IS01-1 **A New Twist to an Old Tale: Novel Insights into the Fate of Well-Known Anesthetics and Analgesics After Administration**

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Increasing evidence indicates that metabolites of the dissociative anesthetic ketamine contribute considerably to the biological effects of this drug and could be developed as next generation antidepressants. Analytical methods for the simultaneous determination of the plethora of hydroxylated, dehydrogenated and/or demethylated compounds formed after administration of ketamine hydrochloride are a prerequisite for future clinical investigations and a deeper understanding of the individual role of the isomers of these metabolites. Thus, we developed a method based on supercritical-fluid chromatography (SFC) coupled to single quadrupole MS detection that allows the separation of ketamine enantiomers as well as all relevant metabolites detected in urine of healthy volunteers. For flupirtine and retigabine, two chemically-similar openers of neuronal voltage gated potassium channels, the fate after administration is of interest for a different reason: the interplay of redox behavior, activity and toxicity remains to be unraveled.