

Upjohn History Presentation 2018

I started here with The Upjohn Company in 1980 as an analytical chemist and retired last October after 37 years. Today I want to show you that this site has a lot of special history.

Now everything I will be showing you today is on the website www.upjohn.net. This site has 800 web pages, over 15,000 images and 19 videos. Anyone in the world who can access the internet can see it and I'm always adding more information to it.

- **WE Upjohn** - Our story starts in 1853, when William Erasmus Upjohn was born in Richland. We know this newborn best as W.E. Upjohn. He was awarded his medical degree at the University of Michigan in 1875 and became a country physician, based in Hastings. It bothered him that pills of that era were so hard they travelled right through the patient without dissolving. He started experimenting with ways to create a pill that would dissolve within the body. It seems he became quite obsessed with this goal and one day he succeeded.
- **Friable Pill** - The Upjohn Pill and Granule Company began around 1886 in Hastings. The three principals were brothers - W.E.Upjohn, Henry Upjohn and James Upjohn and their innovative product was the friable pill. The term friable means easily crumbled into smaller particles. The new company used a logo of a thumb crushing a pill and a thumb remained part of the logo for 60 years.
- **First Building** - The Upjohn brothers wanted to build a factory in Hastings but the city council there would not allow it so The Upjohn Pill and Granule Company moved to Downtown Kalamazoo. Kalamazoo had a population of 14,000 people at that time and called itself the "Windmill capital of the world". It was also a leader in buggy manufacturing – 47,000 buggies had been made. The first Upjohn building was on Farmers Alley.

Upjohn History Presentation 2018

- **First Price List** - The first Upjohn price list was printed in 1886. It contained 110 different pills and 50 granules, and included the following friable pills: Anti-constipation, Anti-syphilitic, Opium, Morphine, Digitalis, Quinine, Strychnine, Blue Mass (Mercury) and Aphrodisiac. Cannabis pills were sold after 1897.
- **Buchu and Pareira Brava** – Upjohn made this product in their Downtown Kalamazoo factory from 1899 to 1914. . I estimate this particular bottle was filled between 1902 and 1904. Buchu (buckoo) is an herb from a plant native to South Africa and Pareira Brava is from a vine native to the West Indies and South America. The label states "Will be found useful in chronic diseases of the urinary passages, kidneys, bladder and as a general diuretic". Of course, back then there was no clinical data to prove any of that and there was no thought at all about side effects. None at all. FDA did not yet exist and medications back then were entirely based on extractions from plants and minerals that early peoples had experimented with over thousands of years

At the start of the 20th century there were no chemical or biological syntheses in our industry. All active ingredients were either minerals or extractions from plants. Upjohn had huge supply chains of plant materials coming from across the world into Kalamazoo. And what testing would have been done on incoming materials at that time? Really there were just three tests – does it look like it should, based upon previous shipments. Does it smell like it did before and does it taste like it did before. That was it.

- **Hematic tonic** – a tonic is supposed to perk you up, right? Note three of the ingredients in these pills – arsenous acid, mercuric chloride and strychnine sulfate. So this tonic contained arsenic, mercury and strychnine. Wow. Why would anybody make this or take this? Well, there used to be a homeopathic principle that a very small quantity of poison will really perk up your system. Again, there was no clinical testing and there was no FDA

Upjohn History Presentation 2018

to regulate products so companies could sell anything they wanted. It didn't matter if a product worked or not, or how toxic it was to the patient. There were no rules at all until 1906 when the Pure Food and Drugs Act was enacted. However, FDA in its current form did not exist until 1920 and only then was there a push to eliminate all the harmful products and products that had no therapeutic effect.

- **Cannabis** – cannabis was a very popular medication back then and every pharmaceutical company made it. Obviously it's good for pain relief and there are those effects that most college students know about. This particular bottle was in the collection of a country doctor. I would date it to the early 1920s. When he died 5 years ago his family auctioned it on eBay. I really wanted it for my own Upjohn bottle collection but alas, it sold for \$450, which was way above my price. So would the cannabis in those pills still be, um, enjoyable? It would be too risky. A hundred years of degradation has produced who knows what impurities inside these pills.
- **Blue Mass** – see slide. It's well-known that Abraham Lincoln took Blue Mass pills for several years to treat what was then called melancholy (today we would call this depression). However, when taking Blue Mass he was prone to erratic behavior and violent outbursts. Recognizing this, he stopped taking the pills and that was a very good thing. Nobody wants a president prone to erratic behavior and outbursts.
- **Quinine pills** – were huge sellers for the Upjohn Company. Quinine used to be the first choice for treating malaria, which is a bad fever caused by the bite of a mosquito that has the disease. In the 1800s almost everyone in Michigan had malaria because of all the wetlands in the state. It was said on the East Coast at that time "Don't go to Michigan, that land of ills, the word Michigan means aches, fever and chills." It was not until most of the wetlands were drained that malaria was no longer seen in Michigan. Malaria was a world-wide problem at that time, making quinine pills a huge

