

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/321331560>

# History of Pharmacy

Presentation · November 2017

CITATIONS

0

READS

46,759

1 author:



Subhashis Debnath

The Assam Royal Global University

25 PUBLICATIONS 153 CITATIONS

SEE PROFILE

Some of the authors of this publication are also working on these related projects:



At present I am working in nanoemulsion [View project](#)



Pharmacogenomics [View project](#)

# History of Pharmacy



Presented by  
**Dr. Subhashis Debnath**  
Professor and HOD  
Department of Pharmaceutics

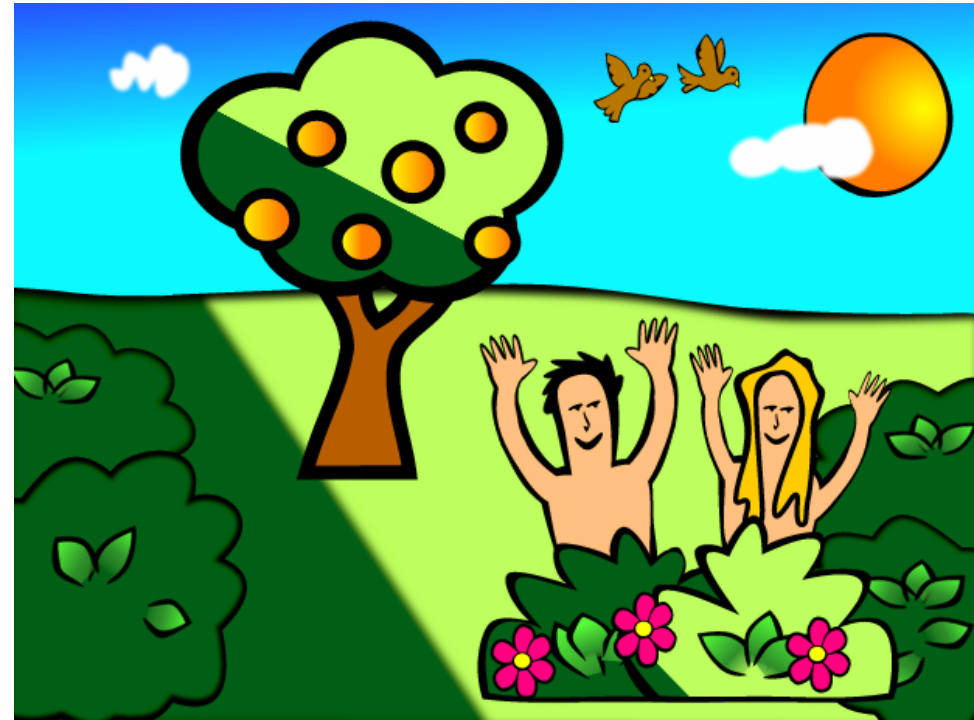
**Seven Hills College of Pharmacy**

**Tirupati**

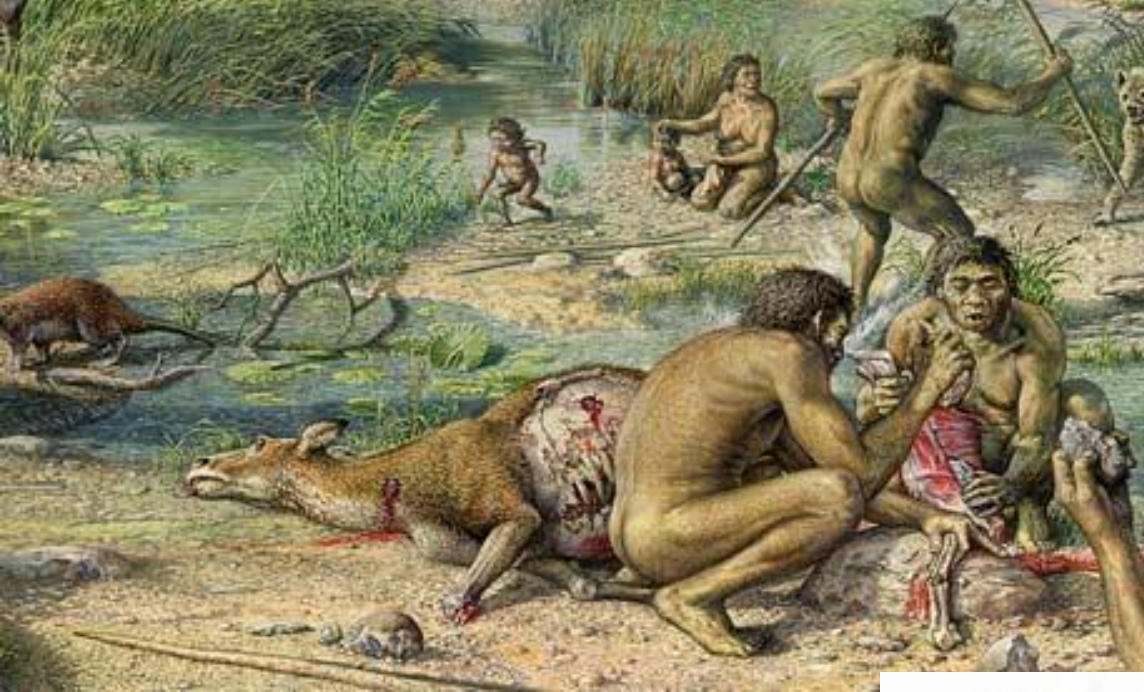


**Man observing animal kingdom**

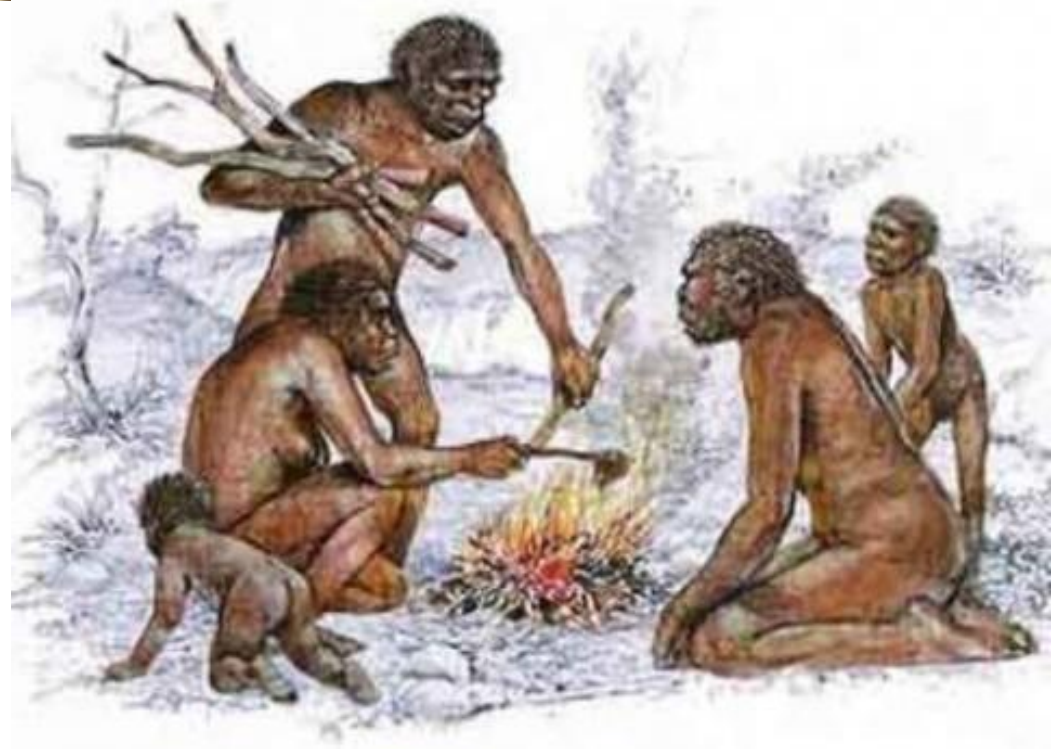
**Observed that animals are depending on nature for everything**



