

## Andreas Ruppel: an appreciation (25<sup>th</sup> May 1946 – 19<sup>th</sup> October 2021)



Andreas Ruppel was the eldest of three brothers, played the violin from early childhood and was a proficient practitioner of judo. Andreas began his “Vordiplom” studies at the University of Freiberg in 1966 and received a scholarship to continue his studies in Montpellier, France. Upon his return to Freiburg, he became a tutor of younger students and passed his diploma in 1972. His interest in pursuing a doctoral thesis led him to Donato Cioli in Rome, Italy, who had recently established a group working on schistosomiasis at the Institute of Cell Biology of the National Research Council. His stay in Italy up to 1974 generated his first scientific papers on schistosomiasis, a topic he considered both scientifically stimulating and, in his own words, would allow him to “contribute to solving real problems” (see URL link below). Andreas then received his doctorate degree from the University of Freiburg in 1978 and his habilitation from the University of Heidelberg in 1988.

Andreas joined what was then the Department of Tropical Hygiene and Public Health at the University of Heidelberg as a scientist in 1979. In 1997, he became a Professor of Parasitology at the university, and from 2007 until his retirement in 2011, he was Director of Teaching at the Heidelberg Institute for Global Health.

With a 45-year publishing record, much of Andreas’ research focused on schistosomiasis. He and his colleagues communicated primary studies on the influence of the host, and the host’s immune and complement system on the natural history and survival of the schistosome parasite, species differences in the parasite’s natural history in mice, the vaccine and epidemiological surveillance potential of various schistosome antigens and the application of natural products as anti-parasitics. Among these scientific exploits, were Andreas’ seminal discoveries regarding the potent immunogenicity of “Sm31/32” antigens in both animals and humans infected with the schistosome parasite. In a series of papers between 1985 and 2000, he and his colleagues demonstrated the antigen’s sensitivity and specificity in the detection of active schistosome infections, regardless of infecting species, and, using the latest DNA cloning techniques, characterized the antigens as proteolytic enzymes that aided the digestion of the host’s blood proteins. This legacy of discoveries and their real-world application continue today with the ongoing investigation of these enzymes at the structural level and as potential drug targets for disease-intervention. Equally, if not more importantly to Andreas, was that in all of his scientific endeavours he sought out and maintained strong collaborations with colleagues internationally, including across Europe, and in Oman, Egypt, Israel and China, many of which developed into life-long friendships.

The reader may find a wonderfully insightful account from Andreas on his scientific efforts in the field of schistosomiasis diagnostics and vaccine discovery in the 2019 book “*Personal*

*experiences during discoveries in Schistosomiasis”*

<https://www.peertechzpublications.com/ebooks/EBOOK10114.pdf>. His account is one of a number from contemporaries in the field of schistosomiasis.

Andreas was a renowned organizer of symposia and workshops on schistosomiasis which shared the joy of scientific discovery and engaged with the local people where the meetings were held while maintaining the advocacy and focus on what is still a morbid disease of poverty. It was this fundamental concern for the precariousness of the human condition that he became active in the field of public and global health in the 2000s, participating in, and ultimately directing teaching at the Heidelberg Institute of Public Health which included workshops and symposia for students from around the world. Andreas continued these activities after his retirement in 2011, including supervising Masters students in International Health. Through his welcoming manner, including maintaining an open house, he made the Masters students from all over the world feel at home. Andreas' deep empathy and ability to listen instilled a sense of trust that offered the students a secure place in which they could discuss problems regarding their studies or life's questions in general. Andreas' capacity as an organizer continued unabated - he organized workshops for the Masters students in many parts of the world, including Myanmar, Sudan, Pakistan and his beloved St. Jakob in Tyrol, Austria, which he had often visited since childhood.

Apart from his academic interests, Andreas was an accomplished violinist, playing regularly with his local orchestra of friends, which included summer trips to St. Jakob that renewed his sense of self, perspective, and humility and gratitude for life. Unbeknownst to many, and starting during his time in Montpellier, Andreas was also deeply knowledgeable of prehistoric cave-paintings found in various parts of France, often obtaining via the landowner 'exclusive access' to those privileged sites, no doubt due to his charm, perfect French and love of French culture, food and wine!

Andreas always emphasized how privileged his life was and how this motivated him to advocate for people and societies who lacked such privileges. He shared life generously with his friends, colleagues and students, and nothing gave him more pleasure than to bring people together to exchange philosophies, ideas and stories. Andreas' deeply humanistic view of the goodness of humanity, curiosity in the natural world and his resolute efforts to leave the world in a better place for his fellow human traveller have left their indelible mark on all those who knew him.

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