

Tribute to a Pioneer (1941-2023)



Josephine Arendt,
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Emeritus Professor of Endocrinology, University of Surrey

It is with great sadness that we report the sudden and unexpected death of Professor Josephine Arendt (4th September, 2023). Jo trained as a biochemist, doing her PhD on serotonin biochemistry at the University of London. It was thus a natural progression for her to begin the early investigations into the serotonin metabolite, melatonin. Jo was internationally recognised for her enormous contribution to the field of melatonin, circadian rhythms and sleep (over 280 publications). She was the acknowledged expert on melatonin especially in humans, her textbook *"Melatonin and the Mammalian Pineal Gland"* is without peer.

In 1975 Jo pioneered immunotechnology for the detection and measurement of melatonin and its metabolites. Being able to measure melatonin simply and rapidly via radioimmunoassay opened up

The Council of the European Pineal Study Group at the Giessen meeting, 1981

From left to right. In front: J. Arendt, I. Ebels, A. Oksche, J. Ariëns-Kappers
Second rank: B. Mess, M. Karasek, J.P. Collin, G.P. Trentini, L. Vollrath, P. Pévet



the field of pineal and melatonin research. She measured melatonin in many species (e.g. sheep, hamsters, tortoises, humans) and characterised melatonin rhythmicity across 24 h and across seasons in humans and other species. She was the first to describe the chronobiotic properties of exogenous melatonin in relation to sleep and the circadian system and initiated its use for circadian rhythm sleep/wake disorders such as jet lag (1986), shift work (1993), non-24 h sleep/wake disorder of the blind (1988) and delayed sleep phase insomnia (1991). She characterised the importance of light and melatonin in humans pursuing research in this area particularly in Polar regions (1987-).

Frustrated by lack of funding for research, in 1988 Jo founded a company Stockgrand Ltd (to exploit her radioimmunoassay expertise with all profits supporting research and many PhD studentships). This technology helped research worldwide and today measurement of melatonin remains the most reliable biomarker of circadian clock timing. Stockgrand also sponsored Invited Lectures at the EBRs conferences (2015, 2017, 2019) as well as Travel Grants for early career researchers.

The Council of the European Pineal Study Group at the Modena meeting, 1987

From left to right M. Karasek, M. Moller, H. Illnerova, J. Falcon, R. Ruzsas, S. Steinlechner
P. Pévet, G.P. Trentini, L. Vollrath, J. Ariëns-Kappers, J. Arendt



Jo's first passion was melatonin and the pineal gland. She was a founding member of the European Pineal Study Group (EPSG), that over time progressed to the European Pineal Society (EPS) and the European Pineal and Biological Rhythms Society (EPBRS), before becoming the current European Biological Rhythms Society (EBRS) (2005-). She served as President of the European Pineal Study Group (1987-1990) and held the Society's Conference (EPSG 5th Colloquium) at the University of Surrey in Guildford in 1990.

Of the many awards and medals that Jo received (Fellow of the Royal Society of Medicine (UK), Medal of St Goran's Hospital (Karolinska Institute), Medal of Justus von Liebig University (Giessen), Ernst and Berta Scharrer Medal (University of Frankfurt) and Doctor honoris causa (Medical University of Lodz), she was most proud of the Johannes Ariens Kappers Medal she received from the EBRS in Munich in 2013.

Jo was a true European. She collaborated with many European chronobiology/sleep laboratories, supporting Eastern European colleagues pre-1989 and mentoring many European early career researchers. She was a Francophile, fluent in French and a lover of French wine and food. Jo's kindness and generosity both academically and socially were much appreciated by many colleagues. She had a warm, caring nature and her joie de vivre was infectious.

To get a flavour of Jo's intelligence and personality, you may listen to these clips from the History of Modern Biomedicine (<http://www.histmodbiomed.org/article/josephine-arendt.html>) and Physiological Society – <https://www.youtube.com/watch?v=eYbvjPdQm24>



Jo receiving the Johannes Ariens Kappers Medal from Till Roenneberg, EBRS President in Munich, 2013.

Her role in the early days of the EBRS are documented in 1) P. Pevet. Evolution of a Scientific Society: from the European Pineal Study Group to the European Biological Rhythms Society. Webpage of the EBRS, September 2014 and 2) Pevet, Illnerova, Arendt. Highlights of EPSG conferences 1978-1990. Webpage of the EBRS, September, 2014.

The field and the EBRS has lost one of its shining stars. A pioneer, a trail blazer!

Condolence Book

<https://rememberancebook.net/book/professor-josephine-arendt/>

Debra J. Skene
Professor of Neuroendocrinology
University of Surrey
Past-President EBRS, 2015-2019