



## Friday 15 June 2012 – Morning

### GCSE HISTORY A (SCHOOLS HISTORY PROJECT)

**A952/21** Historical Source Investigation  
Developments in British Medicine, 1200–1945



Candidates answer on the Answer Booklet.

**OCR supplied materials:**

- 8 page Answer Booklet (sent with general stationery)

**Other materials required:**

None

**Duration:** 1 hour 30 minutes



#### INSTRUCTIONS TO CANDIDATES

- Write your name, centre number and candidate number in the spaces provided on the Answer Booklet. Please write clearly and in capital letters.
- Use black ink.
- Answer **all** the questions.
- Read each question carefully. Make sure you know what you have to do before starting your answer.
- Study the Background Information and the sources carefully. You should spend at least ten minutes doing this.
- Do **not** write in the bar codes.

#### INFORMATION FOR CANDIDATES

- The number of marks is given in brackets [ ] at the end of each question or part question.
- The total number of marks for this paper is **50**.
- This document consists of **10** pages. Any blank pages are indicated.

**FOLD OUT THIS PAGE**

**Study the Background Information and the sources carefully. You should spend at least ten minutes doing this.**

**In answering the questions, you will need to use your knowledge of the topic to interpret and evaluate the sources. When you are asked to evaluate specific sources you must do so, but you may also use any of the other sources if they are relevant.**

**Answer ALL the questions.**

**1 Study Source A.**

What impression does this source give of Fleming? Use the source and your knowledge to explain your answer. **[6]**

**2. Study Sources B and C.**

How different are these two sources as evidence about Fleming's role in penicillin? Use the sources and your knowledge to explain your answer. **[9]**

**3. Study Source D.**

Are you surprised by this source? Use the source and your knowledge to explain your answer. **[8]**

**4. Study Source E.**

Why was this source published at that time? Use the source and your knowledge to explain your answer. **[9]**

**5. Study Source F.**

How useful is this source to an historian investigating the story of penicillin? Use the source and your knowledge to explain your answer. **[8]**

**6. Study all the sources.**

'Fleming does not deserve credit for penicillin.'

How far do the sources on this paper support this view? Use the sources and your knowledge to explain your answer. Remember to identify the sources you use. **[10]**

## Developments in British Medicine, 1200–1945

### How much credit does Fleming deserve for penicillin?

#### Background Information

In 1928, Alexander Fleming left his laboratory to go on holiday. On his return, he discovered mould on some of the dishes he had left. He noticed that the mould had killed the germ cultures in the dishes. He did not know how to turn the mould into a pure drug that could be used to treat large numbers of people. This was first done by Howard Florey and Ernst Chain. Fleming got most of the credit for penicillin. He became a national hero in Britain and was honoured all over the world. In 1945, he was awarded the Nobel Prize for Medicine together with Florey and Chain. Some historians have argued that Fleming has been given too much credit for penicillin.

Who should really get the credit for penicillin?

#### SOURCE A



*Stained glass window showing Fleming in his laboratory. It was installed in St James' Church, London, close to St Mary's Hospital, where he had worked for 49 years.*

**SOURCE B**

Sir, in your article on penicillin yesterday you did not give credit for its discovery to anyone. I would add to your article by pointing out that it should be given to Professor Alexander Fleming of this laboratory. For he is the discoverer of penicillin and also the author of the original suggestion that this substance might have important applications in medicine.

*From a letter to a newspaper by Sir Almroth Wright, published 30 August 1942. Wright was the Head of Department at St Mary's Hospital, in which Fleming worked.*

**SOURCE C**

My policy has never been to speak to the press or allow them to get any information from us by telephone. This has been stuck to in spite of protests from some of my colleagues (especially Chain). In contrast, Fleming is always being interviewed and photographed (we have plenty of evidence of this here). The result is that he is put across as the discoverer of penicillin (which is true), and with the implication that he did all the work leading to the discovery of its properties (which is not true). Many of my colleagues feel things are going much too far, and are naturally frustrated at seeing so much of their own work going to glorify or even financially enrich someone else.