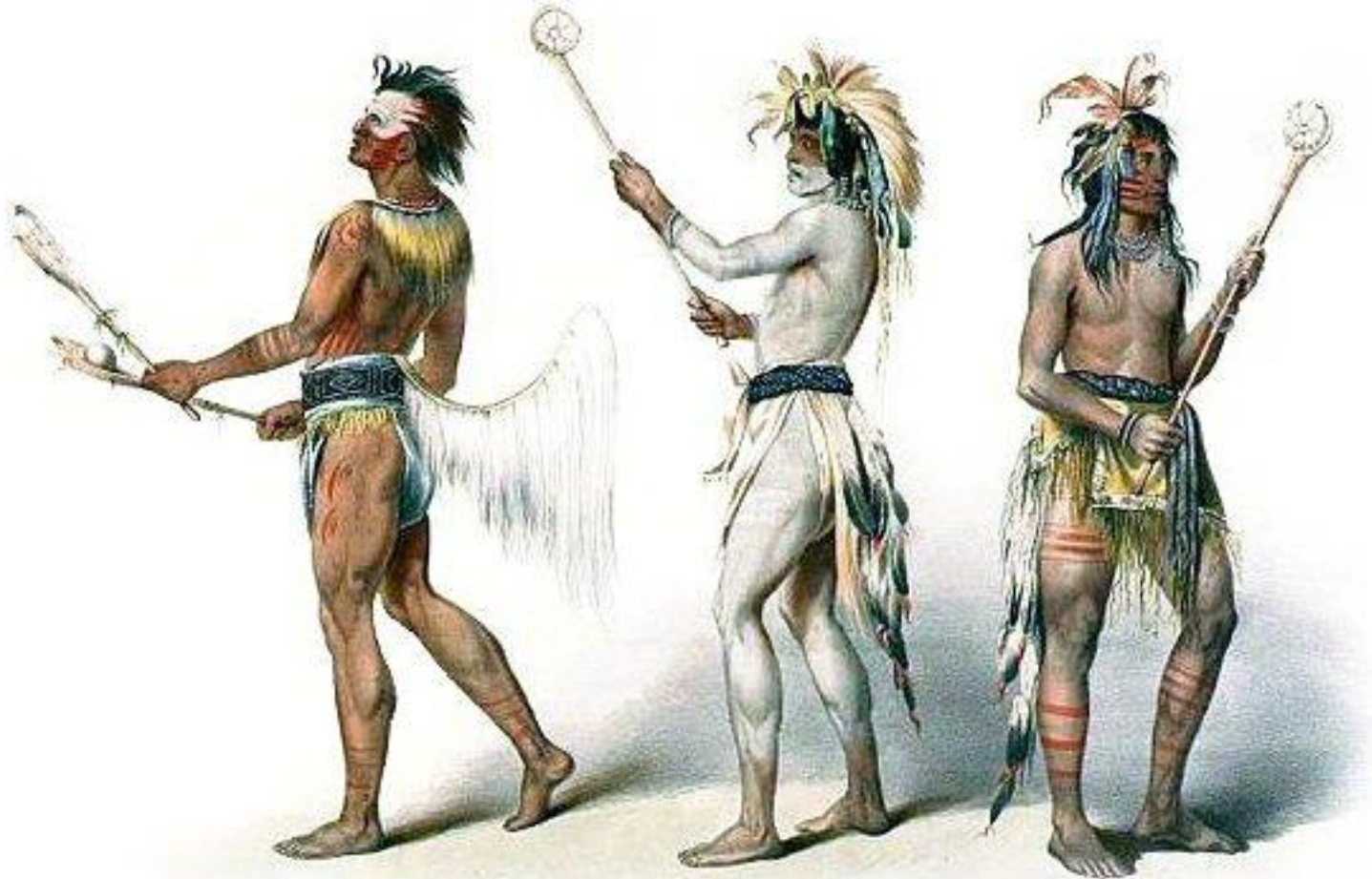




**Asked food from nature  
and nature gave food**



**Asked cloth from nature  
and nature gave cloth**





**Asked energy from nature  
and nature gave fire**

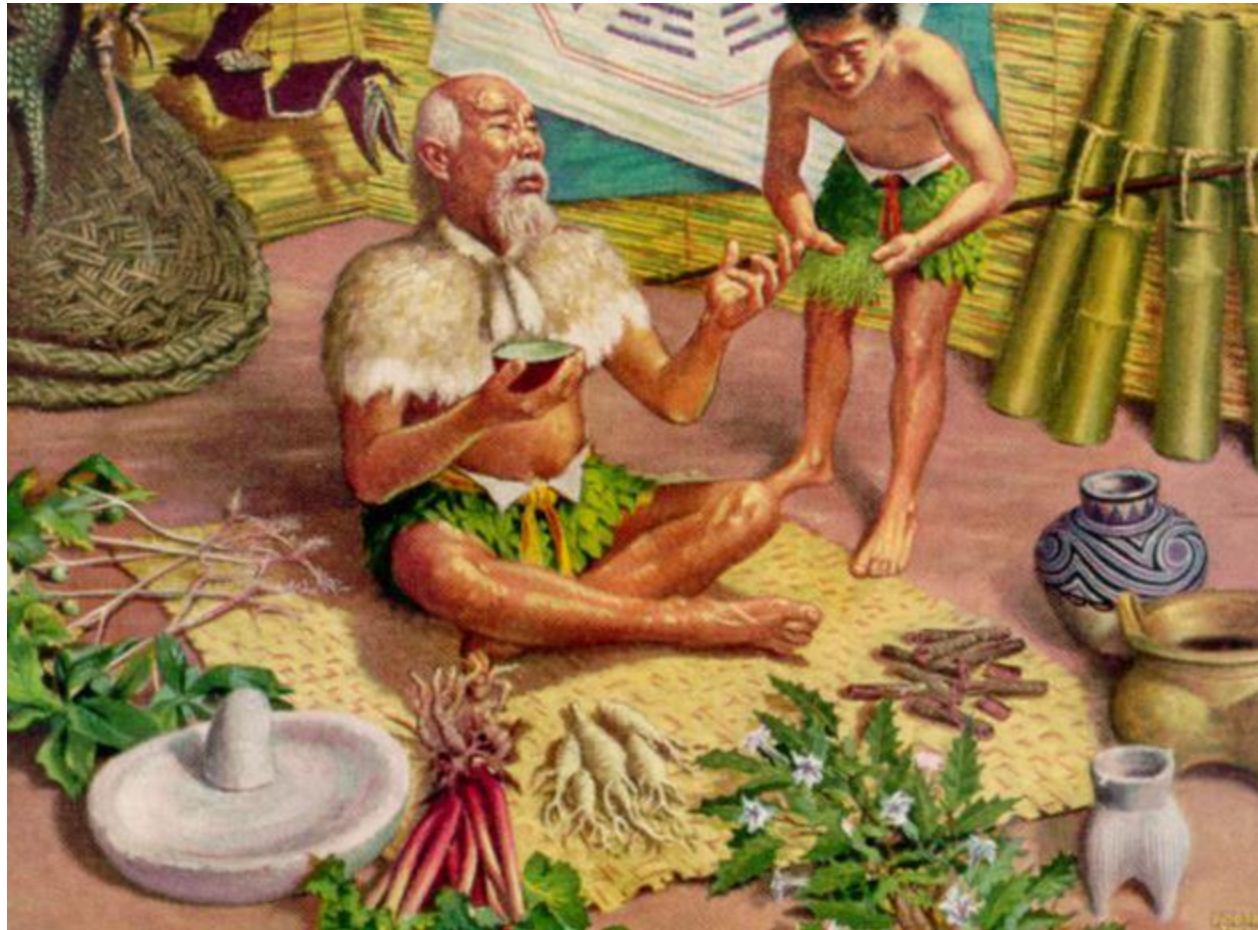




**Asked medicine from nature  
and nature gave medicine**

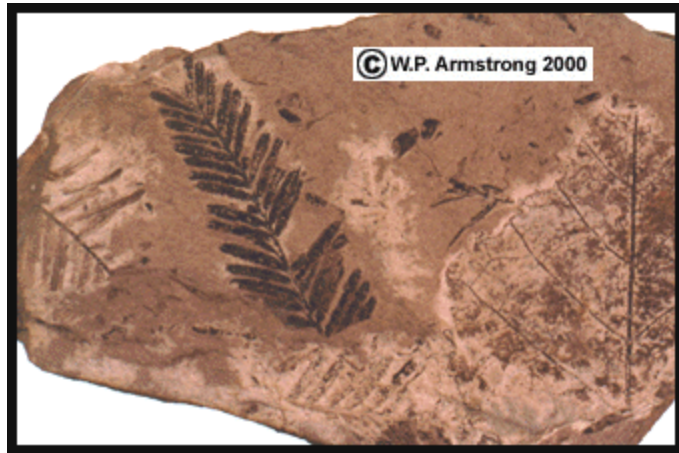






**Pharmacy is as old as human civilisation**





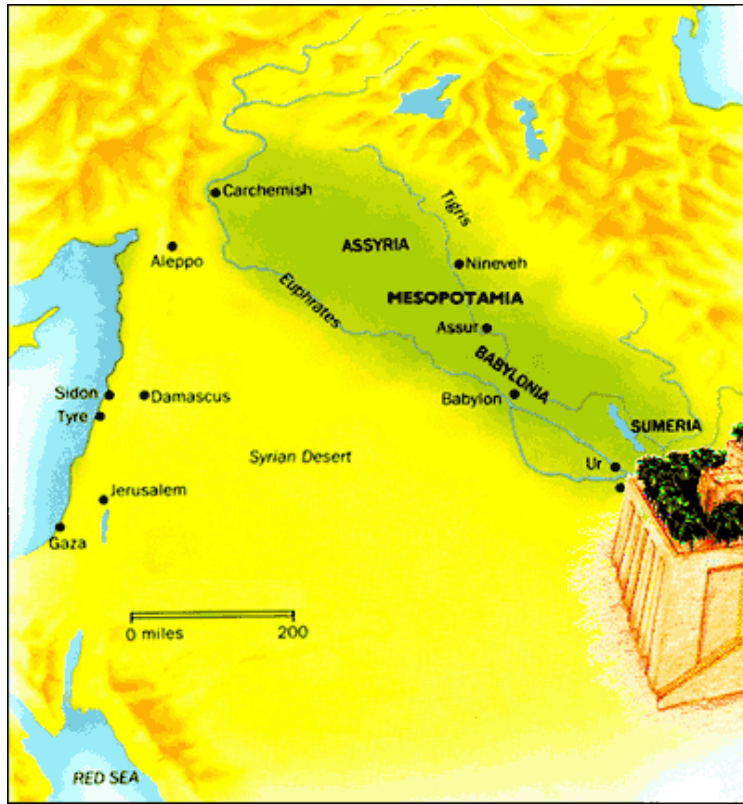
Pharmacy has a long history. Fossils from plants with medicinal properties have been found with the remains of Neanderthals, indicating that early man used these plants as drugs around 50,000 BC.



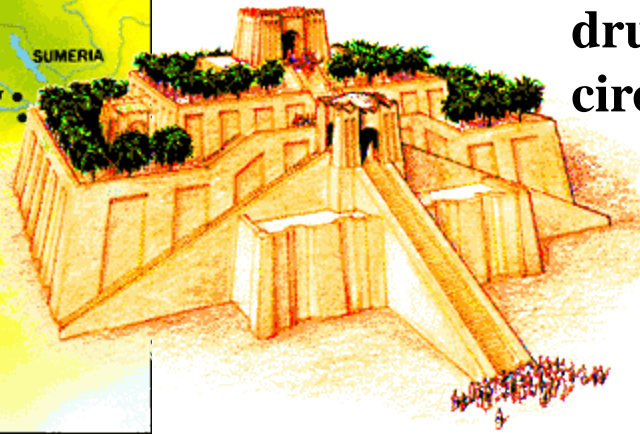




The first prescription authenticated is now available in the British Museum, and dates back to 3700 BC.



The earliest historical record for the preparation of drugs comes from Babylonia, circa 2600 BC.

