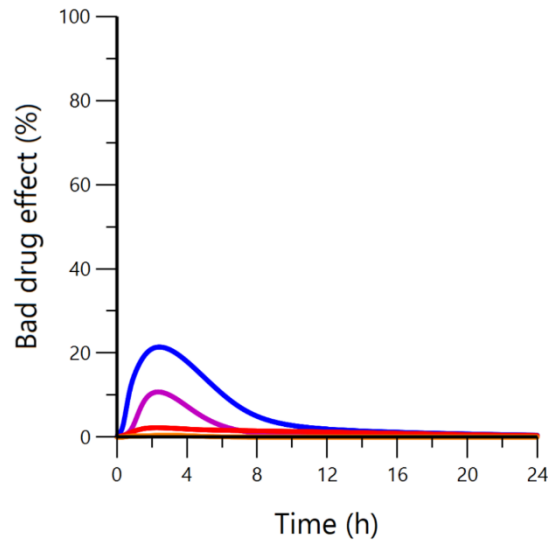
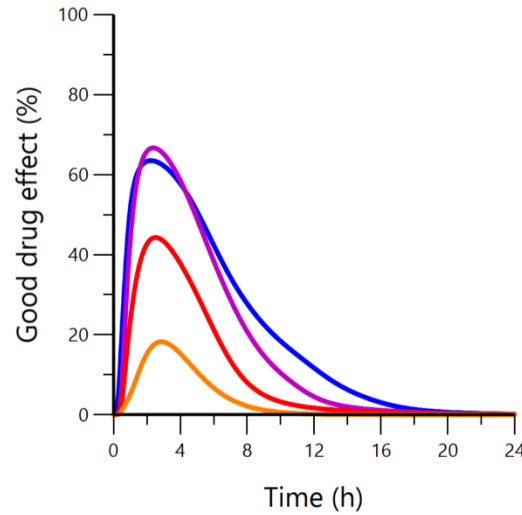
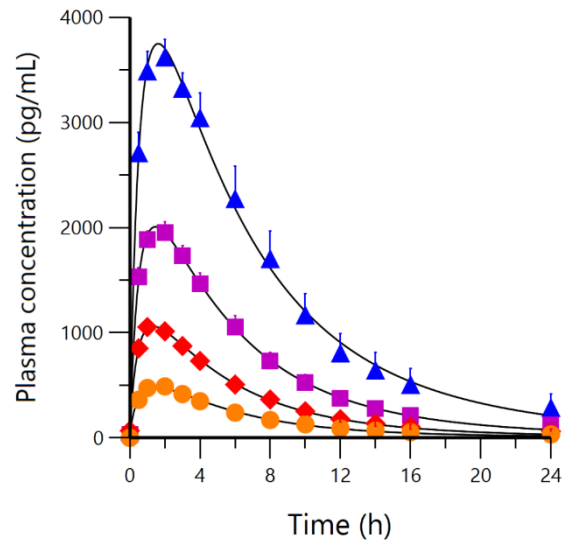
Akute Wirkung korreliert mit Therapieeffekt



Psychedelic drugs such as psilocybin and LSD can induce an experience known as **oceanic boundlessness**, which is characterized by a feeling of oneness with the world and a sense of awe.

