

# ASPIRIN®

## Market

People take more care about their health today. In many European countries, one in three medical drugs are already sold without prescription, for the purpose of self-treatment, and the trend is continually growing. In 2006, only 10% of medications were issued without prescription in Croatia, and this amounted to 85 million Euro. (Source: PharmMIS data).

In Europe, demand is highest for flu medications, followed in the popularity rating by over-the-counter painkillers. Croatia is no exception and the painkiller and flu medication market totals in 15 million Euro (source PharmMIS), making up almost a quarter of the total market for over-the-counter medications. Taking into consideration the fact that our life gains in pace every year, it can be confirmed that the painkiller and flu medication market in Croatia is bound to grow.

## Achievements

Aspirin, one of the world's best known and most successful brands, is the most famous and the biggest brand of the Bayer concern, or more precisely, its daughter company Bayer HealthCare with its seat in Leverkusen, Germany. In 2005, Bayer HealthCare sales reached a total of around 9.4 billion euro profit and employed nearly 33,800 people around the globe.

Bayer HealthCare owns four research centres - in West Haven and Berkeley (USA), Wuppertal (Germany) and Kyoto (Japan), mostly dealing in research of effective methods for the treatment of illnesses such as arteriosclerosis, diabetes, cancer; cardio-vascular diseases and infections. Bayer HealthCare is one of the top world leaders and innovators in the area of health protection and medical production, including divisions such as Animal Health, Biological Medications, Over-the-Counter Medications (Consumer Care), Diabetes Care, Diagnostics and Bayer Pharma (prescription-only medications).

With the acquisition of Roche Consumer Health in 2004, Bayer HealthCare joined the world's three leading

over-the-counter medication producers. In early 2007, merger with the German pharmaceutical company Schering was successfully completed as well.

## History

In 1863, the well-known German chemist Fridrich Bayer founded an aniline paint factory in the small town of Wuppertal. Who could have known back then that the name would enter world history and that it would become a synonym for unprecedented quality in pharmaceuticals on all continents. The Bayer company was among the first to enter the drug production process. 19 February 1888, came to be a historic day - by the company management decree, the pharmaceutical department was founded. The pharmacy of the world - that is how the Bayer company would be known from that day on. And the decisive step towards glory - the Fenacetin was the first antipyretic, bringing relief to millions of flu patients.

In 1899, Bayer launched the production of its famous Aspirin, rightfully dubbed the drug of the 20th century. The history of Aspirin - the first drug to contain acetylsalicylic acid (ASA) as one of its active ingredients, goes way back into the century. It was created through empirical research and subsequent synthesis and chemical modification of the natural chemical compound which was known as early as the 1st century B.C. The willow bark (a natural source of salicylic acid) was used by the ancient Romans to relieve arthritis and rheumatic pain. References to similar use of



the willow bark can be found in ancient Egyptian papyrus scripts as well as in the recipes of the legendary Greek physician Hippocrates.

Persistent research for a harmless and effective medication was concluded by a Bayer company chemist, Felix Hoffman, in 1897, when he synthesized acetylsalicylic acid in a chemically pure and stable form appropriate for the production of medication. In 1899, Bayer patented a medication based on this discovery, under the name of Aspirin. The medication was launched on the market that same year and soon became popular in many countries around the world and Europe. The famous Spanish philosopher José Ortega y Gasset dubbed the 20th century the century of Aspirin, but Aspirin will, no doubt, continue to bring relief to people of the 21st century as well.

