

compounds and drugs that act at the brain and cause significant changes in mental state. The group of drugs that we are referring to includes *N*-methyl-D-aspartate (NMDA) receptor antagonists (ketamine, nitrous oxide, xenon), serotonergic psychedelics (5-HT_{2a} receptor agonists psilocybin and lysergic acid diethylamide and serotonin-releasing 3,4-methylenedioxymethamphetamine), ayahuasca, cannabinoids (CB-1 receptor agonists), and κ -opioid receptor agonists Salvinorin A and B; this list is certainly not complete (see List of Psychedelic Drugs³). During the past two decades we studied ketamine, cannabis, and recently also psilocybin in patients and healthy volunteers and observed several similarities in the subjective expression of feelings and emotions during and after treatment. One important commonality is that these drug consumers display a certain disconnection or dissociation from reality. In this sense, the word “dissociation” and “dissociative drug” have a different meaning than described by Bowdle *et al.*¹ It may indeed not be the correct wording because dissociation does not encompass all of the symptoms experienced and expressed by the users of these drugs (not all symptoms relate to a disconnect with reality). Moreover, there are clear distinctions in symptomatology between these different drugs. For example, the hallucinogenic effects of cannabinoids are very different from those of ketamine or ayahuasca. Hence, it may just not be possible to have one denominator that describes the mind-altering effects of these drugs. The conclusion of Bowdle *et al.*¹ is that it is best to describe the anesthetic drugs that have psychedelic effects by their mechanism of action, for example, the NMDA-receptor antagonist ketamine. However, there is ample evidence that many of the ketamine effects are non-NMDA related. For example, acute pain relief may be related to the μ -opioid receptor and/or specific background potassium channels.^{4,5} Therefore, we argue that we need another approach. One term that describes both the NMDA-receptor antagonists and serotonergic psychedelics is psychoplastogen. Psychoplastogens are molecules that have a neurotrophic effect and promote rapid neural plasticity in the cortex (rewiring of pathologic neurocircuitry).⁶ Although this term does not describe the subjective experiences caused by these drugs, it does describe the mechanisms associated with their healing effects, whether it be anti-depression or pain relief. Hence, in future studies we will refer to ketamine as a psychoplastogen. We thank Dr. Bowdle *et al.* for this mental exercise that we hope will result in an improved description of the behavioral effects of psychedelic drugs.

Competing Interests

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Implementation of a More Sustainable Waste Management Policy in the Operating Room

To the Editor:

The waste produced by an operating room represents on average 20 to 30% of the waste of a