n=20

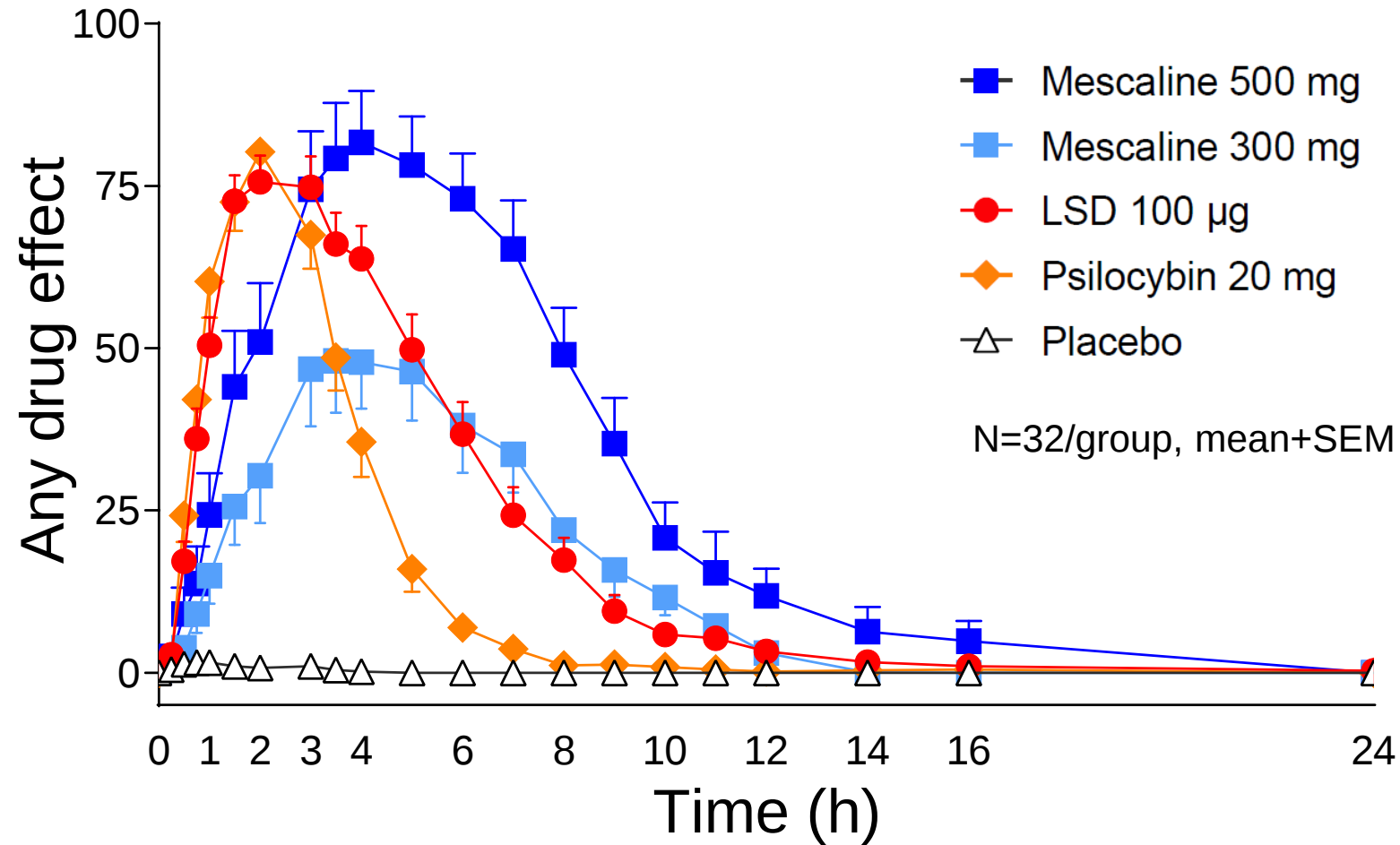
LSD pharmacokinetics-pharmacodynamics



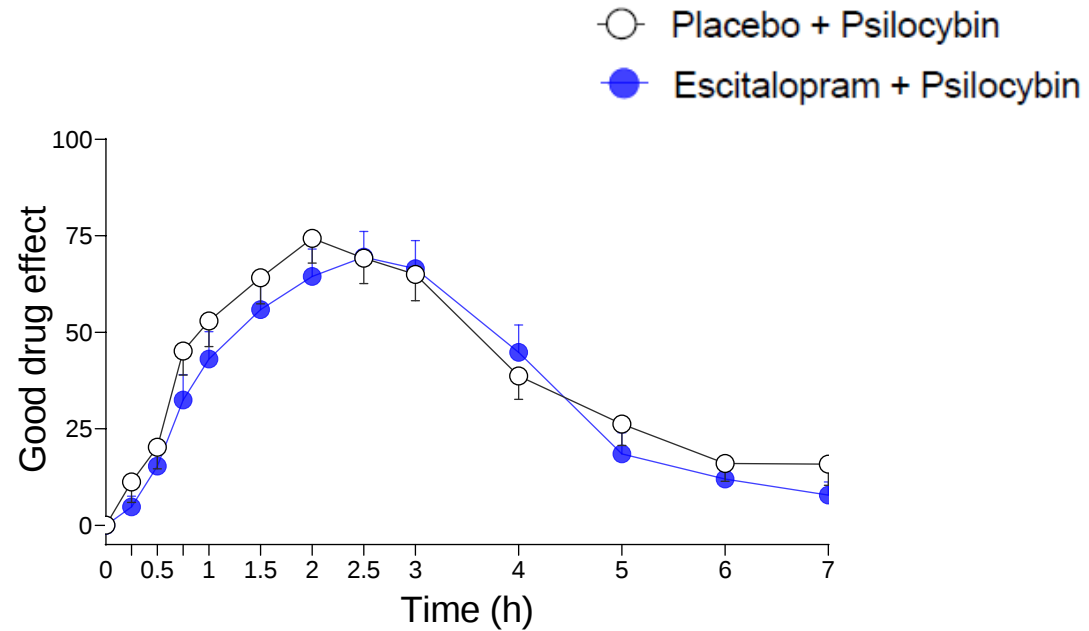
- 25 µg
- ◆ 50 µg
- 100 µg
- ▲ 200 µg
- predicted mean

N=16/dose
within-subjects

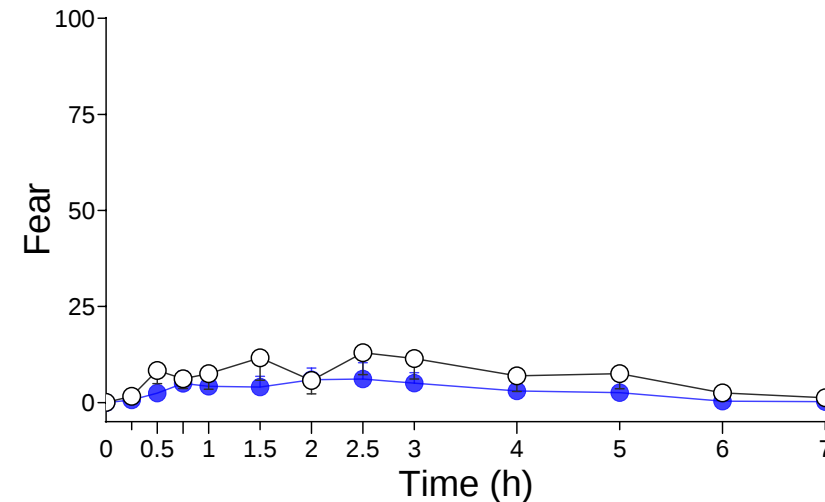
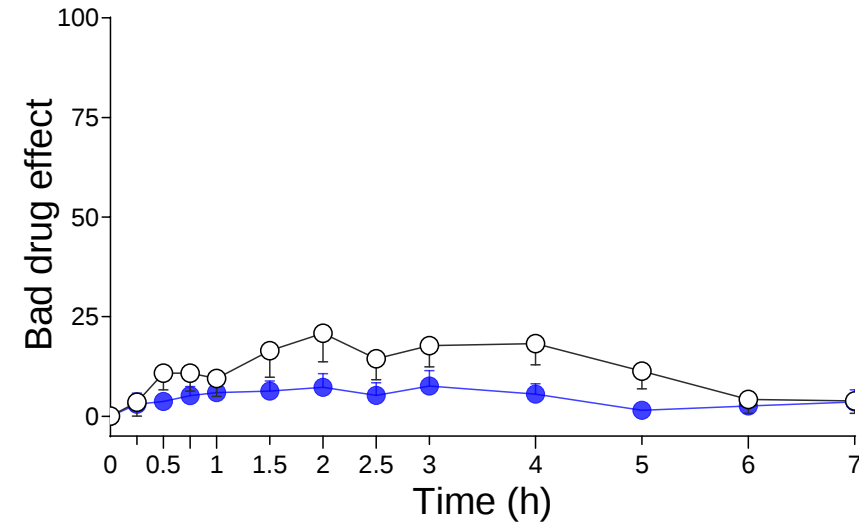
Dose equivalence and subjective effect duration of different psychedelics