## Product

The over-the-counter medication Aspirin is a successful partner in effective and safe treatment of pain and cold. Aspirin has more than one hundred years of experience in medical application, as well as the world's largest database, demonstrating the possibilities and the



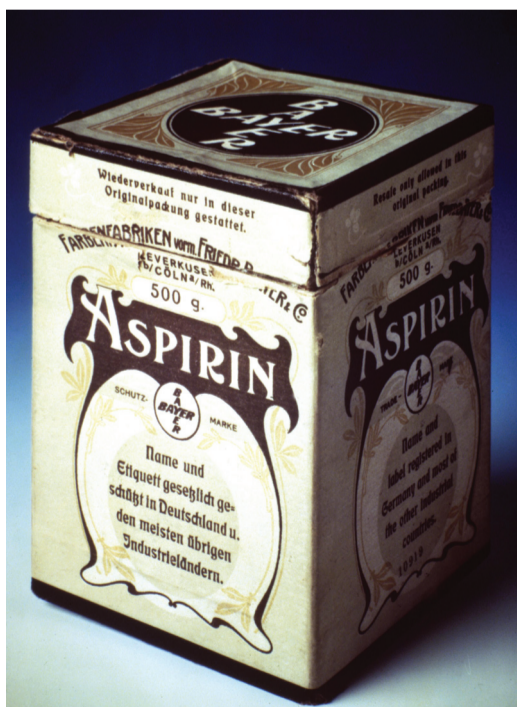
The first to synthesize salicylic acid was the young Italian scientist Raffaele Piria, in 1838. In 1859, professor



wide range of therapeutic indicators for its application. According to the 2005 consumption data of the Readers Digest magazine, Aspirin is the most reliable analgesic in Europe. Europeans have been putting their trust in Aspirin for years - it is a medication with a single ingredient which, according to the latest scientific studies, is safer than painkillers, which include paracetamol.

At the start of its career, Aspirin was used to remove pain and reduce high fever; and in the late 20th and early 21st centuries its application range significantly expanded. Aspirin is successfully used for the treatment and prophylaxis of myocardial infarction and other cardio-vascular conditions. In addition, the latest research conducted in the USA showed that Aspirin was the right medication for prophylaxis with some types of cancer: cancer of the lungs, the colon and the stomach lining. Research is also under way on the efficiency of Aspirin in the treatment of diabetes and old-age dementia (Alzheimer's disease). Research results published in January 2007 in the American Journal of Respiratory and Critical Care Medicine show that the incidence of asthma in male patients was reduced by 22% due to the regular intake of low-dosage Aspirin. Physicians also point out that Aspirin helps with altitude and decompression problems. The convincing results, demonstrated in prophylaxis and treatment of many conditions, are summed up in the slogan "An Aspirin a day keeps the doctor away".

A medicine such as Aspirin, which is well-known



and is in constant demand - is a good source of profit for every pharmacy. The Aspirin product range in Croatia includes the classic Aspirin 500 mg tablets for pain relief (headache), Aspirin plus C soluble tablets quickly soluble in water and also containing a high concentration of vitamin C needed for organism resilience, Aspirin Direkt chewable tablets for pain relief with quick effect and Aspirin Protect tablets with gastroresistant coating (not dissolving in the stomach but in the bowels) intended for prophylaxis of cardio-vascular diseases.

#### Recent developments

In 1971, the British pharmacology professor, John R. Vane, discovered the mechanism of the effect of the Aspirin active ingredient on the human organism, directly attacking the inflammation focal point. He received the Nobel Prize for his discovery in 1982, and was knighted by Queen Elisabeth II.

In the early 1970s, a new era in Aspirin's career began - a US scientist proved that use of the medication reduced the risk of myocardial infarction and stroke. 30 years later, no one can deny the significance of

Aspirin in the prophylaxis of cardio-vascular diseases. In the late 1990s, scientists discovered yet another effect of the "wonder drug", its ability to stand up to cancer. Aspirin still holds many mysteries and is the focus of great interest of the world's scientists. At the beginning of the third millennium, research into Aspirin and its main component (ASA) produce around 3 500 scientific papers on the topic every year.

