

**XIIIth INTERNATIONAL
COURSE ON CHRONOPHARMACOLOGY
Ruprecht-Karls-Universität Heidelberg
Summer School 2012**



REVIEW LECTURES:

- Chronobiology, history and basic mechanisms
- Cellular basis and morphology of biological clocks
- Chronogenes and their regulation
- Circadian gene expression
- Fundamentals of mammalian circadian rhythms
- Development of circadian rhythms
- Biological rhythms in plants
- Clock interaction with cell cycles
- Use of radiotelemetry in chronopharmacologic research
- Masking effects and circadian rhythms, entrainment, Aschoff's rules
- Chronoepidemiology
- Chronobiology of psychiatric diseases
- Chronopharmacokinetics
- Chronopharmacology of pain
- Chronopharmaceutical drug delivery
- Rhythms in endocrinology and neuroendocrinology, aging and biological rhythms
- Chronopharmacology/-chronotoxicology of anticancer agents and chronotherapy
- Chronopharmacological aspects of bronchial asthma
- Chronopharmacology of angina pectoris and hypertension
- Sleep apnea, sleep disorders
- Shift work, accidents
- Internal desynchronisation
- Jet-lag

PRACTICAL APPROACHES:

- Telemetry, actography, ABPM (24-h blood pressure measurement), temperature measurement, grip strength, peak flow, sleep lab ect.
- Data evaluation and analysis

Place: Institut für Experimentelle und Klinische Pharmakologie und Toxikologie, Universität Heidelberg, Maybachstr. 14, 68169 Mannheim

From: 30.7. – 4.8.2012

Information/Registration:

Internet:

www.chronopharmacology.de

e-mail:

bjoern.lemmer@pharmtox.uni-heidelberg.de

Prof.U.Albrecht (University Fribourg, Switzerland); Prof. B.Bruguerolle (University Marseille); Prof. Chr.Cajochen (University Basel, Switzerland); Dr. M.Canal (University Manchester); Prof. L.Edmunds (SUNY New York); Dr. B.Edwards (John Moore University, Liverpool); Prof. G.Fleißner (Universität Frankfurt); Dr. G.Fleißner (Universität Frankfurt); Dr. S.Gorbey (Universität Heidelberg); Prof. B.Lemmer (Universität Heidelberg); Prof. F.Lévi (INSERM, Villejuif); Prof. M.Middeke (Universität München); Dr. F.McInnes (Drug Delivery Int., Glasgow); Prof. R.Manfredini (University Ferrara); Prof. A.Reinberg (Chronobiology Unit, Rothschild Foundation, Paris); J.Schmitt (Theresienkrankenhaus Mannheim); Prof. M-H. Smolensky (University of Texas at Austin); Prof. Y.Touitou (Chronobiology Unit, Rothschild Foundation, Paris); Prof. E.Wagner (Universität Freiburg).

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Director of the Course

Prof. Dr.med. Dr.h.c. B. Lemmer