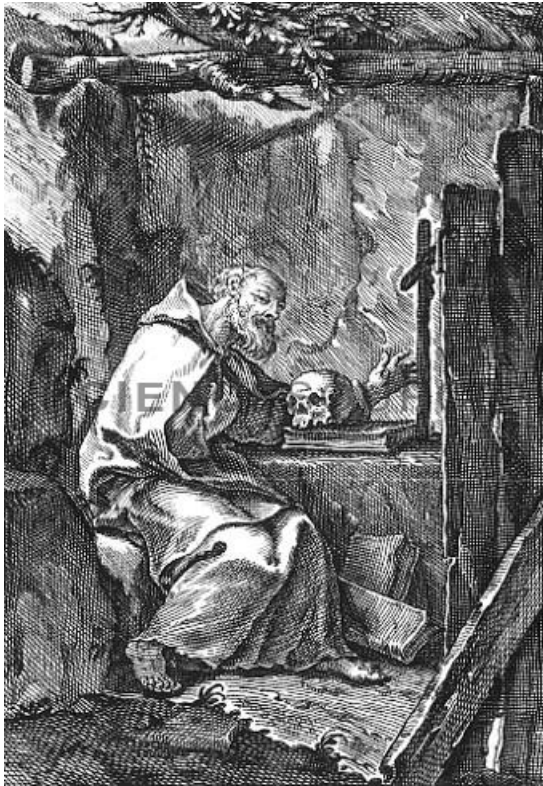




**Pharmacy is a recognized part of medical practice dating as far back as Sumerian times, around 2,000 to 1,500 BC**



Among the best known early pharmacists came around 400 BC. **Diocles of Carystus** was a Greek member of the “rhizotomoi,” a specialized branch of medical experts on the uses of medicinal plant. During this time, **Pedanius Dioscorides** wrote a five volume work entitled, “De Materia Medica,” meaning Concerning Medicinal Substances. It is the source for medieval pharmaceutical medicine in Europe, as well as in the Islamic World.



Diocles of Carystus



Dioscorides

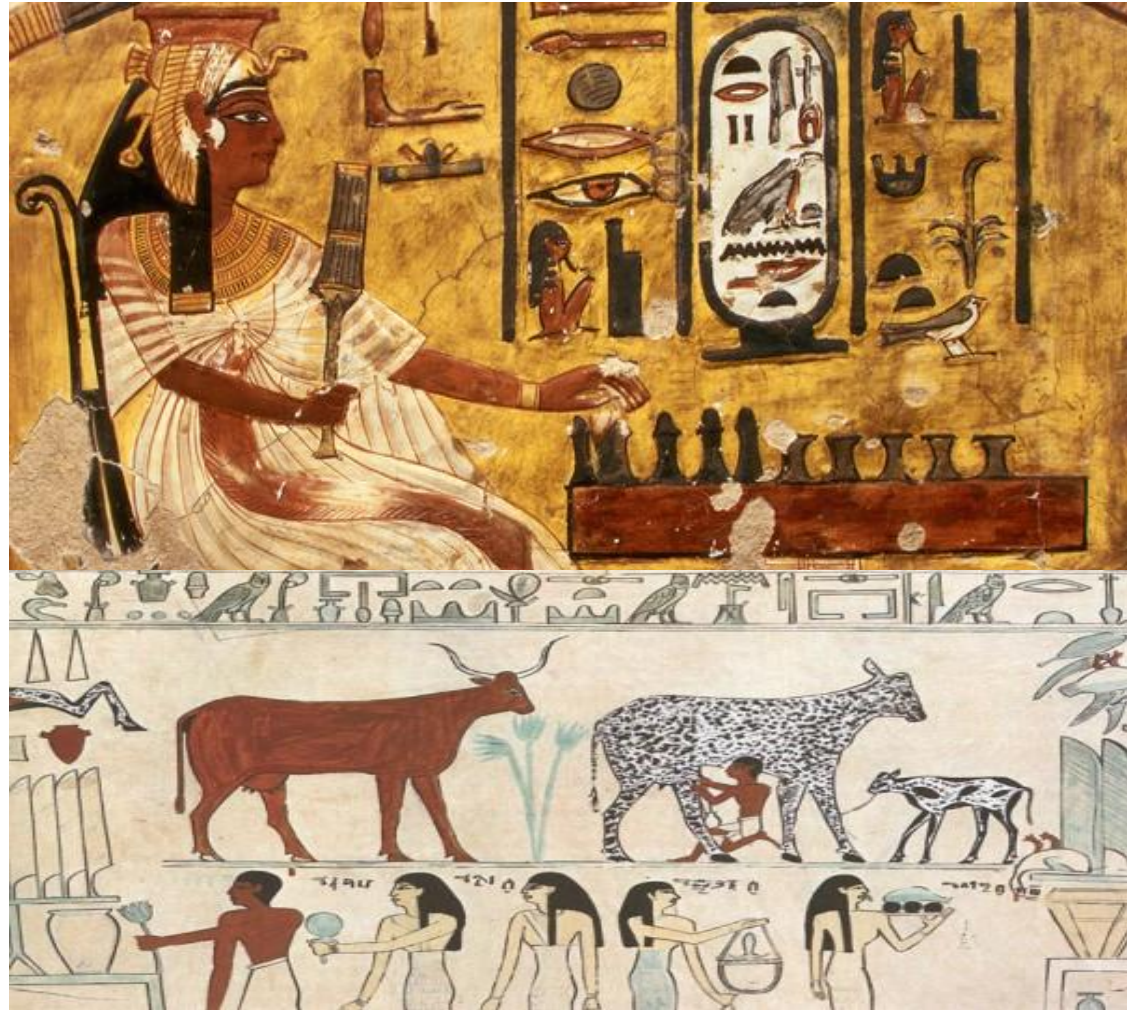
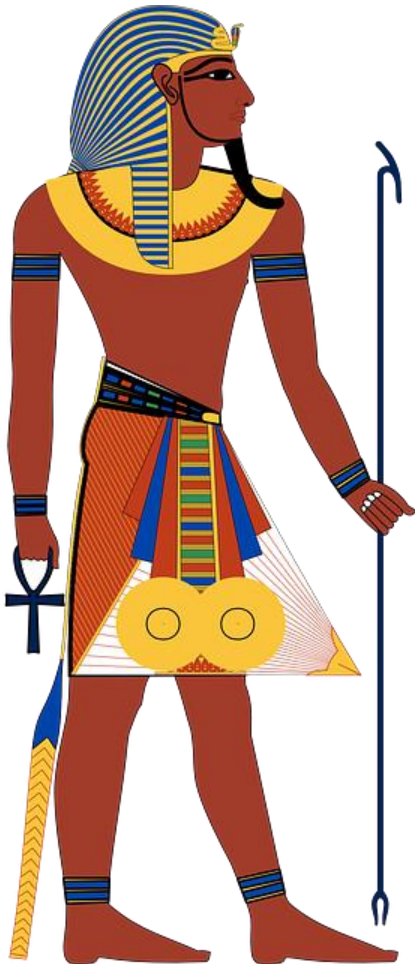