Since 1995, scientists from different countries compete for the prestigious international award called the Aspirin Award. The competition facilitates better understanding of the mechanism of action and ushers in all new possibilities of Aspirin. This award was founded by the Bayer company and has become its contribution in research and discovery of new mechanisms of action of ASA. Some previously unknown characteristics of Aspirin have been revealed thanks to this competition, such as its ability to reduce glucose level in the bloodstream, as well as the virulence of the golden staphylococ (which is the main cause of dangerous infections, such as endocarditis infection, osteomyelitis, etc.), it behaves like an anti-oxidant and has an immunostimulating effect.

#### Promotion

Thanks to well-conceived marketing, Aspirin has become a world brand. For the promotion of the medicine in the market, active use is made of the traditional methods - TV, radio, publications, as well as special advertising projects; for example, Bayer marked 100 years of Aspirin with a project that found its way

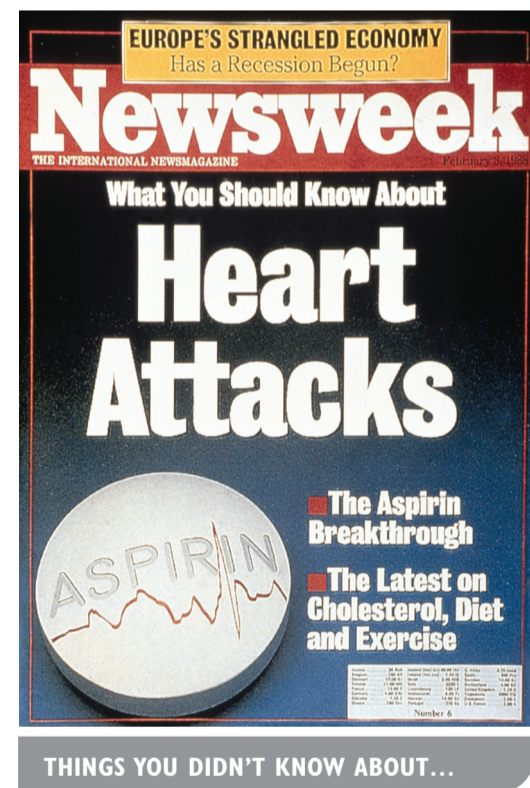


into many textbooks. Bayer turned the 120-metre-high skyscraper in Leverkusen, Germany, the company premises, into the world's largest Aspirin packet, thus entering the Guinness Book of Records. 22,500 metres of tissue was used for this purpose. The event was seen by 40,000 people. World TV stations aired live coverage of the event. Bayer is one of the world's most important sponsors supporting professional and amateur sports for the physically challenged.

#### Brand value

Bayer's Aspirin is the best known analgesic medicine, an effective aid in reducing high fever; with anti-inflammatory effect, and in smaller dosage (100 mg ASA) can be applied daily as prevention of cardio-vascular diseases. The triumphant voyage of the medication across the countries and continents continues through the third millennium. Compared to most generic medications, Aspirin has the undeniable advantages of a genuine medical product: high effectiveness, excellent tolerance on the organism, and has a wide range of effects. It is far more effective than any generic medication - unoriginal medications produced on the basis of ASA. Bayer allocates up to 30% of its budget on research and elaboration with the aim of acquiring even better effectiveness and safety of the product. Thus, Aspirin undergoes more than 100 quality controls in the course of production. More than a hundred years of experience in the application of Aspirin practically eliminated all unwanted side effects. This fact is a guarantee for high demand and complete trust of its consumers.

[www.aspirin.com](http://www.aspirin.com)



THINGS YOU DIDN'T KNOW ABOUT...

#### Aspirin

- In 1950, Aspirin entered the Guinness Book of Records for the first time as the most popular pain relief medicine in the world.
- In 1969, Aspirin accompanied US astronauts to the Moon, as a component of the space pharmacy the size of 12x12x20 cm.
- Botanists have grown a type of rose that they called Aspirin.
- In Argentina Aspirin enjoys great popularity, having become the second currency: in shops where it is packed, it is often given to customers instead of change.
- In 2005, a new mechanism of Aspirin was discovered - an active component of Aspirin stimulating the production of nitrogen oxide, thereby blocking inflammations.