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Z K < s / > > ~~U~~ErDc Sezgin, of Karolinska Institutet, Sweden will be honored as the recipient of the Biophysical Journal Paper of the Year Early Career Investigator Award at the 68th Annual Meeting of the Biophysical Society, held February 10, 14 in Philadelphia, Pennsylvania. This award recognizes the work of outstanding early career investigators in biophysics. The winning paper is titled "Influence of the Extracellular Domain Size on the Dynamic Behavior of Membrane Proteins." The paper was published in Volume 121, Issue 20 of Biophysical Journal

1

The influence of membrane lipids and the cytoskeletal matrix on the dynamics of membrane proteins has been studied extensively. However, the effects of extracellular domain size and chemistry have been largely overlooked despite there being extensive diversity in these features between various proteins. Through the clever engineering of reconstituted proteins into membranes, Sezgin and his colleagues began to investigate the fundamental question of how extracellular domain (ECD) size and/or glycosylation affects membrane protein mobility and ability to access ordered lipid domains. They discovered that larger ECDs (either through protein mass or glycosylation) diffused slower and were more likely to be excluded from ordered domains. These observations begin to make connections between various models (lipid rafts, kinetic segregation, cytoskeletal compartmentalization) that explain distinct yet, coupled aspects of how membrane organization controls cell signaling.

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"The Paper of the Year Early Career Investigator Award was created to recognize and honor the groundbreaking work being done by scientists in the early stages of their research careers and the potential for future discoveries in biophysics," said Vasanthi Jayaraman, Editor in Chief. "Membrane which was first published in 1960 and has been published in partnership with Cell Press since 2009. The journal covers a wide range of topics in membrane biology and biophysics."

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