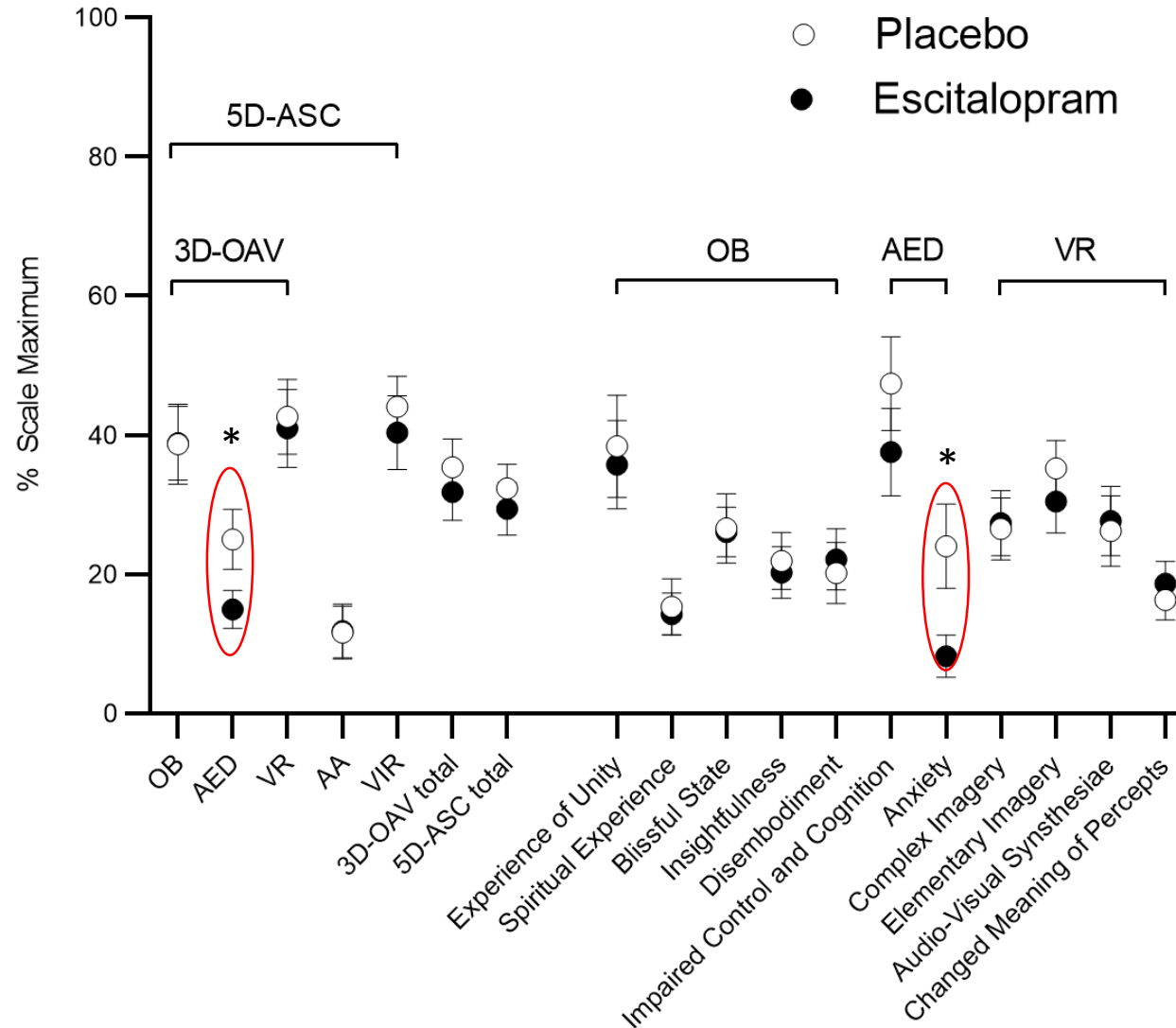
Escitalopram reduced acute bad but not good drug effects of psilocybin



Escitalopram 10 mg/day for 7 days followed by 20 mg/day for another 7 days and psilocybin 25 mg on day 14; N=24

