

Menno Reindert Kruk

Mandatory Retired Ass. Prof. at the former Dept. Medical Pharmacology
Leiden Amsterdam Center for Drug Research (LACDR) Leiden University (2009)
Mobile +31 (0)652 0651 94
Email: Info@mennokruk.nl

12.07.44 Born in Utrecht, The Netherlands
22.12.69 Married to **Dr. Martje Kruk-de Bruin**, in Delft, The Netherlands, 4 Children born 1975, 1977 & 1983 (twins).

Education and Training

High School Montessori Lyceum, Rotterdam (1962) Languages: French, English, German and Frisian

Pregraduate Experimental Biology Leiden University: majors in neurochemistry, sensory physiology and behavioural biology (1970).
European Training programme for Brain and Behaviour Research in Paris, Bordeaux and Strasbourg (1972).

PhD thesis "Origins of Hypothalamic Aggression" at the Leiden University (1981). PhD on the same date as **Dr Martje Kruk-de Bruin**.
M.R. Kruk is a registered experimental pharmacologist and ethologist.

Former Positions

Assistant microbiology, Faculty Biology Leiden University (1969)
Officer in the Dutch Medical Army Corps working at the Dutch National Institute of Health on viral vaccines (1970-1971)
Junior Scientist dept. Fundamental Pharmacology Leiden University (1971-1975)
Senior Scientist dept. of Pharmacology Leiden University (1975-1987)
Senior Scientist dept. of Physiology Leiden University (1987-1993)
Assistant Professor dept. Medical Pharmacology, LACDR Leiden University (1993-2009)
Docent Pharmacology Hogeschool Physical Therapy (1983-2003)

Present Affiliation: Visiting Scientist Department of Physics (LION) Leiden University (2015-

Teaching

- Courses in Behavioural Biology, Animal Experimentation, Pharmacology, Biological Psychology and Endocrinology to undergraduate, graduate and post-graduate students in the biomedical sciences, medicine, pharmacy, biology, physical therapy and psychiatry.
- International ULLA-Summer school. Courses on critical evaluation of animal models used to study human behavioral disorders
- Main teaching activity: Courses on the reciprocal relation between hormones, nervous system and behaviour in animals and humans.
- Best Biomedical Course Medical School (LUMC) 2004. Best Teacher LUMC 2005. Nomination best University Teacher (2002 & 2006).

Former Memberships

New York Academy of Sciences (NYAS) International Society for Research on Aggression (ISRA)
European Behavioural Pharmacology Society (EBPS)
Netherlands Society for Pharmacology (Nederlandse Farmacologische Vereniging)
Netherlands Zoological Society (Koninklijke Nederlandse Dierkundige Vereniging, KNDV)
Netherlands Society for Behavioural Biology (Nederlandse Vereniging voor Gedragsbiologie, NVG)

Scientific Interest

Aim: Clarify which hypothalamic neurons mediate attack during electrical stimulation; register their activity during social conflict in order to improve understanding of "pathological" processes in aggression. **Methods:** ethological, pharmacological, endocrine and physiological approaches. **General:** Studying the interaction between brain function, hormones and behaviour to understand brain mechanisms during violent behavior, and to explore how "Aggression" can be studied using methods from the exact, natural sciences.

Main Research Topics

Developing animal models of functional and pathological aggression and the mathematical tools to describe and analyse effects of drugs and hormones on behavioural structure and interactions between animals. Studying the crucial role of corticosteroid feedback to the brain in the control of aggressive behaviour (in cooperation with Dr. József Haller, Budapest). Studying the interaction between the processing of conflict related stimuli and stress hormones in aggression inducing paradigms in humans, with Dr. Ewald Naumann and Prof. Dr. Hartmut Schächinger, Trier, Germany (LACDR, IRTG, DFG, OTKA, NWO).

Reviewing

Physiology and Behavior, Behavioural Processes, Neuroscience Biobehavioural Reviews, Aggressive Behavior, Behavioural Neuroscience, Behavioural Brain Research, Hippocampus, Hormones and Behavior, Pharmacology and Behavior, Biological Psychiatry, Frontiers in Systems Neuroscience.

