



Realização:



MINISTÉRIO DA EDUCAÇÃO  
UNIVERSIDADE FEDERAL DO PIAUÍ – EDITAL 11/2015

# EXAME DE PROFICIÊNCIA DE LEITURA EM LÍNGUA ESTRANGEIRA

DATA: 18/10/2015

HORÁRIO: das 8 às 11 horas

## CADERNO DE PROVA

Idioma:

**INGLÊS**

Área de Pesquisa:

**(1) CIÊNCIAS BIOLÓGICAS, CIÊNCIAS  
AGRÁRIAS E CIÊNCIAS DA SAÚDE**

### LEIA ATENTAMENTE AS INSTRUÇÕES

- Esta prova é constituída de um texto técnico-científico em língua estrangeira, seguido de 5 (cinco) questões abertas relativas ao texto apresentado.
- É permitido o uso de dicionário impresso, sendo vedados trocas ou empréstimos de materiais durante a realização do Exame.
- As respostas deverão ser redigidas em português e transcritas para a **Folha de Respostas**, utilizando caneta esferográfica com **tinta preta** ou **azul, escrita grossa**.
- A Folha de Respostas** será o único documento válido para correção, não devendo, portanto, conter rasuras.
- Será eliminado o candidato que se identificar em outro espaço além daquele reservado na capa da **Folha de Respostas** e/ou redigir as respostas com lápis grafite (ou lapiseira).
- Nenhum candidato poderá entregar o Caderno de Prova e a Folha de Respostas antes de transcorridos 60 minutos do início do Exame.
- Em nenhuma hipótese haverá substituição da **Folha de Respostas**.
- Ao encerrar a prova, o candidato entregará, obrigatoriamente, ao fiscal da sala, o Caderno de Prova e a Folha de Respostas devidamente assinada no espaço reservado para esse fim.

## Can red wine and chocolate really stave off Alzheimer's disease?



High in resveratrol (Image: Stock Connection/REX)

A study suggests that a chemical in dark chocolate and red wine can slow the progression of Alzheimer's disease. But how conclusive is the data, and does this mean we should all drink more wine? *New Scientist* looks at the evidence.

### What is resveratrol?

Found in grapes, red wine and dark chocolate, many claims have been made about resveratrol. It has been touted as a potential panacea for a range of age-related disorders, including cancer, diabetes and neurological problems, but so far most of the data supporting these claims has come from lab studies and work in animals. There have been only a few, small studies in humans.

### How might resveratrol protect us from age-related illness?

Extremely calorie-restricted diets greatly reduce age-related diseases in lab animals. This is thought to happen through the activation of a group of enzymes called sirtuins, which seem to affect gene expression and protect against the effects of stress, including a poor diet.

The hope is that resveratrol activates sirtuins to get the same benefits – like preventing the onset of age-related diseases, including Alzheimer's – without having to stick to such a low-energy diet. But some experiments have suggested slowed ageing from caloric restriction may not be down to sirtuins after all.

### What does the latest study show?

To see if resveratrol could delay the progression of Alzheimer's disease in people, Scott Turner at Georgetown University Medical Centre in Washington DC and his team gave 119 people with mild to moderate symptoms of the disease either a gram of synthesised resveratrol twice a day in pills for a year, or a placebo.

Over the course of the study, those in the placebo group showed typical signs of Alzheimer's progressing, including a decline in the level of amyloid beta protein in their blood – thought to be a sign that this compound was being taken from their blood and deposited in their brains. Those taking resveratrol, however, showed little or no change in amyloid beta levels in their blood.

### Did the resveratrol make any difference to brain function?

This study was designed to test the safety of taking large doses of resveratrol, rather than look at whether it works. As such, the study is too small to detect any meaningful effect that it might have had on brain function. But Turner says they did see a slight improvement in one measure of cognitive function, although this wasn't statistically significant. A larger study may find a stronger result.

### Is amyloid a good indicator of Alzheimer's disease?

Alzheimer's is typically characterised by the build-up of amyloid plaques in the brain, so it is often used as a biomarker for the disease. But questions remain over the role of amyloid in the disease – does it cause the condition or is it just a symptom? We won't know how informative amyloid levels are until we find a successful way of stopping or slowing Alzheimer's, says Neil Buckholtz of the NIH National Institute on Aging in Bethesda, Maryland, which funded this study.

### Does this mean we should drink more wine?

"You can't possibly consume enough resveratrol from food sources to reach the doses that were used in the study," says James Hendrix, a scientist with the US charity Alzheimer's Association. Turner estimates someone would have to drink 1000 bottles of red wine a day to even come close.

Natural supplements are problematic, too. Plants produce resveratrol in response to stress, such as a fungal infection, cold or drought, and the level of the compound in a plant can vary tremendously. The only way to guarantee the dose is with a synthesised product.

"Nature did not design resveratrol to treat Alzheimer's disease, it designed it for some other reason that only a grape knows," says Hendrix. But the molecule is a good starting point, he says. Chemists should be able to tweak the structure to make more of the chemical reach the brain and to reduce the dose and side effects.

Until then, it's probably best to think of resveratrol and other dietary molecules as counteracting poor diet rather than preventing Alzheimer's.

Journal reference: **Neurology**, DOI: 10.1212/WNL.0000000000002035

**EM HIPÓTESE ALGUMA, SERÁ CONSIDERADA A RESPOSTA NESTE CADERNO.**

Depois de ler o texto, responda as questões a seguir em português.

QUESTÃO 01 - Como a pergunta formulada na introdução do texto (As pessoas deveriam tomar mais vinho para reduzir a progressão do Mal de Alzheimer?) é respondida pelo estudo?

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QUESTÃO 02 - Descreva o estudo realizado pela equipe de Scott Turner.

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QUESTÃO 03 - De que maneira o resveratrol poderia nos proteger de doenças relacionadas ao envelhecimento?

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