

### Who discovered penicillin?

Alexander Fleming in 1928, I hear you say. Everyone knows the answer to that. Well, everyone is wrong. Alexander Fleming actually rediscovered it.

Penicillin was first written about in 1875 by John Tyndall.<sup>1</sup> These included a French medical student, Ernest Duchesne, who sent a paper about it to the Institut Pasteur in Paris. This famous research institute ignored Duchesne's findings on the grounds that he was too young!

Scientists were aware of the properties of penicillin, but medical science was not advanced enough at the time for anyone to realize that it might become a life-saving medicine.<sup>2</sup> But he was convinced that it could not remain in the human body long enough to kill bacteria.

In 1930, it is reported that Cecil Paine successfully used penicillin to treat a small number of patients with eye disease.<sup>3</sup> Then Howard Florey and a team of researchers made great progress in showing the effects of penicillin.

The main difficulty for Florey was availability.<sup>4</sup> The Second World War had just started and Britain had neither the money nor the resources to invest in mass-production. Florey therefore took his team to the US to continue his work.

Producing large quantities of the drug was not an easy task.<sup>5</sup> However, further research and the chance discovery that a cantaloupe melon was the best place to find high quality penicillin speeded up the process considerably. By June 1945 over 646 billion units a year were being produced.

So who really discovered penicillin? Well, many people. Scientists before Fleming knew about it. Fleming obviously plays an important role in the story, but even he stopped studying it at one point. Florey deserves a lot of the credit.<sup>6</sup> Finally, it is worth remembering that the Nobel Prize for medicine awarded in 1945 went not to Fleming alone, but was shared with Florey and Ernst Boris Chain, a member of Florey's team.

- A His attempts to treat humans failed because he just did not have enough of the antibiotic.
- B Over the next fifty-three years it was studied in various countries by a number of scientists.
- C And the hard work of his team should not be forgotten either.
- D Of course, penicillin is one of the most widely used antibiotic treatments of all time.
- E However, it was not until 1939 that any intensive research was done into the drug.
- F By June 1942, they had made enough penicillin to treat just ten patients.
- G Fleming himself thought it might be useful as an antiseptic.