Dedication: Robert U. Muller (1942–2013)

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Shortly after the conference on which the papers in this issue are based, one of the participants, a valued friend and colleague, Robert Muller died suddenly. Bob was one of the pioneer investigators of the spatial functions of the hippocampus and made important contributions to this field of neuroscience. As early as 1975, he decided to switch from working on the properties of biological membranes to studying the spatial functions of the hippocampus by recording the activity of single cells in freely moving animals. It was during a visit to London that he stopped in to see Lynn Nadel and myself, and announced his Pauline conversion. In his usual forthright manner, he told us that he had decided to make the switch not because he thought that the cognitive map theory was necessarily correct, but that if space had any role to play in the function of the hippocampus, even marginally, great classical thinkers had provided us with a panoply of ideas and approaches that we could exploit in our attempts to understand it. Space would be our hippocampal Rosetta Stone and Bob believed he could help to decipher it. As if to underscore this point, Bob showed us the 1905 volume of the journal *Annalen der Physik* containing three of Einstein’s annus mirabilis papers which he had just purchased in an antiquarian bookshop on Charing Cross Road. I barely conquered a rush of envy.

It took almost a decade before Bob began to deliver on that promise but the wait was worth it. Bob’s deep scientific knowledge and understanding allowed him to bring a powerful perspective to bear on the study of hippocampal spatial cells. With colleagues from SUNY Downstate Medical Center, notably Jim Ranck, John Kubie, Steve Fox, Jeff Taube, Greg Quirk and Andre Fenton, Bob studied the distribution of place cells in two-dimensional walled environments, how place fields remapped between different environments, the effects of small changes in environmental cues and documented the properties of the head
direction cells. These and other important contributions have stood the test of time and will continue to do so.

Discussing the hippocampus (or any other topic for that matter) with Bob was not always a relaxed undertaking. His intense need to grasp every nuance of an argument and to subject it to destructive, and sometimes fatal, analysis made for a stimulating and rewarding, if sometimes uncomfortable, discussion. Not for him the platitudes and social graces of much scientific dialogue. The hippocampal spatial mapping field will be a much duller and less interesting place without him.

Bob Muller pictured (far right) in 2002 with the editors of this Special Issue.