细胞永生的女性 The woman whose cells never die

Hello. This is 6 Minute English from BBC Learning English. I'm Rob.

大家好。这里是 BBC 学习英语栏目的六分钟英语。我是罗伯。

And I'm Georgina.

我是乔治娜。

What do Vincent Van Gogh and Galileo Galilei have in common, Georgina?

文森特·梵高和伽利略·伽利雷有什么共同之处，乔治娜?

Hmm...their first name and last names both start with the same letter?

嗯.....他们的名和姓的首字母都一样?

Well, that's true...but another similarity is their amazing contributions - to art and science - were only recognised after their death.

呃，确实如此.....但是另一个相似之处是他们的突出贡献——对于艺术和科学——都是在他们死后被承认的。

I know another person whose huge contribution to science went unrecognised during her lifetime, Rob.

罗伯，我还知道一个人，在她在世时，她对科学的巨大贡献都不为人所知。

But unlike Van Gogh or Galileo, you probably haven't heard of her.

但是跟梵高和伽利略不同，你可能都没有听说过她。

She's the subject of this programme.

她是本期节目的主题。

Henrietta Lacks was a young, black, American mother who died of cancer in Baltimore in 1951. Although she never consented to her tissues being used for medical research, doctors at the time found her cells to have an extraordinary ability to replace themselves endlessly.

海里埃塔·拉克丝是一位年轻的美国黑人母亲，她于 1951 年患癌症而死于巴尔的摩。尽管她从未同意将她的组织用于医学研究，当时的医生们发现她的细胞拥有能够无止境地自我替换的杰出能力。

Named 'HeLa cells' after her initials, Henrietta Lacks' tissue helped make possible all sorts of medical breakthroughs, from the polio vaccine to cancer drugs, to HIV and IVF treatments.

以她的名字开头命名的“HeLa 细胞”让各种医学突破成为可能，从小儿麻痹症疫苗到癌症药物，再到 HIV 和 IVF 疗法。

Born one hundred years ago, in 1920, the great-great-granddaughter of slaves, Henrietta and her cells continue to provide medical discoveries to this day...

生于一百年前的 1920 年，这位奴隶的曾曾曾曾孙女海里埃塔和她的细胞一直到今天都在继续提供医学发现.....

...most recently, of course, in the race for a coronavirus vaccine.

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.....当然最近的是在新冠疫苗的竞赛中。

But before we go on, Georgina, it's time for my quiz question.

但是在我们继续之前，乔治娜，是时候问问题了。

I mentioned that Henrietta Lacks was born one hundred years ago, but do you know what other medical breakthrough happened in 1921?

我之前提到海里埃塔·拉克丝生于一百年前，但是你知道 1921 年还有什么其他医学突破吗?

Was it a) the discovery of insulin, b) the discovery of penicillin or, c) the discovery of vitamin E?

是 A. 胰岛素的发现，B.盘尼西林的发现，还是 C. 维生素 E 的发现?

I'll say, a) the discovery of insulin.

我要选 A. 胰岛素的发现。

OK, Georgina, we'll find out if that's right later on.

好的，乔治娜，我们稍后会揭晓你是否回答正确。

Now, it was Henrietta's biography by science writer, Rebecca Skloot, that brought her remarkable story to the world's attention a decade ago.

真是由科学作家瑞贝卡·思科鲁特写的海里埃塔的传记在十年前让她的卓绝故事带到了全世界人们的眼前。

Here is Rebecca Skloot, explaining Henrietta's importance to BBC World Service programme, The Forum.

以下是瑞贝卡·思科鲁特在 BBC 世界服务节目《论坛》中解释海里埃塔的重要性。

So much of science is based on growing cells in culture which started with her cells.

很多的科学都是基于在培养皿中培养细胞开始的，最开始是培养她的细胞。

In vitro fertilization - that started with the ability to grow embryos in culture which you can do in part thanks to her cells so the list just goes on and on, and right now people are often asking how are HeLa cells helping with Covid.

体外受精——它指的是有能力在培养皿中培养胚胎，能够做到这一点有一部分要感谢她的细胞，所以感谢名单很长，现在人们经常问 HeLa 细胞要如何帮助应对新冠。

Scientists worked that out very quickly using her cells...they figured out what the receptor looks like and they did the same thing with HIV...so her cells are just this incredible workhorse that is at the base of so much science.

科学家们利用她的细胞很快就弄明白了.....他们弄清楚了受体的样子，并且他们对 HIV 也做了同样的事情.....所以她的细胞为如此多的科学基石做出了不懈的努力。

Doctors used Henrietta's cells to figure out, or understand, how cells reproduce and divide, knowledge that was vital in developing in vitro fertilization, or IVF, a technique for women who cannot become pregnant naturally, in which an egg is fertilized outside the body.

医生们利用海里埃塔的细胞弄清楚或理解了细胞如何繁殖和分裂，对于体外受精或者叫 IVF 来说很重要的知识，这项技术主要针对无法自然受孕的女性，在这个过程中卵子在体外受精。

Our bodies are made of millions and millions of cells and to understand how they work we need to grow them in a lab.