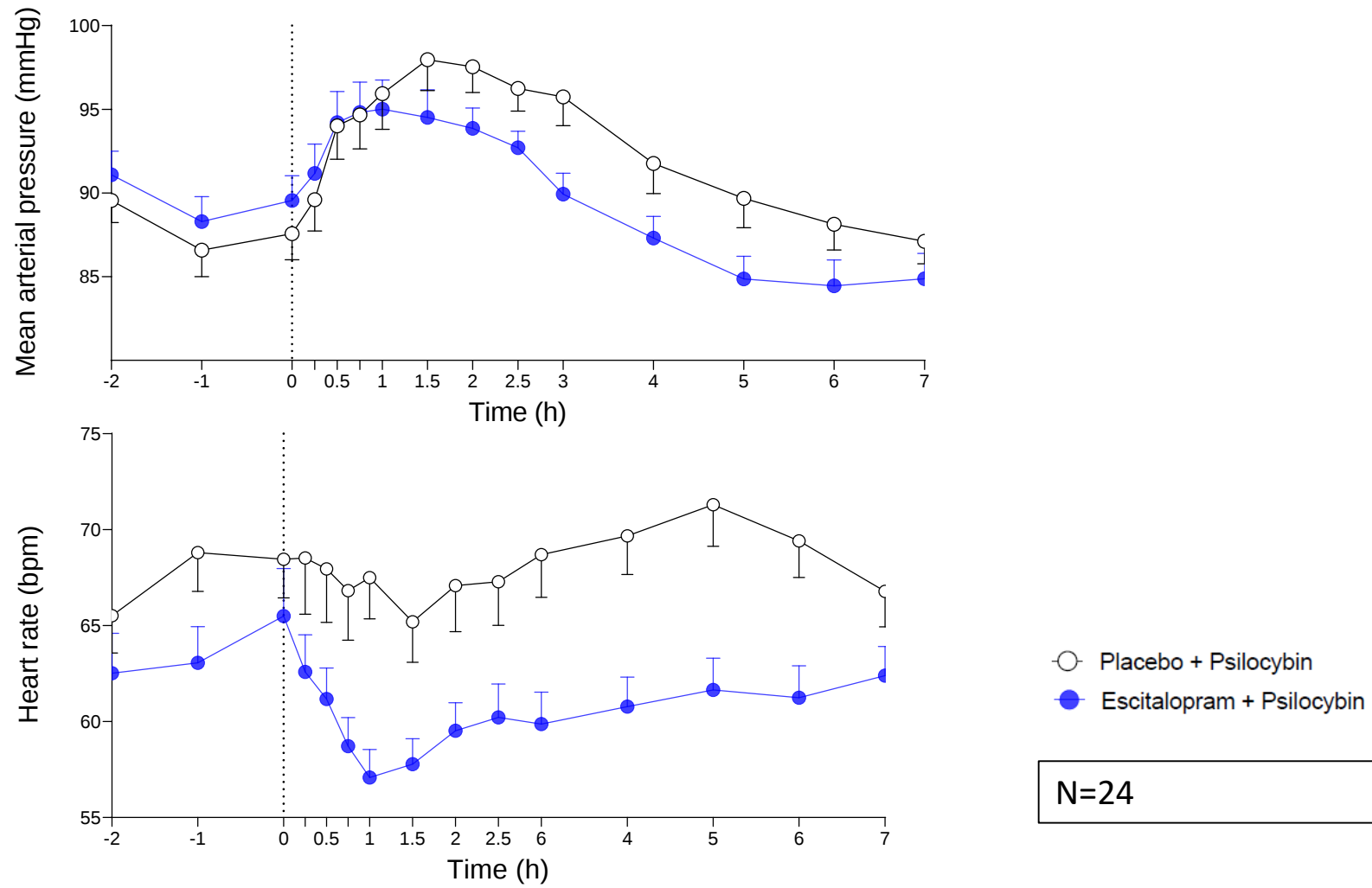


Escitalopram reduced anxiety but not the psychedelic response to psilocybin

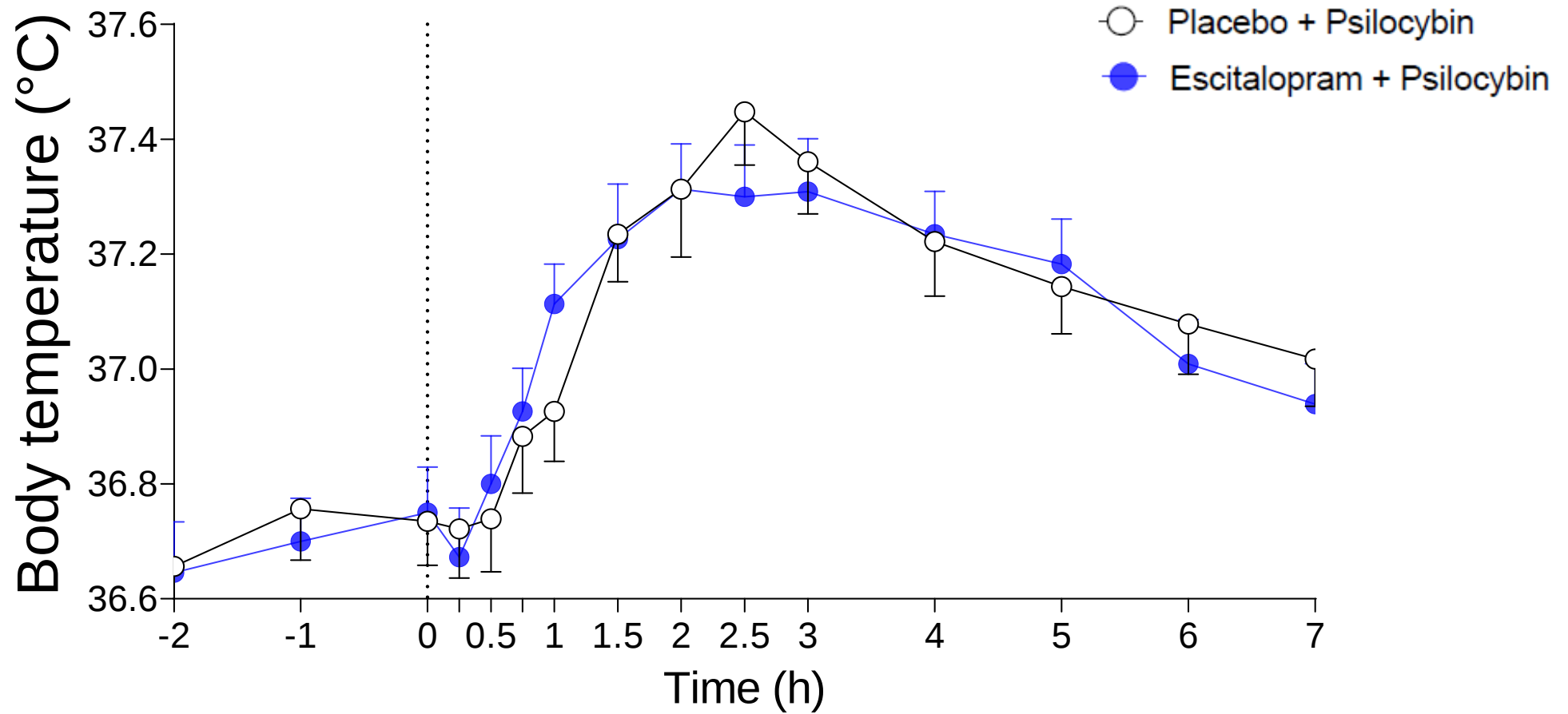


* $p < 0.05$ vs placebo; N=24

Escitalopram reduced the cardiostimulant effects of psilocybin