“De Materia Medica,”

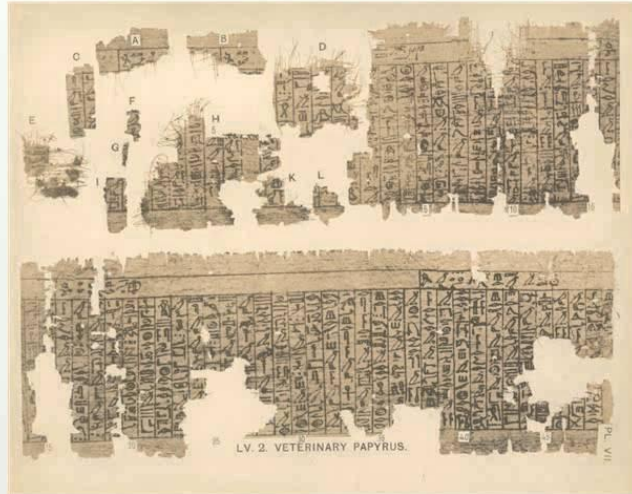


## The ancient Egyptians, the Greeks and the Romans:

To trace the history of pharmacy and pharmaceutical preparations from the time of the Pharaohs of Egypt up to the present day, we have a series of Egyptian documents. These include the Kahun Papyrus of 2000 B.C., which dealt with veterinary medicines



# Kahun Papyri



[https://en.wikipedia.org/wiki/File:PKahun\\_LV2.jpg](https://en.wikipedia.org/wiki/File:PKahun_LV2.jpg)

The papyrus is medical prescriptions written in hieratic Egyptian writing, concentrating on treatments for problems dealing with the urinary system, blood, hair, and bites





The papyrus itself is in the form of a scroll 22 yards long, and about 12 inches wide, and it actually corresponds to a modern formula book or collection of recipes, in the compounding of which, something like 700 drugs are mentioned. Many of these are in use today, while others are entirely unknown, or at least we have been unable to trace the vague and in many cases fanciful names given to them. Some of the drugs or preparations named are as follows:- Wine, beer, yeast, vinegar, turpentine, figs, castor oil,



Scroll



Figs



Castor oil

Besides the vegetable products a fair number of mineral compounds were in use, and included such things as iron, lead, bitumen, magnesia, nitre, vermilion, copper sulphate, common salt, etc. Finely powdered precious stones such as emeralds and sapphires were also used in the treatment of diseases.



