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The *Biophysical Journal* Names Erdic Sezgin the 2023 Paper of the Year-Early Career Investigator Awardee

ROCKVILLE, MD – Erdic 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*.

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 fundament 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.

"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. "We congratulate Dr. Sezgin for his research on the role of extracellular domain size in determining location and dynamics in the lipid membrane. This has opened the door to a new mechanism of cell signaling."

The *Biophysical Journal* is the Biophysical Society's flagship journal which was first published in 1960 and has been published in partnership with Cell Press since 2009. The journal spans a wide range of subjects and disciplines that provide quantitative insight into fundamental problems at the molecular, cellular, systems, and whole-organism levels.

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The Biophysical Society, founded in 1958, is a professional, scientific Society established to lead development and dissemination of knowledge in biophysics. The Society promotes growth in this expanding field through its annual meeting, publications, and committee and outreach activities. Its 7,500 members are located throughout the United States and the world, where they teach and conduct research in colleges, universities, laboratories, government agencies, and industry.