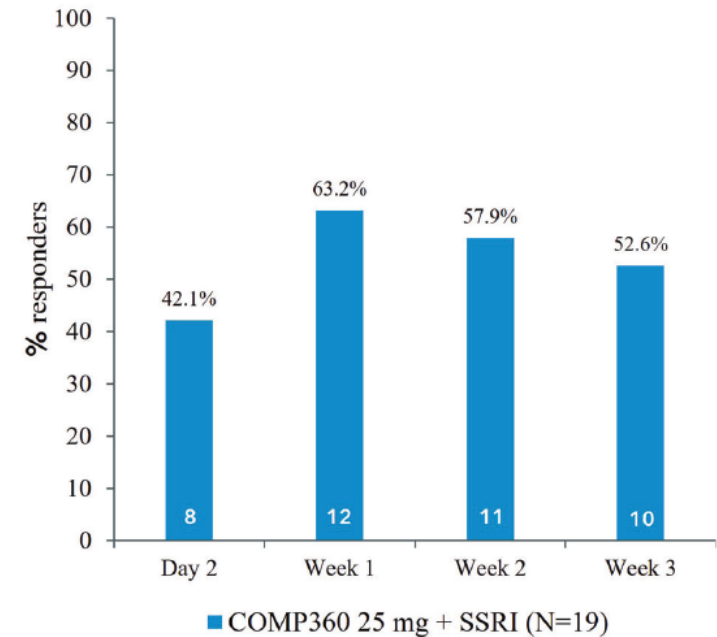
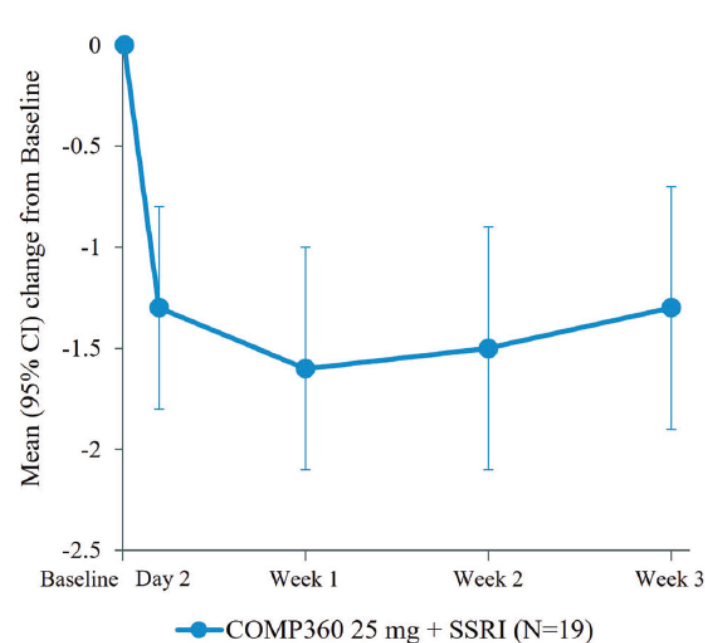
Escitalopram did not alter thermogenic effects of psilocybin



Psilocybin for treatment resistant depression in patients taking a concomitant SSRI medication

