

A story of drug discovery

Activity sheet B – A story of drug discovery questions

- 1 It is difficult to find a chemical that kills the micro-organisms causing a disease without harming the healthy parts of the body, because all living cells are **similar / different**.
- 2 Koch used newly discovered **synthetic / natural** dyes to stain bacteria.
- 3 Ehrlich's work with dyes helped him to think of the idea of _____
_____ to treat illnesses because he thought chemicals would attach themselves selectively to bacteria that cause disease but not to normal cells.
- 4 Ehrlich decided to investigate arsenic compounds after his lack of success with nitrogen-based azo dyes because arsenic is in the **same / different** group of the periodic table as nitrogen.
- 5 Why was the first 'magic bullet' called 'Ehrlich 606'?

- 6 Domagk decided that a dye that stuck strongly to wool might also be attracted to the proteins of bacteria, because wool is a **carbohydrate / fat / protein**.
- 7 'Magic bullets' such as Prontosil became less important in the treatment of bacterial disease after the 1940s because of the discovery of **antigens / antibodies / antibiotics**.
- 8 Antibodies produced to fight chicken pox do not work against measles because they do not match the shape of measles **antigens / antibodies / antibiotics**.
- 9 Leukaemia sufferers have cancer cells in their bone marrow.
Monoclonal **antigens / antibodies / antibiotics** could help in the treatment of leukaemia.
- 10 a) What is chemotherapy?

b) List two possible unpleasant side-effects of chemotherapy.
i) _____
ii) _____