MEDICAL PHILATELY-33

From Tree to Tablet…The Story of Aspirin

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Published on 30th December 2024

Aspirin, the trade name for acetylsalicylic acid, was introduced to the market by Friedrich Bayer & Company in 1899. In addition to its well-known use as an analgesic, antipyretic, and anti-inflammatory agent, research has shown that aspirin can serve as a life-saving preventive treatment for a variety of conditions. These include heart attacks, strokes, colon cancer, pregnancy complications, diabetes, and even dementia. The Columbia round stamp issued in 1999 celebrates 100 years of Aspirin.

While there is no extensive philatelic coverage of aspirin itself, the evolving story of its discovery and the determination of its mechanism of action can be followed through selected postage stamps.

Willows, from the genus Salix, are a group of deciduous trees and shrubs, found primarily on moist soils in cold and temperate regions. They are charged with acetylsalicylic acid. Willow trees, the source of aspirin can be found on a variety of stamps like these Poland and Uruguay stamps.

The father of modern medicine, **Hippocrates,** (460 - 377 B.C) has left historical records of pain relief treatments, including the use of powder made from the bark and leaves of the willow tree to help heal headaches, pains fevers and labour pains. Another champion Greek physician **Galen** also used willow extracts extensively. In 1763 an English clergyman, Rev Edward Stone observed its beneficial effect in treating many of his parishioners for rheumatism. Stone was an advocate of **Paracelsus'** "Doctrine of Signatures," which presumed there was a geographical or ecological association between the conditions that produced a human disorder and the plants whose extracts cured it.

The chemical investigation into the healing properties of substances found in willow bark began in the early 19th century, partly due to Napoleon's continental blockade, which disrupted the supply of Peruvian **Cinchona tree** bark, another natural source of salicylic acid. The Rwanda stamp commemorates the 150th anniversary of the discovery of Quinine. In 1820, French

Cite this article as: Sajikumar J. From Tree to Tablet…The Story of Aspirin. Kerala Medical Journal. 2024 Dec 30;17(4):228–29.
DOI: https://doi.org/10.52314/kmj.2024.v17i4.685

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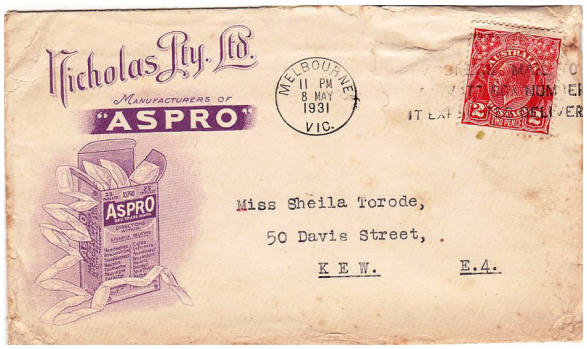
chemists **Joseph Pelletier** (1788-1842) and **Joseph-Bienaime Caventou** (1795-1877) successfully isolated quinine from cinchona bark.

Felix Hoffmann, a German chemist, produced a stable form of acetylsalicylic acid, in 1897. Hoffmann, was searching for something to relieve his father's arthritis. He studied French chemist Charles Gergardt's experiments and "rediscovered" acetylsalicylic acid or aspirin, as we now know it. In 2023, Liberia issued stamps to commemorate the 125th anniversary of the introduction of Bayer Aspirin. The stamps feature Hoffman, the Aspirin tablet and its structure and parts of the willow tree.

In 1977, Brazil issued a stamp to commemorate World Rheumatism Year, featuring aspirin crystals. The chemical structure of aspirin was depicted on a German stamp in 1990.

The precise mechanism of the action of aspirin was described in 1970 by the British pharmacologist **John Vane,** who showed that aspirin achieved its effects by inhibiting the production of prostaglandins. Vane was knighted and jointly awarded the 1982 Nobel Prize for Medicine, along with the Swedish scientists Sune **Bergström and Bengt Samuelsson** "for their discoveries concerning prostaglandins and related biologically active substances." John Vane is featured in the Micronesia stamp while the Swedish stamps shows Bergström and Bengt Samuelsson.

A Red Cross worker carries a package labeled 'aspirine' in the 1972 stamp from Central African Republic. The current use of aspirin as a stroke preventative is reflected in this 1999 Gabon stamp commemorating 100 years of discovery of aspirin.



Nicholas Aspro advertising envelope 1931

Aspirin is used long-term, at low doses, to help prevent heart attacks, strokes, and thrombosis in people at high risk. Aspirin may be effective at preventing certain types of cancer, particularly colorectal cancer. Aspirin is a first-line treatment for acute rheumatic fever and many chronic inflammatory conditions like rheumatoid arthritis.

END NOTE

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Conflict of Interest: None declared