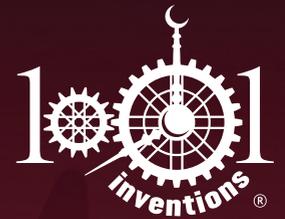
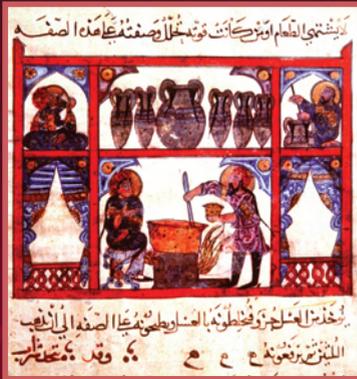


Pharmacy



Have you ever used tablets, ointments or syrupy medicines?
So did the people of Baghdad, Iraq, more than 1100 years ago.



A 13th century Arabic version of Dioscorides De Materia Medica showing a pharmacy with chemists preparing medications.

The Muslim pharmacists of ninth century Baghdad were very skilled. They knew how to make, store and preserve a huge variety of medicinal drugs. Most pharmacies were family-run businesses. So parents taught their children all they needed to know to become future pharmacists.

The Baghdad pharmacists built on the work of earlier pharmacists from Mesopotamia, Egypt, Greece, India and China. They found out about Greek medicines by translating Greek pharmacists' books. They learnt of Chinese medicines when people travelled between China and the Islamic world. They also inherited traditional medicines from the Babylonians and Assyrians.



Manuscript with pharmacological tables ascribed to Ibn al-Baytar.

A thousand years ago, expert Muslim pharmacists knew of more than 700 medicines. Ibn Sina listed them all alphabetically in a book, and described the uses of each one.

Other scientists listed medicines, too. Many books about medicines include reports of personal observations and experiments. Al-Biruni's book mentions the findings of other scientists, and shows that they don't always agree!

Several of these early books were translated from Arabic into Latin. Because the books were so well organised, they were easy to use. And because they were based on observation and experiment, they were reliable. The books influenced European pharmacists for centuries.

Today, there are lots of different ways of taking the medicines you need. The same was true in the Islamic world: syrups, tablets, capsules and ointments were all available. Pharmacists also mixed bitter-tasting powders with honey or jam to make them taste better.

Al-Zahrawi knew that, when taking a mixture of powdered medicines, it was no use just mixing the powders in a bottle. The lighter particles would go to the top, and the heavier ones to the bottom. The patient would get the wrong dose of both medicines. So Al-Zahrawi made tablets from powder mixtures. He wrapped single doses of mixed powders in silver foil, too. Al-Zahrawi also experimented with catgut. As a surgeon, he had used it to stitch up internal organs. As the wound healed, the catgut broke down and dissolved away without infection. He tried wrapping single doses of mixed powdered medicines in catgut. Patients swallowed the catgut parcels. The parcels slowly disintegrated in their stomachs. This released the medicines inside them.

Muslim doctors did not rely only on medicines. They also prescribed special foods and diets to prevent and treat illnesses – just like doctors today. A thousand years ago, Ibn Al-Adeem wrote detailed instructions for 3000 of these recipes.

It is vital to get the dose of a medicine correct! The Muslim scientist Al-Kindi realised this more than a thousand years ago. He did lots of calculations to work out medicine doses. Al-Kindi was one of the first scientists to use maths in science.

A thousand years ago – just as today – some medicines were very expensive. Others weren't always available. So Al-Kindi looked for – and wrote lists of – alternative medicines that people could use instead. Today, there are often several alternative medicines for treating an illness. And doctors often look at the cost before deciding which to prescribe.



Images from *Muslim Heritage in our World*, FSTC (2006), pages 184 (top left) and 187 (lower left).