



Proves d'accés a la universitat

Llengua estrangera **Anglès**

Sèrie 2 - A

Qualificació		TR
Comprensió oral		
Comprensió escrita		
Redacció		
Suma de notes parcials		
Qualificació final		

Etiqueta de l'alumne/a

Ubicació del tribunal

Número del tribunal

Etiqueta de qualificació

Etiqueta del corrector/a

Part 1: Listening comprehension

GOALBALL, A UNIQUE SPORT

In this radio programme you are going to hear some new words. Read and listen to them. Make sure you know what they mean.

goalball: golbol

low vision: baixa visió / baja visión

eyeshade: antifaç / antifaz

Ready?

Now read the questions on the following page. Read them carefully before listening to the radio programme.

[Now listen to the interview.]

Part 2: Reading comprehension

THE WOMAN WHO SAVED MILLIONS OF LIVES WITHOUT KNOWING

One young black woman made one of the greatest contributions of all time to modern medicine, even though she never knew the important role she has played.

Henrietta Lacks was diagnosed with cervical cancer in 1951 at the age of 31, shortly after giving birth to her fifth child. At the time, segregation was widespread in the US, so she turned to Johns Hopkins Hospital in Baltimore, Maryland, as it was one of the few which provided medical care to black people.

The **ward** where she ended up was down the hall from George Gey, a researcher who had been trying to grow human cells in his lab for decades. During the treatment to remove her tumour, her doctor sent a small sample of **tissue** without her knowing to Gey. Up to this point, attempts to grow human cells outside the body had failed. But something about Lacks's cells was about to change that.

In most people a natural process called *senescence* puts a limit on the lifespan of cells. Senescence is linked to aging: as cells divide and multiply over time, the accuracy of each accompanying replication of DNA decreases. The protective caps on the end of each **strand** of DNA, which are called *telomeres*, shorten. Eventually the DNA strands become unprotected and mutations associated with cancers and other age-related diseases arise.

Typically human cells are able to divide around 50 times before they reach senescence. But Lacks's cells were different. In the laboratory, her cells were able to divide and replicate indefinitely. They were, in essence, immortal. It made them perfect for medical research as a **culture** of identical cells could be grown quickly. Gey shared them widely with other scientists, and they became a workhorse of biological research.

Her cell line, which came to be known as "HeLa" in honour of Lacks, is the first and most commonly used immortalised cell line in medicine. Today, work done with HeLa cells **underpins** much of modern medicine. Millions of people owe their lives to the tissue taken from her—the cell line it generated was used to create the first polio vaccine, cancer medicines and *in vitro* fertilisation. Her cells even made it into space before any living human. One of the most recent applications has been in research for vaccines against COVID-19.

But the story of Henrietta Lacks also illustrates the racial inequities that are embedded in American medical research and health-care systems. Lacks was a black woman. Doctors and scientists revealed Lacks's name publicly, gave her medical records to the media and even published her cells' genome online, repeatedly failing to ask her family for consent. None of the biotechnology or other companies that profited from her cells passed any money back to her family, either.

Now, the extraordinary events of 2020—the #BlackLivesMatter movement for racial justice, and the unequal **death toll** of COVID-19 on communities of colour—are forcing scientists to reconsider past injustices. Some have called for a reduction, or even an end, in the use of HeLa cells in research. The argument is that, because the cells were obtained without Lacks's knowledge or consent (even though this was legal at the time), any use of them is unethical and perpetuates an injustice.

But that is not what many Lacks family members want. Henrietta Lacks has dozens of descendants, several of whom are calling for people to celebrate her life and legacy in her centennial year, #HELA100. To her grandson Alfred Lacks Carter, the most important thing about HeLa cells is how they have advanced cancer research—an adequate tribute, given that Lacks died of the disease at the young age of 31. "The cells were taken in a bad way but they are doing good for the world," he says. And they do so for people of all ethnicities.

Text adapted from an article on
BBC.com (November 20, 2020)

ward: sala d'hospital / sala de hospital

tissue: teixit / tejido

strand: cadena

culture: cultiu / cultivo

underpins: forma la base de

death toll: nombre de víctimes / número de víctimas

QUESTIONS

Choose the best answer according to the text. Only ONE answer is correct.

