An MBoC Favorite: TOR controls translation initiation and early G1 progression in yeast

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In celebration of MBoC's first 20 years, members of the Editorial Board, members of the ASCB Council, and others comment on their favorite MBoC papers from the past two decades.

Following the identification of the Target of the immunosuppressant drug Rapamycin (TOR) in yeast and mTOR in mammals, this paper established clear connections between TOR and both protein synthesis and cellular proliferation (Barbet *et al.*, 1996). The paper set the scene for studies on the TOR pathway by proposing that this pathway managed G1 progression via the regulation of translation initiation of specific mRNAs. From a more personal perspective, this paper introduced me to the potential that polysome analysis held in terms of the level of information that could be gained from such a simple technique. I also remember reading the paper and being struck by how comprehensive the story was; the authors outlined the basic mechanism of translational regulation and detailed the downstream consequences in terms of cellular physiology. Clearly, given the number of citations this paper has gained, I was not alone!

A PDF of the paper discussed above is attached to this article.

REFERENCE

Barbet NC, Schneider U, Helliwell SB, Stansfield I, Tuite MF, Hall MN (1996). TOR controls translation initiation and early GI progression in yeast. Mol Biol Cell 7. 25–42.

DOI: 10.1091/mbc.E12-03-0189

Molecular Biology of the Cell Volume 23 Page 3026.

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