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Autore	CORNO, ANDREA
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Sommario	During mitosis, DNA material needs to be properly segregated. Chromosome segregation is triggered by the Anaphase Promoting Complex or Cyclosome (APC/C), an E3 ubiquitin ligase activated by its cofactor Cdc20. Activation of APC:Cdc20 is conditioned by the presence of optimal conditions for a proper partition of sister chromatids. Without such conditions, activation of APC/C:Cdc20 could lead to unequal chromosome segregation, by which an aneuploid progeny could arise. The Spindle Assembly Checkpoint (SAC) inhibits the activity of APC/C:Cdc20, blocking the progression through the cell cycle and thus preventing erroneous chromosome segregation. When cells experience a prolonged SAC activation, they may die in mitosis by apoptosis, or overcome the arrest and progress into the cell cycle even when chromosome segregation is impaired. The second scenario is also known as adaptation to the SAC (or mitotic slippage). Once adapted, cell proliferation can still be blocked (via apoptosis or G1 arrest) or cells can resume cell division. The latter case may establish a progeny of cells in which aneuploidy and genomic instability introduce large genetic variability, with potentially irreversible and deleterious effect on the cell population. Using S. cerevisiae as a model organism, we characterized a

	population of cells escaped from a prolonged mitotic arrest, which we called adapted cells. Proteomic analysis of these cells revealed large rewirings of biological processes and pathways, suggesting a pseudo "differentiated" state for adapted cells. The cell cycle of adapted cell is heavily modified, to account for the chronic inhibition of APC/C:Cdc20. On the one hand, APC/C:Cdc20 itself become less responsive to the SAC, as observed in a population of cells where we uncoupled adaptation from missegregation. We showed that cellular size was not responsible for the partial recovery of APC/C:Cdc20 activity in the presence of the SAC. Our data rather suggest a role for Cdc28-mediated phosphorylation. On the other hand, other activators of APC/C like Cdh1 become essential, unlike what observed in a regular cell cycle. The synthetic lethality of adapted cells with mitotic exit genes suggests potential molecular targets for specific inhibition of adapted cells.
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