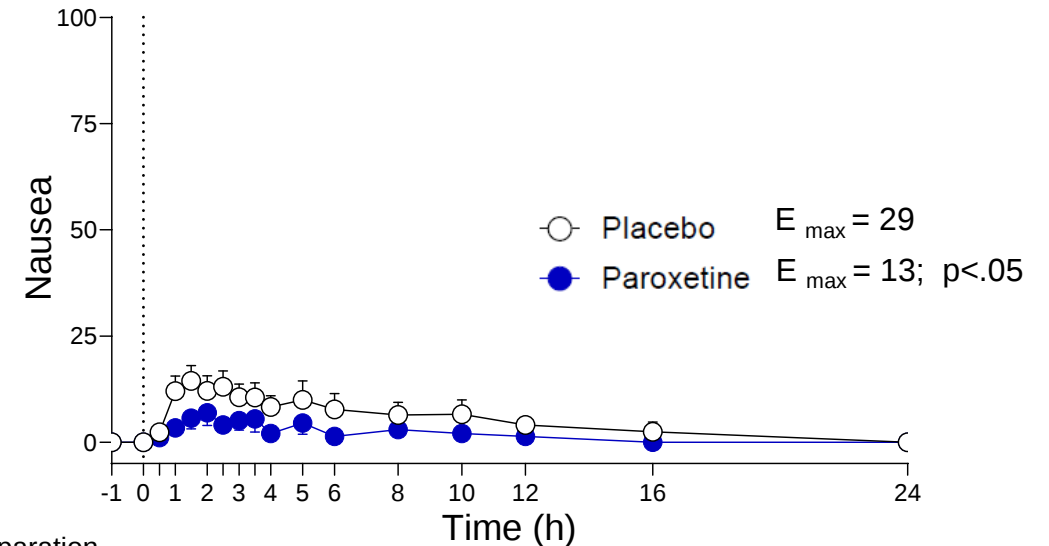
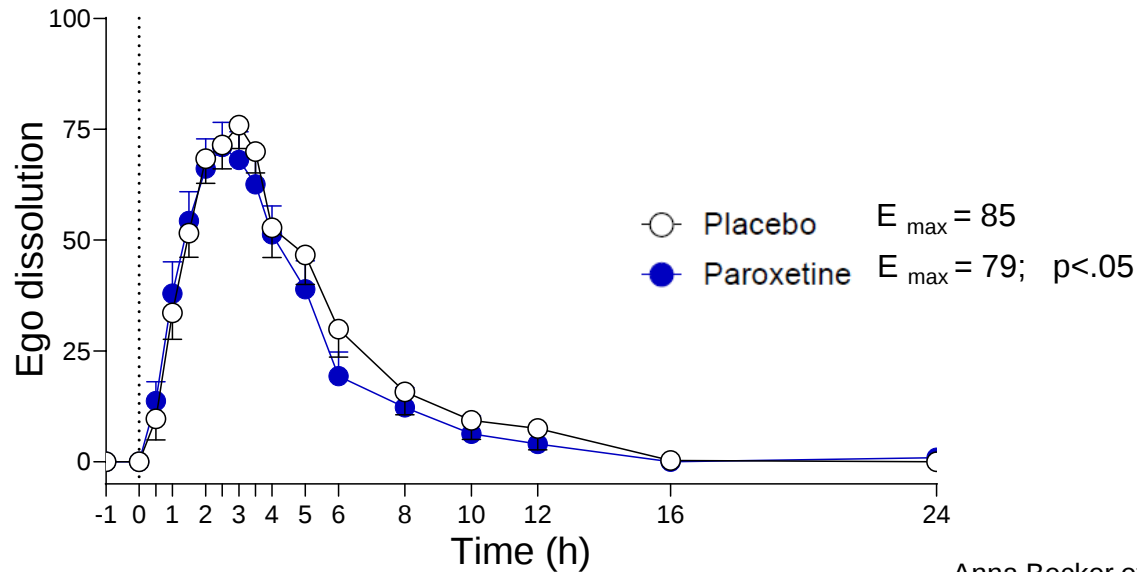
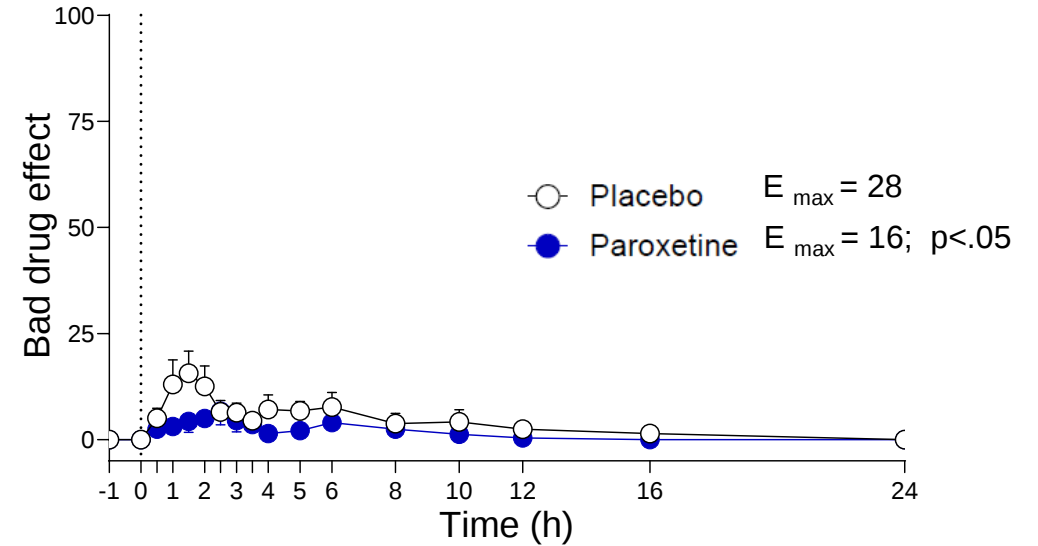
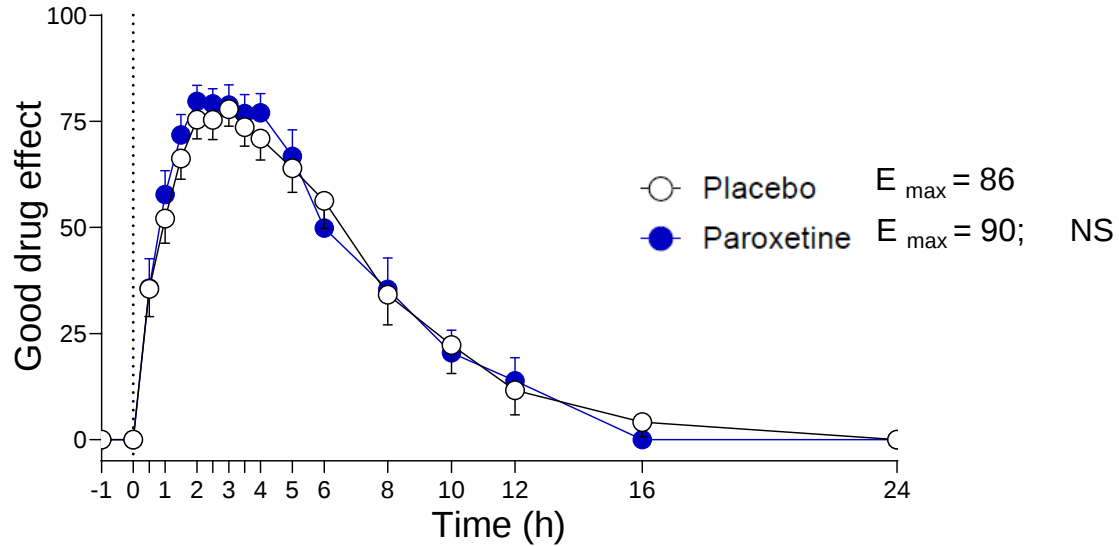
Guy M. Goodwin¹✉, Megan Croal¹, David Feifel², John R. Kelly³, Lindsey Marwood¹ , Sunil Mistry¹, Veronica O'Keane³, Stephanie Knatz Peck¹ , Hollie Simmons¹, Claudia Sisa¹, Susan C. Stansfield¹, Joyce Tsai¹, Sam Williams¹ and Ekaterina Malievskaia¹

-19 patients with depression with ongoing SSRI treatment (mean duration: 15 months)
25 mg of psilocybin add on
-Good therapeutic response with no evidence