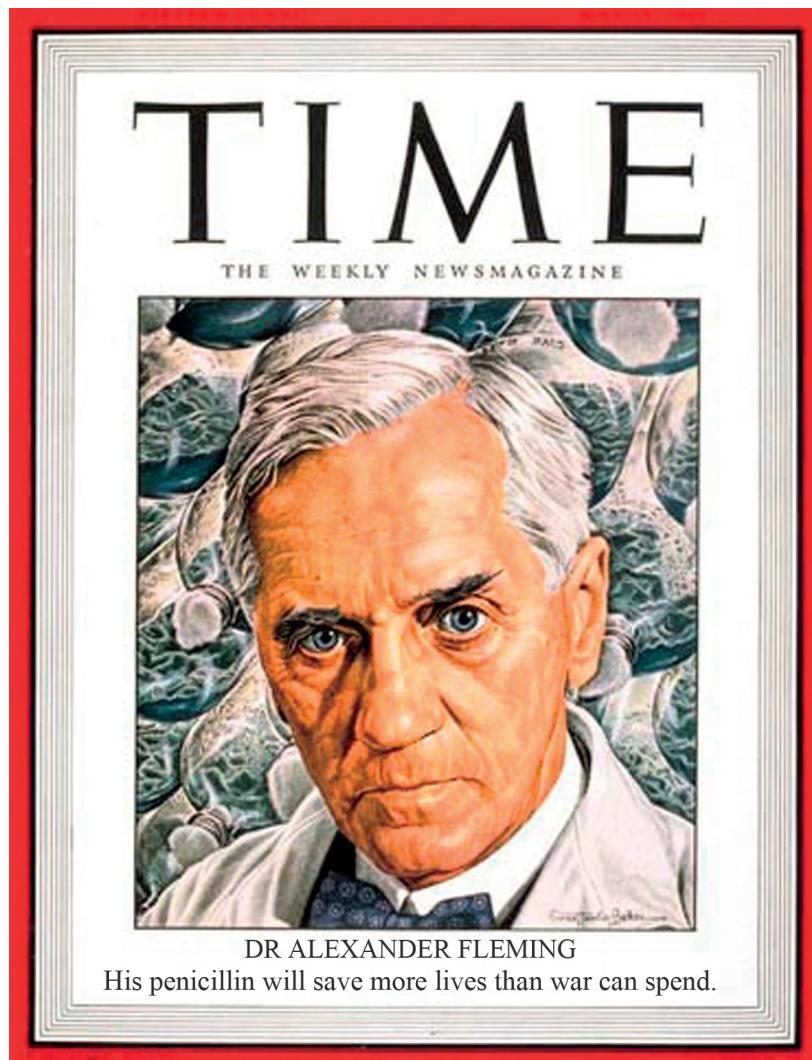
*From a letter written by Howard Florey to the Medical Research Council, 1944.*

**SOURCE D**

Although my work started you off on the penicillin hunt it is you who has made it a practical proposition and you should get the credit. News reporters are very persistent and I have not been able to dodge them completely. The Daily Mail rang this department yesterday asking for an interview. They were told we did not want any further publicity. An hour later a reporter came to the lab and asked to see me and was told I was out. Late in the afternoon, this same reporter rang me up and asked me whether anyone in this country was going to make large quantities of penicillin. I said 'yes'. Then she asked when it was likely to be available. I said 'God knows'. Today in the paper it is reported that I said it would be produced in quantity in a short time.

*From a letter by Fleming to Florey, 1942.*

SOURCE E



*Dr Alexander Fleming, on the front page of the American publication, Time Magazine, 1944.*

## SOURCE F

The first BBC radio broadcast dealing specifically with penicillin was transmitted on 4<sup>th</sup> September 1942. The broadcast explained what penicillin was, how it was produced and its effectiveness in killing germs. The script of the broadcast, which is still preserved, is very interesting. In the script there is a passage which says, 'Professor Florey, Dr Chain and their colleagues at Oxford, aided by grants from the Medical Research Council, have made an intensive study of penicillin.' This has been crossed out in pen. This smacks of an attempt to make sure that the only name to be associated with penicillin would be that of Fleming. It could be argued that this amendment to the original typed script was just part of the normal editing process. But if this was true, then why cross out those lines and not those dealing with the technical explanations of penicillin?

*From a book published in 2008.*

## SOURCE G

Fleming's role in the story of penicillin has been exaggerated. He was unable to purify the substance. There is evidence that he was not convinced that the problem of purifying the active part of penicillin could be overcome. The credit for this and for overcoming the many problems of mass production belongs to Howard Florey and his team of Oxford investigators, most notably Ernst Chain. It was Chain who pointed the group towards penicillin in the first place.

*From a book about disease published in 1983.*







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