Emeralds

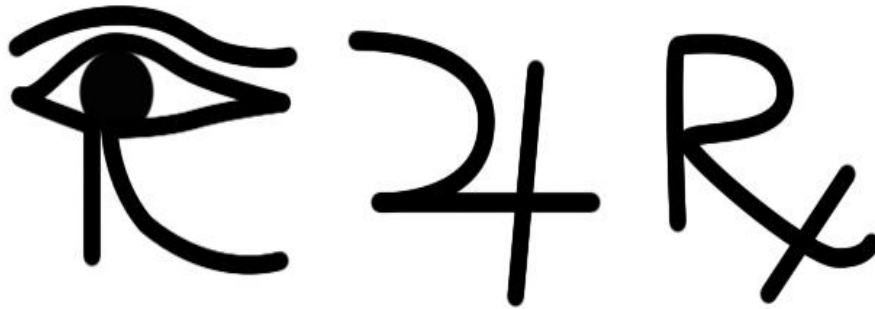


Sapphires



- *Rx symbol*

This is one of the symbols that links pharmacy practice today to ancient mythology, and which appears on every prescription. The Rx can take many forms, but they all basically have the same intent. The most popular interpretation is that it could have derived from the ancient Egyptian eye symbol, the Eye of Horus (symbol of protection, royal power and good health or Jupiter- God of healing), the falcon god of lower Egypt.



- *Left to right: the Eye of Horus, the symbol for Jupiter, and the Rx symbol*

It is also believed that Rx is an abbreviation for the Latin verb “recipere”, which translated means “Take” (it or thou). Hence it became the heading for the formula or prescription that followed. The English word recipe is derived from it and is taken to mean a list of ingredients and directions for making something, especially a food/ pharmaceutical preparation.



**Eye of Horus**



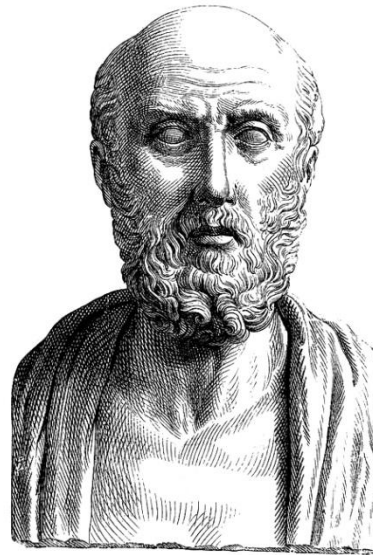


## Ancient Chinese Medicine

Pharmaceutical knowledge at this period was not restricted to the Egyptians. The Chinese had their-Pun Tsao or Great Herbal, which was an extremely interesting manuscript. It mentions 150 separate and particular herbs. Some of the remedies described in this book are toad's eyelids for colds, and earthworms rolled in honey for gastritis.



**Ancient Greece:** In medicine the Greeks made two giant steps, expressed in the writings of **Hippocrates**. Firstly they began to look for natural causes and effects in producing disease, and secondly they produced the first clearly recognisable descriptions of diseases and epidemics.



**Hippocrates**





Beginning in the 7th century BC, Greek legend has it that a god named Asklepios gradually superseded Apollo as the greatest of the healing gods.



## Galen :

Galen is a Greek physician and surgeon. His famous medicinal formula was **Theriac**, an herbal jam or electuary with some 64 different ingredients that was a virtual panacea or cure-all for many diseases, and an antidote to many poisons.



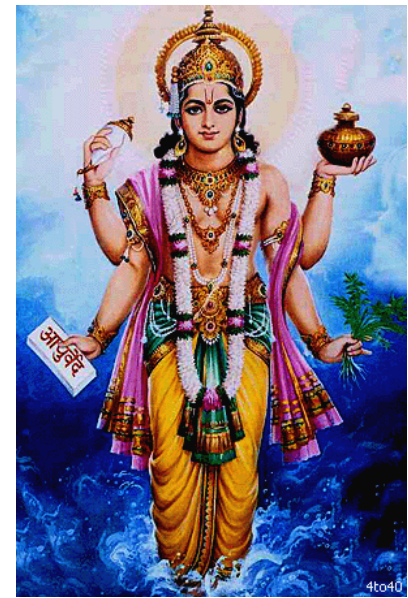


# Indian Medicine:

It was the incarnation of Lord Vishnu who invented the Science of Medicine in the Universe and it is he who quickly cures all ailments of the ever-diseased living being. According to the reference, the commonly worshiped Hindu God of Medicine, "DHANVANTARI" is the original exponent of the Indian medicine.

Ayurveda, the "Science of Life" practiced by the ancient Indians is based on Atharveda. It was one of the oldest scriptures of the Hindus, about 3,000 years old. 1/5th of the human race practices it even today.

Caraka and Suśruta were medical doctors as well as pharmacists, so they studied more than 1000 herbs thoroughly. The Ayurveda had been used by his devotees for medical purposes. It eventually spread over Asia with the advanced evolution of Buddhism



DHANVANTARI



Caraka and Suśruta

# The Evolution of pharmacy and the apothecaries in England

**The Apothecaries** (a person who prepared and sold medicines and drugs.) – Over the 16th and 17th centuries the art of the apothecary was developing rapidly in Britain as well as on the continent, and with this development there came a desire for the apothecaries or dispensers to form a Guild of their own.





In 1617, King James 1st of England granted the Apothecaries a royal charter which separated them from the Grocers (a person who sells food and small household goods). Naturally the Grocers tried to resist, but the King stood firm as he saw the grocers as merchants having no professional skill, whilst the practice of the apothecary was an art and a mystery. (Skill & Knowledge) These very same words were in use in apprenticeship indentures less than 100 years ago.