[3 points: 0.375 points for each correct answer. Wrong answers will be penalized by deducting 0.125 points. There is no penalty for unanswered questions.]

		Espai per al corrector/a		
		Correcta	Incorrecta	No contestada
1.	Which one of the following sentences about Henrietta Lacks is NOT true? <input type="checkbox"/> She is responsible for a great advance in medicine. <input type="checkbox"/> She died while giving birth to her fifth son. <input type="checkbox"/> She never knew of her contribution to medicine. <input type="checkbox"/> She was segregated for being black.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.	When Henrietta Lacks was in hospital, George Gey <input type="checkbox"/> operated to remove her tumour. <input type="checkbox"/> received some of her tissue. <input type="checkbox"/> informed her of his experiments. <input type="checkbox"/> was growing human cells in his lab.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.	Because of senescence, <input type="checkbox"/> cells continue dividing and multiplying. <input type="checkbox"/> the DNA replicates perfectly throughout one's lifetime. <input type="checkbox"/> cancers are avoided. <input type="checkbox"/> cells eventually die.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.	Lacks's cells "became a workhorse of biological research." This means that <input type="checkbox"/> they were used over and over again. <input type="checkbox"/> they divided endlessly. <input type="checkbox"/> they could be shared easily. <input type="checkbox"/> they were preserved in a lab.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.	The HeLa cell line <input type="checkbox"/> has been the basis for medical research for years. <input type="checkbox"/> was immortalised in a laboratory. <input type="checkbox"/> is only used in studies on the health of black people. <input type="checkbox"/> cannot be used in present-day research anymore.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.	According to the text, <input type="checkbox"/> neither Henrietta nor her family were ever asked permission to conduct experiments with her cells. <input type="checkbox"/> the companies that used her cells in their products have paid her family compensation. <input type="checkbox"/> Lacks's medical records have been very useful to scientists and doctors, and that's why they were published. <input type="checkbox"/> Black people at that time had their lives exposed by doctors and the health-care system.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.	The #BlackLivesMatter movement <input type="checkbox"/> has made researchers consider stopping the use of HeLa cells completely. <input type="checkbox"/> has increased the number of COVID-19 deaths among black people. <input type="checkbox"/> considers the research done with HeLa cells illegal. <input type="checkbox"/> expects scientists to continue the experiments with HeLa cells.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.	Some of Henrietta's descendants <input type="checkbox"/> want to pay tribute to all the people who have died of cancer. <input type="checkbox"/> do not mind what was done wrong, because the result was worth it. <input type="checkbox"/> are organising a party to celebrate the anniversary of her death. <input type="checkbox"/> are encouraging people of all races to contribute to cancer research.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Correctes	Incorrectes	No contestades
Recompte de les respostes		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nota de comprensió escrita		<input style="width: 100px; height: 20px;" type="text"/>		

Part 3: Writing

Choose ONE topic. Your answer should be 125-150 words in length. There is no specific penalty for exceeding 150 words in length. Extra points are not given for exceeding 150 words. [4 points]

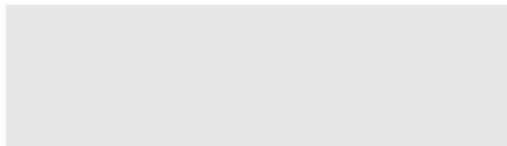
1. “Medical research is subject to ethical standards that promote and ensure respect for all human subjects and protect their health and rights. While the primary purpose of medical research is to generate new knowledge, this goal can never take precedence over the rights and interests of individual research subjects.” Write a **for-and-against essay** about the rights and interests of individuals vs. the goal of advancing medical knowledge.
2. The #BlackLivesMatter movement is dedicated to fighting racism and anti-black violence, especially in the form of police brutality, and demands that society value the lives and humanity of black people as much as it values the lives and humanity of white people. Do you think such a movement is necessary today? Write an **opinion essay**.
3. Imagine that you have a friend who doesn’t know if they want to study at university after high school or if they want to enroll in a program of vocational or professional training for 1 or 2 years. Write an **email** to them giving advice on their future studies.

Grammar	
Vocabulary	
Text	
Maturity	
Total	
Nota de la redacció	

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Etiqueta de l'alumne/a



Institut
d'Estudis
Catalans