我们的身体由数以百万计的细胞构成，要想理解它们的运转方式，我们需要在实验室里培养它们。

No-one had succeeded in doing this until Henrietta's extraordinary cells which just grew and grew.

直到海里埃塔杰出的不断生长的细胞出现之前，没有人能够成功地做到这一点。

This resulted not only in new fertility treatments, but later in AIDS and cancer breakthroughs, which is why Rebecca refers to HeLa cells as a workhorse, meaning someone who does a lot of work.

这不仅催生了新的生育治疗，之后还催生了艾滋病和癌症的突破，这就是为什么瑞贝卡把 HeLa 细胞叫做老黄牛，意思是做了很多工作的人。

But perhaps Henrietta's greatest legacy of all was the vaccine for polio.

但是也许海里埃塔最伟大的遗产是小儿麻痹症的疫苗。

Here's professor of genetics, Sir John Burn, talking to BBC World Service's, The Forum.

以下是基因学教授约翰·伯恩爵士对话 BBC 世界服务节目《论坛》。

Henrietta would have particularly liked the announcement this year that polio vaccine had led to the eradication of polio in Africa - so the centenary of her birth, it seems rather symbolic that her unwitting contribution to medicine eventually eradicated that scourge of mankind.

海里埃塔会尤其喜欢今年宣布小儿麻痹症疫苗使得小儿麻痹症在非洲灭绝了——也就是她的百年诞辰，她对医学的无意贡献最终消除了人类的祸害，这很有象征意义。

John Burn calls polio a scourge, meaning something causing much pain and suffering.

约翰·伯恩把小儿麻痹症叫做祸害，意思是造成很多痛苦和折磨的东西。

Henrietta's role in eradicating this terrible disease is all the more remarkable as she was never asked permission to use her cells for research, and it's taken decades for the Lacks family to win their grandmother the recognition she deserves.

海里埃塔在消灭这一可怕疾病的作用更加突出，因为从没有人向她请求允许用她的细胞做研究，而且拉克丝的家人花了几十年才为他们的祖母争取到了应有的肯定。

That's why John Burn calls Henrietta's contribution unwitting - it was made without her knowledge or consent.

这就是为什么约翰·伯恩说海里埃塔的贡献是无意的——她不知晓也没有同意。

And with the eyes of the world now focused on vaccines for the coronavirus, this year is a symbolic time to celebrate her centenary - the one hundredth anniversary of an important event.

现在世界的目光都聚焦在新冠疫苗上，今年是纪念她百年诞辰——某个重要事件的一百周年纪念——的象征性时刻。

Henrietta Lacks - a remarkable woman whose name is finally making its way into the history books.

海里埃塔·拉克丝——一位杰出的女性，她的名字终于载入史册。

But something else remarkable happened one hundred years ago, didn't it, Rob?

但是一百年前还发生了别的了不起的事情，不是吗，罗伯?

Ah, yes, you mean my quiz question.

啊，是的，你是说我的问题。

I asked you which important medical breakthrough occurred one hundred years ago, in 1921. I said, a) the discovery of insulin.

我之前问你一百年前的 1921 年发生了什么重要的医学突破。我说的是 A. 胰岛素的发现。

Which was...the correct answer!

回答.....正确!

Discovered by Canadian doctor Frederick Banting, insulin saved the lives of millions of diabetics.

由加拿大医生弗雷德里克·班廷发现，胰岛素拯救了数百万糖尿病患者的生命。

And on that healthy note, let's recap the vocabulary from this programme, starting with in vitro fertilization, or IVF - a medical technique for women who cannot become pregnant naturally.

说到健康，我们来回顾今天节目的词汇吧，从体外受精或者 IVF 开始——一种针对无法自然受孕的女性的医学技术。

Henrietta's HeLa cells helped doctors figure out, or understand, a lot about how cells grow and led to so many medical discoveries we might call them a workhorse, something which works extremely hard.

海里埃塔的 HeLa 细胞帮助医生们弄明白或理解了很多关于细胞生长的内容，并且催生了如此多的医学发现，我们可以把它们叫做老黄牛，指的是工作极其辛苦的事物。

A scourge means something that causes much pain and suffering, like the terrible diseases which Henrietta's unwitting, or unknowing, contribution helped eradicate.

祸害指的是引起了很多痛苦和折磨的事物，例如被海里埃塔无意的或不知晓的贡献帮忙根除了的可怕的疾病。

Making 2021 a year of hope and the perfect time to celebrate the centenary of her birth - it's one hundredth anniversary!

让 2021 年成为希望的一年，也是庆祝她百年诞辰——即一百周年纪念——的最佳时机。

We hope this upbeat programme has been just what the doctor ordered.

我们希望本期积极向上的节目正式哪位医生所希望看到的。

Remember to join us again soon at 6 Minute English.

请记得再次收听六分钟英语。

Bye for now!

再见!

Goodbye!

再见!