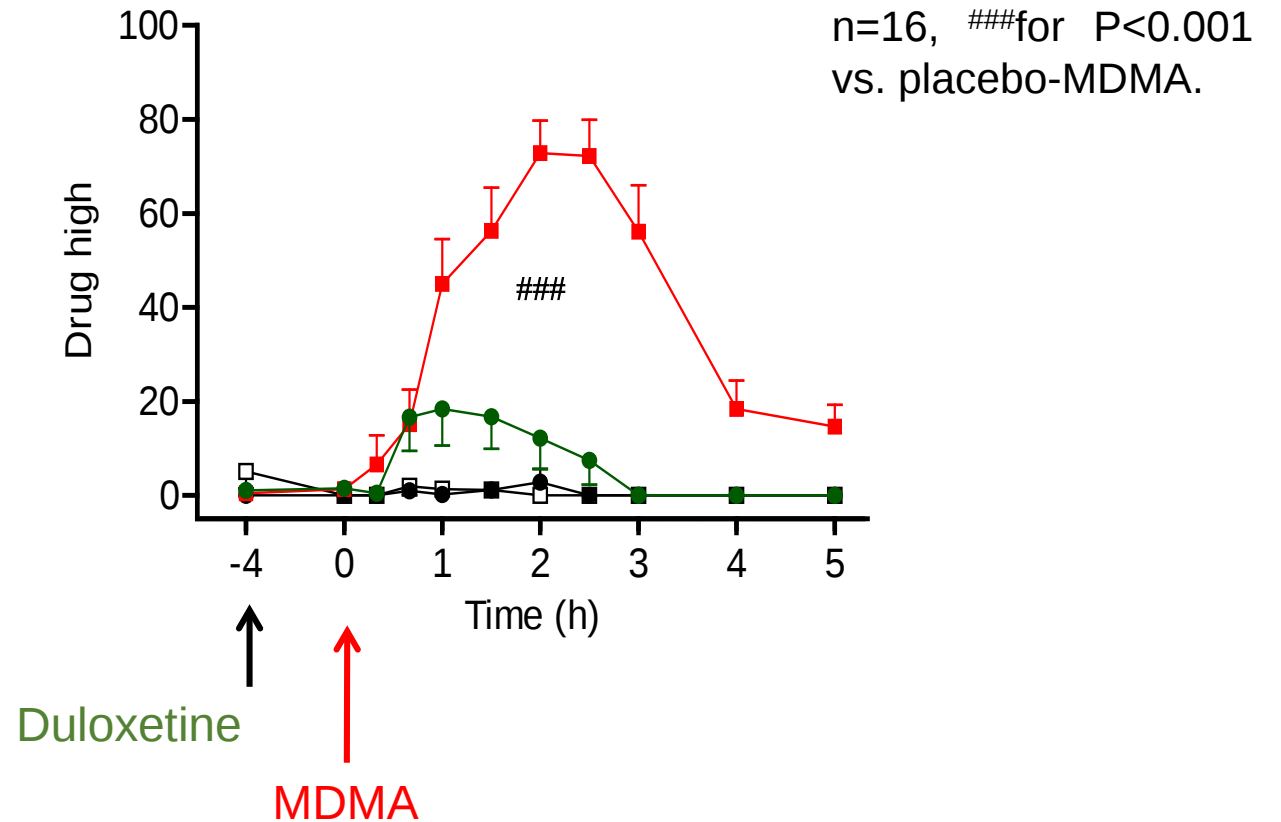
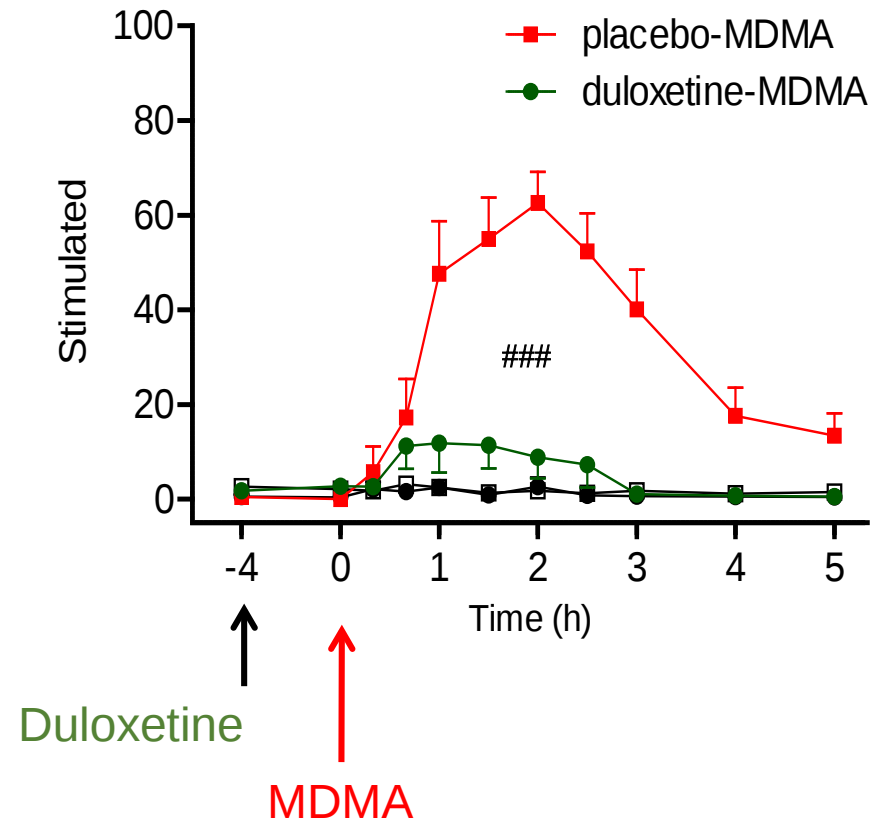