King James 1st of England



Apothecaries a royal charter

The defining moment, after almost 200 years of argument, came with the passing of the Apothecaries Act of 1815. Prior to this, many apothecaries practised medicine, but they weren't supposed to charge for their advice, only for the drugs they supplied. The physicians weren't supposed to dispense drugs, but many did and they even brought law suits against apothecaries who exceeded their powers.

The outcome of the new Apothecaries Act was a clearer definition of the two streams of practice involving, medicine and pharmacy.

**Dispenser** – doctors and pharmacists employed non-professionally trained dispensers in institutions such as hospitals, workhouses, and prisons. They were trained assistants who compounded prescriptions under supervision. From 1815 onwards, the Society of Apothecaries offered an assistants' examination qualifying candidates to compound and dispense drugs under the supervision of an apothecary, pharmacist or doctor.



- **Chemist (Chymist)** – although the term chemist is now often used interchangeably with that of pharmacist, references to chemists in historical documents sometimes refer to those involved with the study of the science of pure chemistry rather than pharmacy. In the 16th, 17th and 18th centuries the distinctions between alchemy and medicinal chemistry were somewhat blurred, but by the mid 19th century ‘pure’ scientific chemists had their own Royal Society of Chemistry. The Society was formed in 1841.
- The word “Chymist” suggests its origins are Greek, but it is generally accepted that Chemist took over from Chymist as the established spelling around 1790.
- Chemist and Druggist a term first used to describe both chemical and drug merchants and practitioners of the emerging profession of pharmacy in the late 18th and 19th century. It is often used in trade directories and census returns. Under the 1868 Pharmacy Act, the term chemist and druggist was used by the Pharmaceutical Society of Great Britain to denote those who had passed its minor examination, thus meeting the minimum requirement to register as a pharmacist

**Pharmaceutical Chemist** – The term ‘pharmacy’ was in widespread use in Europe, with various spellings, from the late classical period. ‘Pharmaceutical’ was used in England by the 17th century and the Oxford Dictionary cites a reference to ‘good pharmaceuticall, botanik and chymicall institutions’ made in 1648. More common usage of the term ‘pharmaceutical chemist’, however, dates from the 18th century, often referring to advocates of the French school of chemical based therapeutics. By the mid 19th century, when it was adopted by the new Pharmaceutical Society of Great Britain, the term ‘pharmaceutical chemist’ was being more widely applied to those interested in organic chemistry and in the skilled compounding of drugs of all descriptions.



## Formation of a pharmaceutical society In Great Britain

- In 1841, one of the leading London chemists, Jacob Bell, organised a meeting of some of his colleagues which led to them forming the **Pharmaceutical Society of Great Britain**. The new Society was involved in lobbying for legislation to control the registration of chemists and also the control of the sale of poisons.
- **The first Pharmacy Act of 1852** amongst other things, made provision for a register of chemists and druggists to be set up and maintained. It also confirmed the Pharmaceutical Society's charter as well as the bye laws governing its proceedings.
- **Another Act in 1868 recognised those who were already practicing as chemists and allowed them to be registered, provided they could show that they were competent to continue practicing.** It also required that future applicants for a licence to dispense and to sell scheduled poisons must pass a qualifying examination, and that titles such as "Pharmaceutical Chemist", "Chemist & Druggist" were restricted to registered persons. The law now gave the power of examination to the Society and also set up a schedule of poisons to be administered by the Society.



# Royal Pharmaceutical Society of Great Britain



- The importance of this Act was that it defined clearly that Pharmacy was to be controlled by pharmacists through their Society, and denied the Medical council the power they had desired to examine and register all those in any way concerned with the practice of medicine or pharmacy.

### **Formation of American Pharmaceutical Association :**

- Retail pharmacies started popping up in the United States in 1729, with the first one founded in Philadelphia by Irish immigrant Christopher Marshall. The first pharmacy attached to a hospital also came about in Philadelphia shortly after, in 1752. By 1852, the American Pharmaceutical Association, now known as the American Pharmacists Association, was founded. The first attempt to standardize pharmaceutical medicines also was made in this year.

Moving into the 20th century, after World War II, pharmaceutical manufacturing took on a modern, industrialized form in the United States. Electronic prescribing systems began in 1990, used to automate the prescribing, supply and administration of medicines in hospitals. And now, Forbes has stated that being a pharmacist is the “best healthcare job” due in part to a high average salary and projected growth. And, we need them, as there were 44.6 million prescriptions filled at pharmacies in 2014, amounting to a \$236 billion dollar industry.



## Future and Conclusion:

- Looking ahead to the future, pharmacies will be even more technologically advanced, with the use of pharmacy robots, smart packaging and a “smart pill.” The use of automated “robots” are still in their infancy, but smart packaging can be used now. It is a blister pack containing a microchip that is able to monitor when doses are popped out of the package, with data transmitted to a mobile phone or tablet app. Since smart packaging can’t tell if the dose was taken, we can go a step further with a smart pill with a sensor that is ingested by the patient, which can provide information on the dose, heart rate and other variables.

*Collected from various sources like internet*



# Thank You