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Review/Revue

Bread, beer and wine: Yeast domestication in the *Saccharomyces sensu stricto* complex
Pain, bière et vin : domestication des levures du complexe des *Saccharomyces sensu stricto*

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Abstract

Yeasts of the *Saccharomyces sensu stricto* species complex are able to convert sugar into ethanol and CO₂ via fermentation. They have been used for thousands years by mankind for fermenting food and beverages. In the Neolithic times, fermentations were probably initiated by naturally occurring yeasts, and it is unknown when humans started to consciously add selected yeast to make beer, wine or bread. Interestingly, such human activities gave rise to the creation of new species in the *Saccharomyces sensu stricto* complex by interspecies hybridization or polyploidization. Within the *S. cerevisiae* species, they have led to the differentiation of genetically distinct groups according to the food process origin. Although the evolutionary history of wine yeast populations has been well described, the histories of other domesticated yeasts need further

been well described, the histories of other domesticated yeasts need further investigation.

Résumé

Les levures du genre *Saccharomyces sensu stricto* sont capables de convertir le sucre en éthanol et CO₂ lors de la fermentation. Ces levures ont été utilisées pendant des millénaires par les hommes pour la fabrication de boissons et d'aliments. Au Néolithique, les fermentations se sont vraisemblablement enclenchées à partir de souches présentes naturellement sur les substrats fermentés. Il est difficile de définir la période à laquelle les hommes ont commencé à utiliser de manière consciente des levures en les sélectionnant pour la production de pain, de bière et de vin. Cependant, on sait que les activités humaines ont été associées à la création de nouvelles espèces du genre *Saccharomyces sensu stricto* par hybridation interspécifique ou polyploidisation. Chez *S. cerevisiae*, elles ont également favorisé la différenciation de groupes génétiques en fonction des processus de fermentation. Bien que l'histoire évolutive des populations de levures de vin soit aujourd'hui mieux connue, l'histoire de la domestication d'autres levures doit être mieux étudiée.



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Keywords

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Mots clés

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