



Universiteit
Leiden
The Netherlands

Ketamine pharmacometrics

Kamp, J.

Citation

Kamp, J. (2021, May 19). *Ketamine pharmacometrics*. Retrieved from <https://hdl.handle.net/1887/3176650>

Version: Publisher's Version

License: [Licence agreement concerning inclusion of doctoral thesis in the Institutional Repository of the University of Leiden](#)

Downloaded from: <https://hdl.handle.net/1887/3176650>

Note: To cite this publication please use the final published version (if applicable).

Cover Page



Universiteit Leiden



The handle <https://hdl.handle.net/1887/3176650> holds various files of this Leiden University dissertation.

Author: Kamp, J.

Title: Ketamine pharmacometrics

Issue Date: 2021-05-19

Ketamine Pharmacometrics

Jasper Kamp

© J. Kamp, 2021, Leiden, the Netherlands

Layout and Printed by: Optima Grafische Communicatie

Cover designed by: Olof Borgwit

ISBN: 978-94-6361-539-6

Ketamine Pharmacometrics

Proefschrift

ter verkrijging van
de graad van doctor aan de Universiteit Leiden,
op gezag van rector magnificus prof.dr.ir. H. Bijl,
volgens besluit van het college voor promoties
te verdedigen op woensdag 19 mei 2021
klokke 16:15 uur

door

Jasper Kamp
geboren te Winschoten
in 1991

Promotor:

prof. dr. A. Dahan

Copromotor:

dr.ir. E. Olofsen

Promotiecommissie:

prof. dr. L.P.H.J. Aarts

dr. M. van Velzen

prof. dr. H-J. Guchelaar

prof. dr. C.A.J. Knibbe (St. Antonius Hospital, Nieuwegein, the Netherlands)

dr. B.C.P. Koch (Erasmus MC, Rotterdam, the Netherlands)

dr.ir. D.J. Eleveld (UMCG, Groningen, the Netherlands)

Contents

Chapter 1	General introduction	7
Chapter 2	Pharmacokinetic and pharmacodynamic considerations for NMDA-receptor antagonist ketamine in the treatment of chronic neuropathic pain: an update of the most recent literature.	15
Chapter 3	Ketamine pharmacokinetics: a systematic review of the literature, meta-analysis and population analysis	37
Chapter 4	Pharmacokinetics of ketamine and its major metabolites norketamine, hydroxynorketamine and dehydronorketamine: a model-based analysis	77
Chapter 5	Stereoselective ketamine effect on cardiac output: A <i>population pharmacokinetic-pharmacodynamic modeling study in healthy volunteers</i>	105
Chapter 6	Are the psychedelic and analgesic effects of ketamine independent?	123
Chapter 7	General Discussion and Conclusions	139
Chapter 8	Nederlandse Samenvatting	151
Addenda		165
	List of publications	167
	Curriculum Vitae	169