

# 4<sup>th</sup> Glycobiology World Congress

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## Joon Kim

Korea University, South Korea

### Secretion of ribosomal protein S3 in cancer cells is mediated by N-glycosylation

Ribosomal protein S3(rpS3), which is known as a DNA repair enzyme, also functions as a component of the 40S ribosomal small subunit. It has been known as a multi-functional protein. It is involved in other extra-ribosomal functions in apoptosis, cell cycle control etc. We have discovered that this protein forms a dimer and is secreted into medium after N-glycosylation. We found that it is secreted only from various cancer cell lines as well as cancer patients but not in normal cells or people who do not have cancers. We also have found that rpS3 is secreted more when cancer cells are more invasive. The secretion pathway turned out to be a standard ER-Golgi dependent pathway. We are currently investigating secretion patterns from cells of various cancer patients to be used as useful cancer biomarkers.

### Biography

Joon Kim has completed his BS and MS from Dept of Microbiology, Seoul National University, PhD in Biochemistry from the University of California at Berkeley and postdoctoral study from Harvard Medical School. He is currently a Professor in the Division of Life Sciences, and Director of Radiation Safety and Management Center, Korea University, Seoul, Korea. He has served as Director of Division of Life Sciences of National Research Foundation of Korea. He has published more than 160 papers in reputed journals.

[joonkim@korea.ac.kr](mailto:joonkim@korea.ac.kr)

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