Last Research Grants

- Hungarian-Dutch cooperation grant (NWO-OTKA, 1997-2003). Brain mechanism of rapid facilitation of Aggression by Glucocorticoids.
- Harry Frank Guggenheim Foundation (NY): Recording Multiple Unit activity from the "aggressive area" in the rat hypothalamus during conflict under specific conditions of the HPA-axis (in cooperation with Prof. Manfred Gahr, München 2002-2007).

Past National Functions:

President & Executive secretary of the Brain and Behaviour Study group of the Dutch National Science Foundation (NWO).
President of the Netherlands Society for Behavioural Biology (NVG, formerly Dutch Ethology Study Group).
Member Ethical Committee on Animal Experimentation of the Leiden University (1983-2003).
President of the Scientific Advisory board of Dr. O. Adang's study on Football Hooliganism and Squatters Riots (1984-1988).
Member of the Scientific Advisory Council of the Netherlands Institute of Forensic Psychiatry NIFP (2007- 2008).

Past International Functions

- Meeting secretary and Treasurer of the European Behavioural Pharmacology Society (EBPS).
- Member on the Harry Frank Guggenheim Editorial Board on the publication programme "Understanding Violence" (1990-1997)
- Organizer of the 2nd Eur. Meeting of the International Society for Research on Aggression (ISRA) in Zeist, the Netherlands (1983).
- Organizer Guggenheim Foundation Meeting on Brain Mechanisms in Aggression in Antwerp, Belgium (1992).
- Organizer meeting of the European Behavioural Pharmacology Society in Noordwijk the Netherlands (1992).
- Symposium on Discrimination of Drugs of Abuse sponsored by the US National Institute for Drug Abuse (NIDA) (1992).
- Convener of 23+ symposia and workshops at ISRA meetings in Strasbourg, Zeist, Turku, Parma, Chicago, Seville and Valencia, and of International meetings on behavioral neuroscience and ethopharmacology in Boston, Budapest, Lisek (Czechoslovakia), Sopron (Hungary), Utrecht (Netherlands), Muenster (Germany), Jerusalem and Leiden.
- Coordinator Guggenheim & NWO supported Hungarian-Netherlands cooperation on "Stress & Aggression Interactions" (1996-2003).
- Chair Scientific Programme Committee of the International Society for Research (ISRA 2004-2006).
- President-elect ISRA 2005-2006. President ISRA 2007-2008. Past-president ISRA 2009-2010.
- Organizer of the 4C-Interdisciplinary Workshop "Context, Causes and Consequences of Conflict" at the Lorentz Center, Leiden (2009).

Major Invited Lectures Past Decade

- "MR-mediated permanent priming of aggression in rats naïve to violence". IRTG Stress Meeting in Trier, Germany, (2007).
- Presidential Address: 17th World Meeting ISRA, Budapest (2008). "Stress and aggression interactions"
- "Stress and aggression interactions and crime " for the Ministry of Justice The Hague (2010)
- Howard Huges Medical Institute. "The hypothalamic network of aggression and its sensitivity to the adrenocortical stress response". In workshop "Can new tools revolutionize understanding of hypothalamic neural circuits?" Washington DC, (2009)
- The Ellison Medical Foundation, "Hypothalamic circuits in stimulation-evoked aggression", in workshop "Neurobiology of Aggression and the Social Brain", Palo Alto, CA, USA (2010). Invited by Prof Dr. Eric Kandel.
- Symposium On Aggression: mechanism and clinical implications. "Tracing the aggressive brain from old questions to new answers". Life Science Building "Bunka Kaika" in Tokyo (2017). Invited by Dr. Kumi O Kuroda BSI RIKEN
- Seminars on "Tracing the Aggressive Brain: from Neural Circuits to Corticosteroid dynamics". Behavioral Science Institute, RIKEN, Wako, Japan (2017). Invited by Dr. Kumi O Kuroda group-leader parental behavior and infanticide.

Menno R. Kruk, PhD, Voorhout, the Netherlands, 16th of January 2018