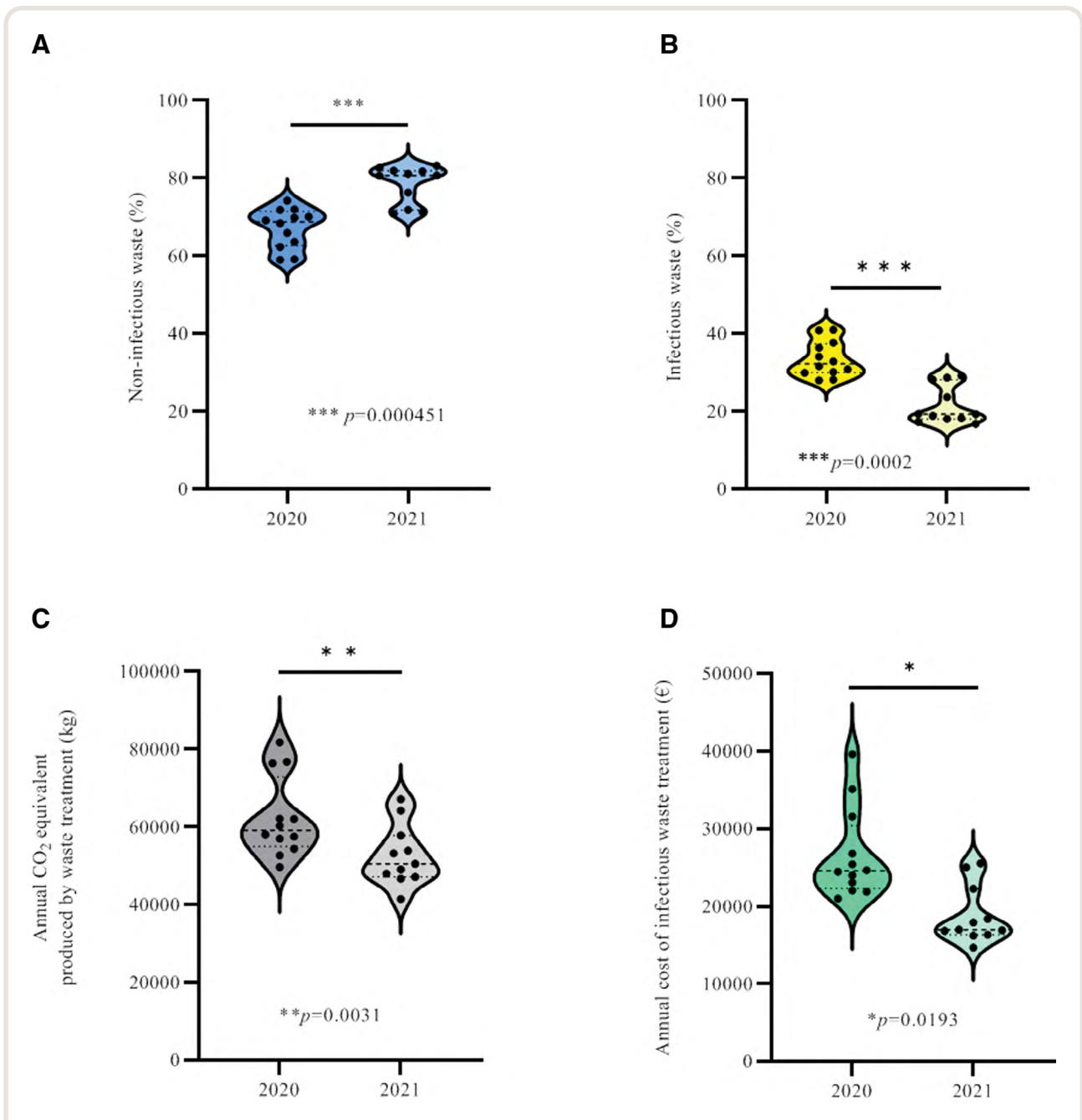


Fig. 1. Comparison between 2020 and 2021 of waste treatment. (A) Noninfectious waste (%). (B) Infectious waste (%). (C) Annual CO₂ equivalent produced by infectious waste treatment (kg). (D) Annual cost of infectious waste treatment (€). (Nonparametric Mann-Whitney U test, the Jamovi project [2021, Version 1.6], data are median and 25 to 75% percentiles [$*P < 0.05$, $**P < 0.01$, $***P < 0.001$]).

health institution.¹ At the Toulouse University Hospital (Toulouse, France), more than 100 tons of waste are produced per month.

In 2020, only noninfectious waste and infectious waste existed within our institution in terms of waste sorting. There was no recycling channel, and nearly 40% of the waste from the operating room was treated as infectious waste (fig. 1, A and B).

The treatment of infectious waste is more expensive than that of noninfectious waste in terms of cost (1 ton of noninfectious and infectious waste costs 270€ and 720€, respectively, to treat at the Toulouse University Hospital) and carbon dioxide impact, because the treatment of 1 ton of noninfectious waste corresponds to 362 kg of CO₂ compared to 934 kg of CO₂ for infectious waste in France.² We have set up a policy of better waste management within

our university hospital with the objective of reducing the proportion of waste treated as infectious waste on the one hand, and, on the other hand, identifying reusable materials by setting up channels for the treatment of recyclable waste.

First, to reduce the amount of waste treated as infectious waste, staffs were made aware of the cost of treating this waste, the recommendations of the institution's health care-associated infectious risk prevention unit were updated, and the members of the green teams accompanied the teams in the field to gradually modify practices and improve sorting.

The second objective was to identify reusable waste. To do this, the teams specializing in waste management worked in the operating room to improve their knowledge of the care-related waste generated by the operating room activity. Subsequently, specific partnerships were established with various service providers (copper, laryngoscope blades, cardboard, bottles, etc.), and we reorganized the operating rooms to facilitate waste sorting. As an example, our green dynamic allowed us to reduce infectious waste and total carbon dioxide production with a consequent reduction in costs (fig. 1).

The implementation of the recycling channels in 2021 enabled the sorting of more than 60 tons of waste in the first year, with near 2 tons of precious metals (laryngoscope blades, aluminum packaging, and copper cables), 15 tons of plastics, 5.9 tons of paper, and 35.9 tons of cardboard. The perspectives of our work are to continue and extend the green project to the other departments of the university hospital, to reduce the global quantity of waste by setting up "custom packs" specific to each surgical procedure, and to avoid overconsumption by educating the staff and raising awareness on a daily basis.³

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