

History of Pharmacology-II

VPT: Unit I; Lecture-4
(Dated 05.10.2020)



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Galen (131-201)

- ✓ A Greek physician, surgeon and philosopher in the Roman Empire.
- ✓ The Dioscorides's *Materia Medica* was later strengthened by Galen that emerged as the authoritative material medica for the next 1,400 years!
- ✓ In fact, some pharmaceutical preparations consisting of primarily herbal or vegetable matter are still referred to as **galenical preparations**.



Paracelsus (1492-1541)

- ✓ The Swiss physician **Philippus Aureolus Theophrastus Bombastus von Hohenheim** (1492-1541), known as **Paracelsus**, introduced the clinical use of laudanum (opium) and a number of tinctures (extracts) of various plants, some of which are still in use today.
- ✓ He is remembered for using drugs for specific and directed purposes, and for the famous dictum "All substances are poisons; there is none which is not a poison. The proper dose separates a poison from a remedy."



Valerius Cordus (1515-1544)

- ✓ A German botanist, physician, pharmacologist und natural scientist.
- ✓ The **First Pharmacopoeia** called **"Dispensatorium"** was published by Valerius Cordus.



Other Pharmacopoeias

- ✓ 1618: Two pharmacopoeias published in London.
- ✓ 1689: Edinburg Pharmacopoeia.
- ✓ 1820: First United States Pharmacopoeia published and given the No. USP-0, the **current** edition of the *United States Pharmacopeia* is titled **USP-39** and the National Formulary titled **NF 34**, which includes excipients.
- ✓ 1864: British Pharmacopoeia. And continues to be published today.

- ✓ During 17th and 18th centuries, drug trade flourished and medical experimentation began.
- ✓ Drugs like cinchona (Quinine), coffee, tea, cocoa (methylxanthines), curare, digitalis and a variety of alkaloids were discovered.

- ✓ In 1656, **Sir Christopher Wren** made the **first intravenous injection of opium in a dog.**
- ✓ The bark of the cinchona tree was brought by Jesuits from South America for use of treatment of malaria.
- ✓ In 1783, the English physician **William Withering** reported on his experience in the use of extracts from the foxglove plant to treat patient with "dropsy," a form of edema most likely caused by congestive heart failure.

Francois Magendie (1783-1855)

- ✓ A French Physiologist
Pharmacologist.
- ✓ Pioneer of Experimental
Pharmacology.
- ✓ Studies actions of Nux vomica
(Strychnine).
- ✓ Introduced Morphine, codeine,
quinine and Strychnine.
- ✓ Foramen of Magendie.



Claude Bernard (1813-1878)

- ✓ A famous Physiologist.
- ✓ A student of Magendie.
- ✓ The active ingredient of foxglove botanical preparations was **digitalis**, and its action was on the heart. We continue to use digoxin today for the treatment of congestive heart failure in humans and animals.



Rudolph Buchheim (1820-1879)

