



Tribute to Sen-itiroh Hakomori

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Although I never had the pleasure to work in the Hakomori group, I had the good fortune to get to know Sen-itiroh through collaborations, visiting his laboratory in Seattle, and especially talking with him at various scientific meetings all over the world. His development as one of the most impactful scientists in the glycosciences and his major scientific achievements have been eloquently detailed in his obituary [1]. I became aware of his work on glycolipid cancer antigens as a post-doc in the 1970s, fascinated how mammalian cells could generate glycan-based antigens that were seen by the immune system as non-self. His ready answer to questions challenging how this could be were logical and credible, namely that tumor cells produced self-glycan structures at higher levels, allowing for antibodies with weak avidity to bind to the tumor cells, but not to normal cells that would produce the same glycan structures but at lower levels. Two other discoveries whose biological impact I feel are yet to be fully revealed are carbohydrate/carbohydrate interactions that mediate cell–cell recognition, and the association of some immune cell receptors with specific glycolipids resulting in a complex that is required for cell signaling and downstream immune responses. Although these fundamentally

important concepts are now well documented to occur, had their importance been more visible during his lifetime, they would be worthy of Nobel prize consideration. I hold great affection for Sen-itiroh, both for his deep insights into the roles of glycans in biology, and his unique personality that was at times ‘quirky’ but always deeply kind and caring of those close to him.

Compliance with ethical standards

Conflicts of interest The author, James Paulson, declares no conflicts of interest.

Reference

1. Laine, R.A. et al.: *Glycobiology* **7**, 708–712 (2021). <https://doi.org/10.1093/glycob/cwab006>

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