Induced cytoskeletal changes in bovine pulmonary artery endothelial cells by resveratrol and the accompanying modified responses to arterial shear stress

ABSTRACT
Our research indicates that resveratrol interacts with endothelial cells in vitro, leading to morphological and structural changes; the findings indicate that it may function as a cardioprotective substance.

INTRODUCTION
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The authors of this study found that resveratrol reduced the expression of endothelial growth factor and angiogenesis-associated factor (AIF) expression in bovine pulmonary artery endothelial cells, as well as its expression in endothelial cells of human lung fibroblasts. Resveratrol also reduced the expression of the pro-inflammatory cytokine IL-6 in the endothelial cells of bovine pulmonary artery endothelial cells. Resveratrol also reduced the expression of the pro-inflammatory Atherosclerosis and coronary heart disease have been widely recognized as significant contributors to mortality in developed countries. However, the fact that high levels of alcohol consumption in France, particularly red wine, may be linked to increased mortality rates due to these conditions. Despite this claim, few studies have suggested that natural components in wine can contribute to improved prevention by targeting specific sites that play a role in CHD, such as vascular endothelial cells or other blood-derived organs. Our aim was to identify the cellular and biochemical changes induced by the interaction between resveratrol and endothelial cells, and to demonstrate that these changes were not solely due to stress on the cell itself but also to changes in functional responsiveness to arterial flow.

CONCLUSION
Remarkable conclusions According to the evidence presented in our study, endothelial cells react with resveratrol in vitro to produce morphological and functional modifications. This was demonstrated through the formation of an elongated shape, interspersed with long, tortuous projections, in cultured human BPAEC, and the resistance of treated cells to detachment from the plastic coverslips under simulated arterial shear stress conditions. The validity of these findings and other data from previous studies raises the question of whether it may require further investigation.