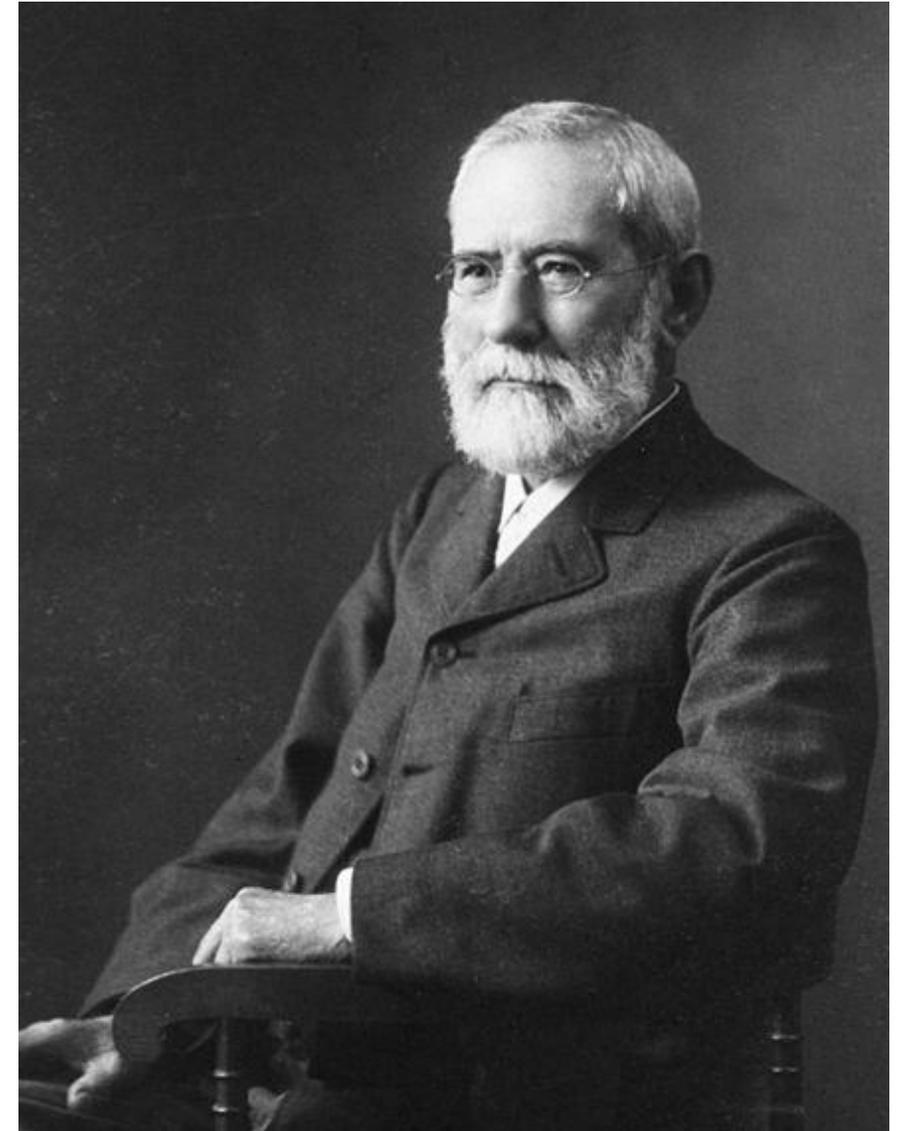
- ✓ A German Pharmacologist.
- ✓ Established the first true **experimental laboratory** dedicated to pharmacology in the mid-18th century.
- ✓ His work included in 1849 a textbook *Beiträge zur Arzneimittellehre*, which classified drugs based on their pharmacological action in living tissue.



R. Buchheim

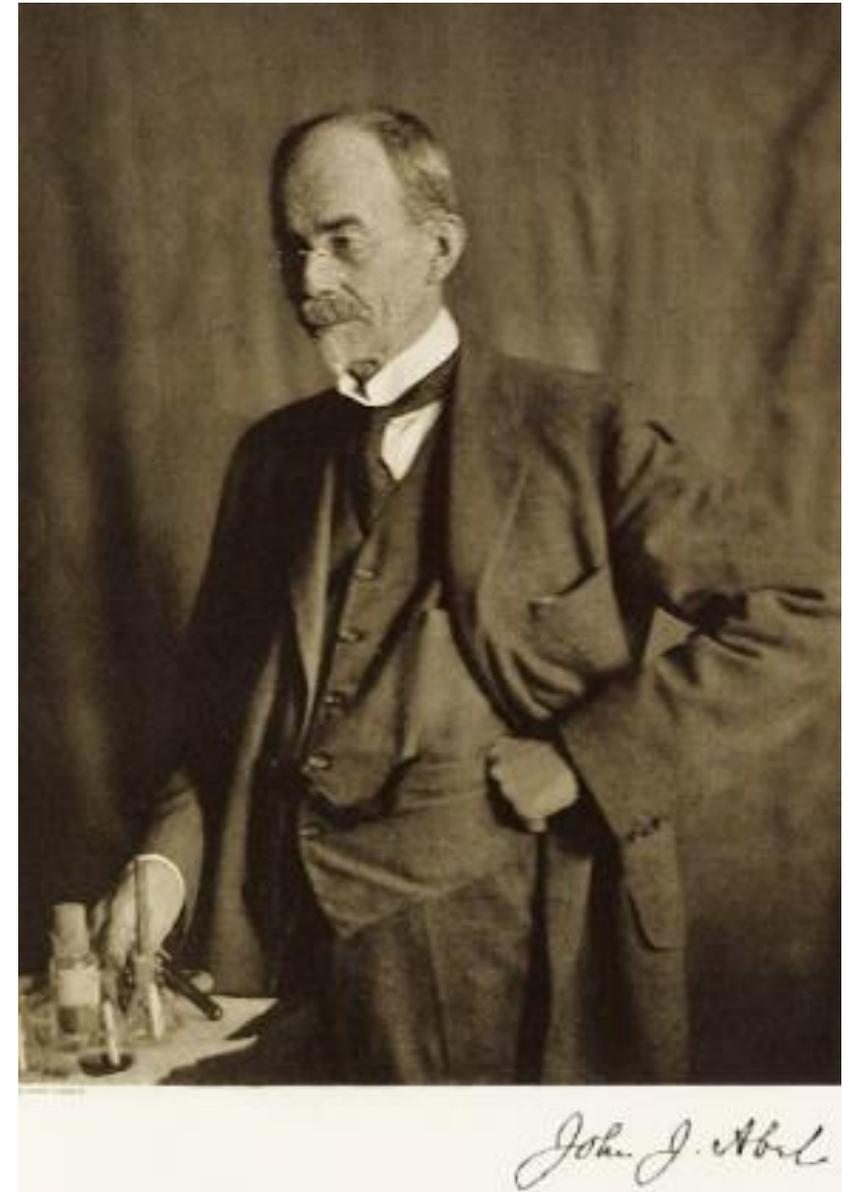
Oswald Schimdeberg (1838-1921)

