



SOCIETY LIFE

In memory of Professor Wolfgang Dörr, Dr.med.vet. (1959-2019)



Wolfgang Dörr was only 59 years old when he died of heart failure on 13 October 2019. Wolfgang was one of the most outstanding clinical and translational radiobiologists of his generation, outstandingly innovative and productive. His influence on our understanding of the pathogenesis and biology of the side effects of radiotherapy in organs and tissues can hardly be overestimated.

Wolfgang was born on 29 November 1959 in Förbau near Hof, close to the Bavarian border and to the former German Democratic Republic (GDR). In Munich, he studied veterinary medicine. After graduation, in 1985, he joined the Experimental Radiotherapy Group at the Institute of Radiation Biology at the Society for Radiation Research, the Gesellschaft für Strahlenforschung (GSF) Neuherberg, to work for his doctorate degree. With his mentor Johann Kummermehr, he developed an ingenious new mouse model to study the pathogenesis and radiobiology of oral mucositis. It permitted daily evaluation of radiation responses and flexible experimental designs, was very precise and was associated with minimal toxicity – the animals even gained weight during experimental follow-up. The model was based on irradiation of a field of 3 x 3 mm in the lower surface of the mouse tongue with 29 kV X-rays, thus sparing the upper surface and, in consequence, pain during eating. This development was proof of Wolfgang's approach to radiobiological experiments: concern for animal

welfare, absolute precision of radiation exposure and of response quantification. His PhD thesis in 1997 entitled Untersuchungen zur Strahlenreaktion des unbehandelten und stimulierten Zungenepithels der Maus (Studies on the radiation response of the untreated and the stimulated epithelium of the murine tongue) was an epitome of clarity and inventiveness. To the diverse programme of the GSF experimental radiotherapy group, Wolfgang contributed his expertise in veterinary medicine, taking part in the development of novel models for normal tissue studies in organs such as heart, lung, stomach and rectum in rats, mice and large animals.

In 1995, at the invitation of Thomas Herrmann, Wolfgang became leader of the normal tissue research group in the large and dynamic radiobiology research division of the Dresden radiotherapy department. Translational radiobiology was practised there before the name was created. Wolfgang sat in clinical conferences to understand the problems faced by clinicians and then designed experimental protocols to explore the underlying biological mechanisms. His work on the radiobiology of oral mucositis culminated in the creation of a clinical service and research programme for oral hygiene in patients treated with radiotherapy for head and neck cancers. His wife Elke Dörr was not only running this service, she was the stronghold in his restless life in radiobiology.

In Dresden, the spectrum of his research expanded to other organs. He developed other physiological techniques to measure functional radiation effects, often in close cooperation with the Dresden tumour response group of Michael Baumann. Wolfgang also was principal investigator in key projects of international, in particular European, research programmes such as CARDIORISK and ALLEGRO.

It was in Dresden that he discovered his talent for teaching. The annual Rennbahn courses for radiotherapy trainees were legendary and always oversubscribed, attended by candidates from all German-speaking countries. It is still going strong, and after his move to Vienna, Wolfgang created an offshoot in Austria with equal success. Wolfgang was one of the most active teachers at the European Society for Radiotherapy and Oncology (ESTRO) courses in radiobiology. His lectures on pathogenesis, fractionation sensitivity and the effects of biological and pharmacological interventions in radiation-induced normal tissue damage shaped the understanding of concepts of translational radiobiology in hundreds of young radiation oncologists throughout Europe. An objective sign of his great role in clinical radiobiology is the fact that of the 27 chapters of the popular textbook Basic Clinical Radiobiology, he is author or co-author in seven.

The care he devoted as mentor and supervisor to more than 30 PhD students who completed their studies under him is legendary. The current PhD students whom he left behind will have to prove that his teaching lives on.

In 2007, Wolfgang moved to Vienna to develop a new programme of applied and translational radiobiology with great support by the head of clinical radiation oncology there, Richard Poetter. Wolfgang's scientific career reached a peak in 2015, when he was appointed as the first Professor of Applied and Translational Radiobiology at the Medical University of Vienna. On the website of the university, this appointment was hailed as an endowed professorship to secure a long-term translational collaboration between the university and the proton centre at MedAustron. Yet, four years later, the Medical University decided to terminate translational radiobiology research in the department of radiation oncology and change the remit of the laboratory into "molecular radiotherapy within the Vienna BioCentre". But Wolfgang found new opportunities to which he planned to devote his comprehensive expertise in applied and translational research. He prepared enthusiastically for new challenges but sadly his heart failed him.

Wolfgang Dörr published extensively. More than 200 original publications and reviews, numerous letters to the editor and comments on papers published by others, and many hundreds of abstracts, teaching lectures and seminar talks spread his research and his ideas wide. He edited and wrote five books and wrote 42 book chapters.

He was a member of the editorial boards of various journals, including Radiotherapy and Oncology and Radiation and Environmental Biophysics, and he was section editor for radiobiology of Strahlentherapie und Onkologie. Wolfgang sat on committees of important radiobiological institutions: he was council member and president (2003-2004) of the European Radiation Research Society, council member and president (2002-2006) of the German Society for Biological Radiation Research, member of the Radiobiology Committee of the European Society for Radiotherapy and Oncology, council member of the German Society for Radiation Oncology and council member of the Austrian Society for Radiation Oncology, Radiobiology and Medical Radiation Physics (ÖGRO). He was awarded honorary membership of ÖGRO in 2011. He was also a member of Committee 1 of the International Commission for Radiation Protection (ICRP).

He is survived by his wife Elke and two grown-up sons. They, as well as his PhD students and his colleagues, will miss him.



Klaus-Rüdiger Trott
München
& Friends of Wolfgang Dörr



Left to right: Karin Haustermans, Rob Coppes, Vincent Grégoire, Wolfgang Dörr, Marianne Koritzinsky, Michael Joiner



In light moments



At an ESTRO radiobiology Course