Paroxetine reduced acute bad but not good drug effects of LSD

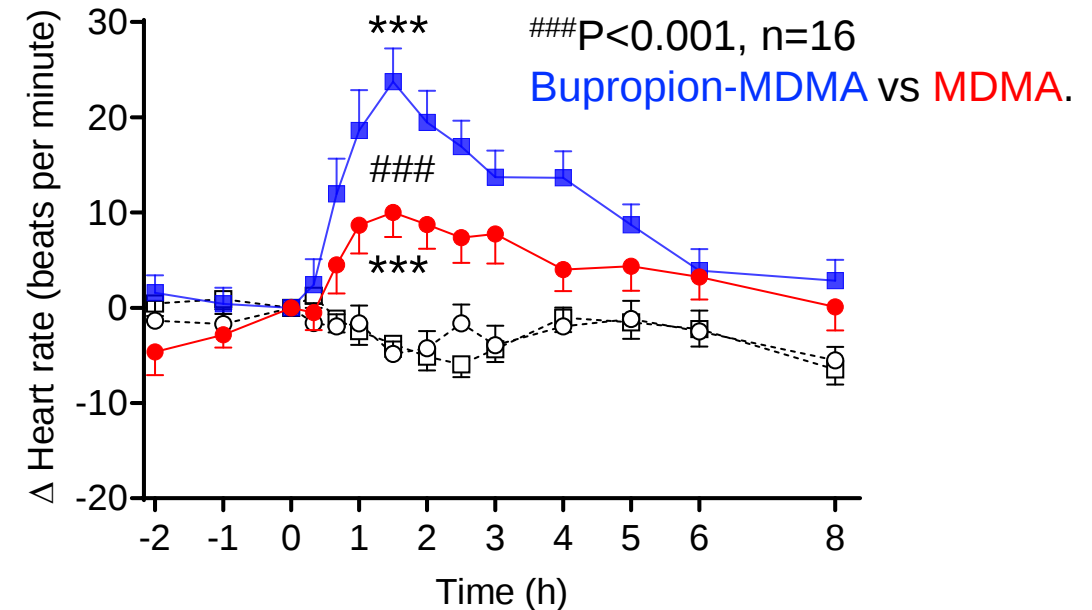
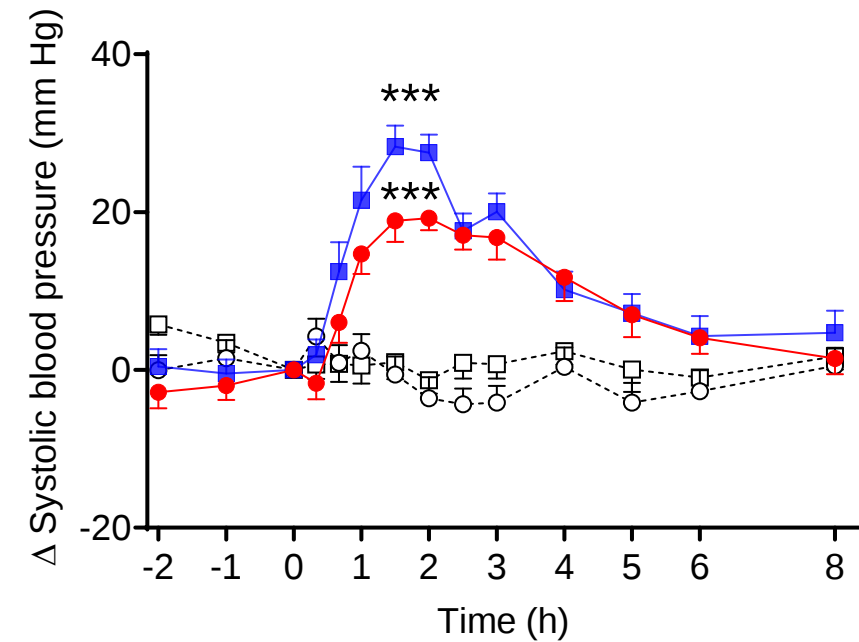
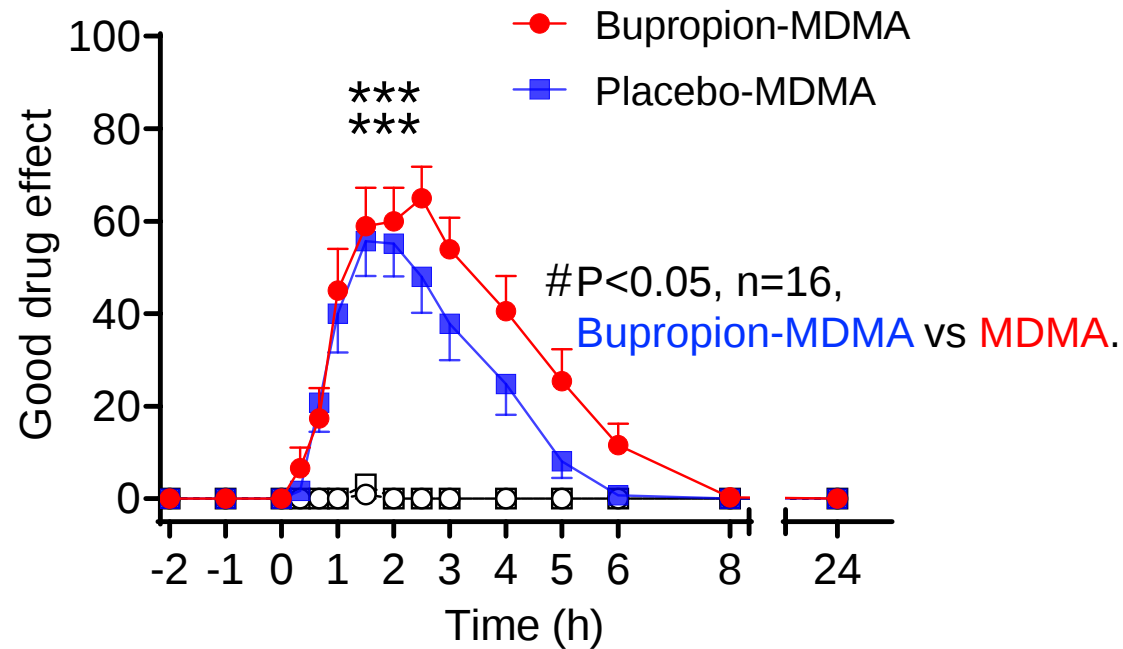
Pretreatment with Paroxetine 10 mg/day for 1 wk followed by 20 mg/day for 5 wks or Placebo. LSD dose = 100 μ g. N=24/group. within-subjects



The SERT/NET blocker duloxetine prevents MDMA response



Bupropion (DAT/NET blocker) does not alter acute mood effects of MDMA and reduces the cardiostimulant response



Drug interactions with MDMA and psychedelics

	MDMA	LSD, Psilocybin
Body weight	Weight dependent dosing, 100 mg < 60 kg, 125 mg >60 kg	Dose independent of weight, 15-40 mg
2D6 poor metabolizer	Reduce dose by 0-25%	Reduce dose of LSD by 0-25%
SSRIs, SNRIs	Pause 5-7 days before (reduced effect)	Maintain, optional on treatment day
Trazodone, Mirtazapine	5-HT ₂ block, unclear, maintain	Pause 5-7 days before
Bupropion	Maintain, effect slightly prolonged (2D6 block)	Unclear, maintain
MAOI	Stop 14 days before	Stop 14 days before
Lithium	Unclear, maintain or pause 3-7 days	Unclear, maintain or pause 3-7 days (possibly increased risk of seizures)
Antipsychotics	Preferably pause, particularly D ₂ antagonists	Pause at least 7 days (reduced effect)
Pregabalin	Unclear, maintain	Unclear, pause on treatment day
Antiepileptics	Unclear, possibly reduced effect, maintain	Unclear, pause on treatment day
Opioids	Maintain, if possible reduce dose	Maintain, if possible reduce dose
Benzodiazepines	maintain	Maintain, if possible reduce dose
Disulfiram	pause for 3 days	Pause for 3 days
Naltrexone	pause for 1-3 days	pause for 1-3 days
Methylphenidate	pause on treatment day	pause on treatment day
(Lis)dexamfetamine	pause on treatment day	pause on treatment day
Antihypertensives	maintain	maintain

See www.saept.ch for a list of drug-psychedelics interactions and recommendations