- ✓ A German Pharmacologist.
- ✓ **Father of Modern Pharmacology.**
- ✓ Took upon himself the goal of making pharmacology an independent scientific discipline based upon precise experimental methodology that ultimately displaced material medica.
- ✓ He founded and edited the **first pharmacology journal** *Archiv für experimentelle Pathologie und Pharmakologie* in 1875



Dr. John Abel (1857-1938)

- ✓ An American Biochemist & Pharmacologist.
- ✓ A student of Oswald Scheimberg.
- ✓ Father of American Pharmacology.
- ✓ Founded the *Journal of Biological Chemistry* as well as the *Journal of Pharmacology and Experimental Therapeutics*.
- ✓ He was instrumental in founding the *American Society of Pharmacology and Experimental Therapeutics* in 1908.



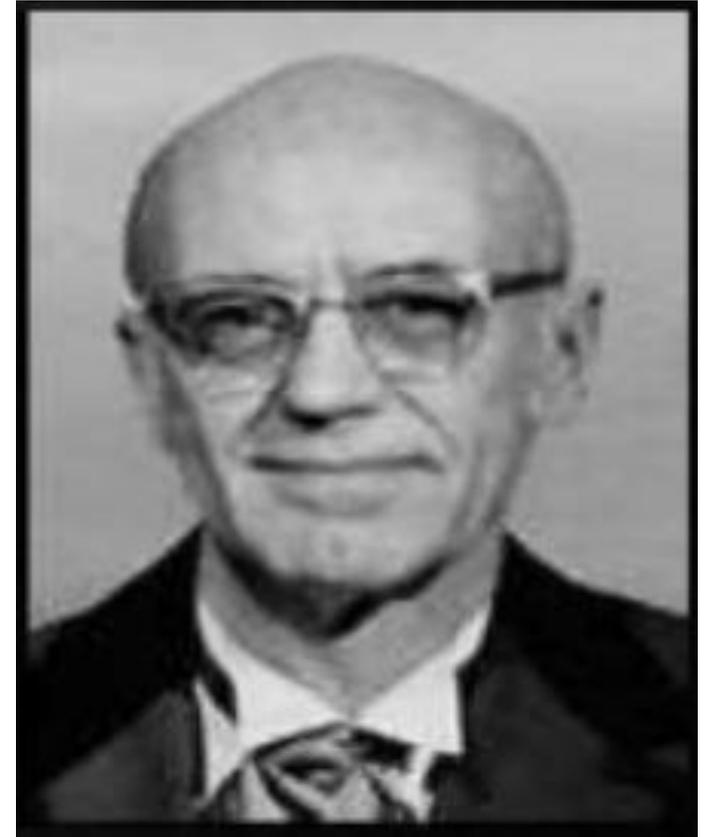
Colonel R. N. Chopra (1882-1973)

- First Chair in Pharmacology in India.
- **Father of Indian Pharmacology.**
- Established first Laboratory at School of Tropical Medicine Calcutta for Scientific Study of Indigenous Drugs of India.



Dr. L. Mayor Jones (1913 - 2000)

- ✓ **Father of Modern Veterinary Pharmacology.**
- ✓ **Emphasis on Veterinary Pharmacology as an independent discipline.**



Thank You

