SUBCELLULAR LOCALIZATION OF LAC12GFP PERMEASE OF *K. LACTIS* IN FUNCTION OF THE GROWTH PHASE

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The yeast *Kluyveromyces lactis* has been considered as an alternative to *Saccharomyces cerevisiae* in biotechnological processes. Opposed to *S. cerevisiae*, *K. lactis* metabolizes lactose in a respiro-fermentative pathway. In low glucose concentration *S. cerevisiae* Snf1p complex is activated, leading transcription of genes involved in assimilation of alternative carbon sources. Recently it has been demonstrated that KlSnf1p affects lactose permease sub-cellular distribution. A *K. lactis snf1* mutant containing a LAC12GFPp has shown intracellular fluorescence suggesting vacuolar permease localization, while in the wild type it is mainly in the plasma membrane. However this difference was observed after 14h of growth. In order to investigate whether KlSnf1p regulates the LAC12GFPp at exponential growth or beginning of stationary phase, the wild type and *snf1* mutant strains were cultivated in YNB lactose, in continuous culture, at dilution rates $D=0.24h^{-1}$ and $D=0.08h^{-1}$. The data reveal that at $D=0.08h^{-1}$ the permease of wild type was found in membrane, while in *snf1* mutant it was localized mainly intracellular. Furthermore it was observed that at higher dilution rate the permease of wild type was localized both intracellular and plasmatic. There results suggest that in *K. lactis* the lactose permease localization depends on the growth phase. Wild type strain remarkably exhibited fermentative metabolism, probably as a consequence of higher sugar assimilation. Unexpectedly, both strains when grown in $D=0.08h^{-1}$ exhibited a more fermentative metabolism.