健康饮食新潮流：自噬延年 2018年10月02日 Tuesday

INTRODUCE

最近，发表在英国《自然》杂志上的一项小鼠实验研究表明，一种对细胞自噬过程至关重要的蛋白质（beclin-1）发生突变后，会增加小鼠大脑和肌肉中的细胞自噬，可延长小鼠的健康期限和寿命。  
自噬（autophagy）一词来源于希腊语的自我（auto-）和吃（-phagy），所以细胞自噬的意思就是“吃掉自己”。这一概念最早提出于20世纪60年代，但因当时研究这种现象困难重重，人们对其一直所知甚少。直到20世纪90年代早期，人们才了解了它的机制，并意识到它的重要性。此前的研究发现，自噬与蠕虫的衰老相关，而今，却是第一次将这种关系印证到了哺乳动物身上随着自噬研究的深入扩展，人们已认识到这不再是一种简单反应，许多生理现象的发生都与之有密切关系。同时，进行该实验的研究团队表示，这可能是哺乳动物增加细胞自噬、预防过早衰老、延长健康期限和寿命的一种有效机制。  
本篇课程选自 The Economist Espresso AP  
难度系数：★★★☆☆  
无用系数：★★☆☆☆

生词或其他词语的陌生用法

New diet trend: autophagy and ageing

① Few would turn down the chance to live longer, and ideas range from starvation diets to blood transfusions from the young.

② A paper published in Nature this week looks at autophagy (Greek for "self-eating"), the process by which cells break down and recycle parts for re-use.

③ Researchers found that mice engineered to have higher levels of beclin-1, an autophagy-associated protein, lived about 10% longer than unmodified cousins.

④ They were healthier, too, suffering fewer cancers and less heart and kidney damage.

⑤ The finding joins mounting evidence that autophagy is important in hindering ageing, though the mechanism remains unclear.

⑥ (One theory is that it recycles worn-out cellular components whose operation generates highly reactive free radicals—chemicals that play havoc with all sorts of cellular processes.)

⑦ The protein in question might one day make a target for drug development.

⑧ However, as with all drugs, the treatment will be in the dose—too much autophagy is as bad as too little.

参考资料：  
https://huanqiukexue.com/a/qianyan/shengwu\_\_yixue/2015/1120/25791.html

生词好句：

1.in the dose /dəʊs/: 剂量问题autophagy /ɔ:ˈtɒfədʒi/: n.（细胞的）自体吞噬  
2.turn down: 拒绝  
3.range from A to B: 从 A 到 B（内容很丰富、什么都有）  
4.starvation diet: 饥饿疗法；饥饿式节食减肥  
5.blood transfusion /ˌtransˈfjʊ:ʒ(ə)n/: 输血  
6.look at: 探讨  
7.engineered /ˌendʒɪˈnɪəd/: adj. 被基因工程改编的  
8.beclin-1: 细胞分化、凋亡和自噬过程中起重要作用的多功能蛋白  
9.autophagy-associated protein /ˈprəʊti:n/: 参与自噬的蛋白  
10.unmodified /ʌnˈmɒdɪfʌɪd/: adj. 未被改编的；未被修改的  
11.mounting /ˈmaʊntɪŋ/: adj. 越来越多的  
12.join mounting evidence: 在逐渐增加的证据上又添了一笔  
13.hinder ageing /ˈhɪndə/: 抗衰老  
14.generate /ˈdʒenəreɪt/: vt. 制造；生成  
15.free radical: 自由基；游离基  
16.play havoc with /ˈhævək/: 对……有（不好的）影响  
17.sth. in question: 正被讨论的……  
18.make sth.: 成为……

补充例句：

1. range from A to B  
我们的课程很多，从时尚到哲学，从文学到商务。  
Our courses range from fashion to philosophy, and from literature to business.  
2. look at  
这部电影探讨了一些社会问题。  
This movie looks at some social issues.  
3. mounting  
① 他们的债务越来越多。  
They faced mounting debts.  
② 要求他辞职的压力越来越大。  
There was mounting pressure on him to resign.  
4. play havoc with  
下雨一直影响着体育比赛的进行。  
Rain has continued to play havoc with sporting events.  
5. make  
有一天，你会成为优秀的科学家。  
One day, you'll make a fabulous scientist.  
6. in the dose  
所有的化学物质都有毒性，但是它们都存在一个剂量问题。  
Every chemical has toxicity, but it's all in the dose.