Upjohn History Presentation 2018

seller. However, quinine has some serious side effects so it's now the third-choice option for treating malaria.

- **Early Expansion** – With pills that actually dissolved in the body, Upjohn became very successful. By 1904 the company price list was 192 pages long. More buildings in Downtown Kalamazoo were either bought or built by the company. Eventually the Upjohn triangle was formed downtown, which was all the land between Lovell St, South St and Portage Rd. This included a company power plant.

During the Great Depression (1929-1939) W.E. Upjohn did not lay off any of his workers. He formed the Upjohn Farms in Richland at that time. Upjohn employees not needed for manufacturing worked at the farms to cultivate vegetables and fruit, which were then sold in Kalamazoo. Because of The Upjohn Company and the many paper mills in the county, Kalamazoo came through the Great Depression pretty easily.

- **Major New Buildings** - The research tower (B25, demolished in 2007) and the headquarters building (B24, now used by Bronson Hospital) were built in 1934-5. As you can see, these were major buildings and both were paid for entirely out of earnings. No loans were needed. That tells you how successful the company had become.
- **1930s Production** - However, you can see from this 1930s photo, production in that era was cramped and not at all amenable to expansion at a site in the middle of a city.
- **WWII Support** - In the Second World War, Upjohn supplied 19 different pharmaceutical items to the military. Best known were the sulfa drugs (sulfanilamide and sulfadiazine). These were in paper packets labeled Wound Tablets. They also did key research on penicillin. Lots of quinine

Upjohn History Presentation 2018

tablets were supplied to support jungle warfare.

- **Building of the Portage Site** (8 slides) - During WWII it was becoming obvious the company needed a major expansion of manufacturing facilities. Company leaders considered building upwards in Downtown Kalamazoo but decided to buy a spacious site outside the city. 1,500 acres of land were bought on Portage Road, the location of our current manufacturing site. At the time the city of Kalamazoo stopped at Cork St and there was no city of Portage. This site was deep in the country. On postcards from that era the new site is described as being near Vicksburg.
The new Upjohn manufacturing complex took 5 years of construction to complete and cost \$32 million, all paid for out of earnings. It was fully opened in April 1951, so we have been manufacturing here for 67 years.
- **Upjohn Buses** - every employee at the new Portage plant lived in the City of Kalamazoo and not everyone had an automobile back then. Thus the company bought buses to shuttle people to work at the new plant in Portage. The fleet of buses eventually grew to 15.
- **Grinding Adrenal Glands** – chemical synthesis still was not quite here yet because in the late 1940s here we have an Upjohn employee in Building 39 grinding adrenal glands from cows. This was the first step in extracting steroids from them. Building 39 was to the east of Building 38. I can't help but wonder how bad these glands smelled. I'm pretty sure the newest operator got this job. However, in the 1950s Upjohn brought in chemical syntheses and biological fermentations on a large scale. By 1960 the big products of the company at this time were antibiotics like neomycin, streptomycin and lincomycin. Upjohn had a big lead over other companies in steroids like cortisone, progesterone, methylprednisolone, prednisone and hydrocortisone. Business was booming. BTW, we started making Gelfoam in 1946, Heparin in 1950 and Solu-Medrol in 1957.

Upjohn History Presentation 2018

- **Barbers Shop** – Because the Portage Site was so far from the city and many people had no car in the 1950s, barber shops, a pharmacy and a check cashing service was provided. All three of these lasted into the 1980s and I can remember using them. I got my hair cut in the basement of Building 41. The barbers shop is now the Training Track room.
- **Going Public** - The Upjohn Company went public in 1958. The private shares, all owned by members of the extended Upjohn family, were split 25 for 1. So every 1 private share became 25 public shares. Upjohn family members sold 2.41 million shares (17% of the total) to the general public at \$45 apiece. They made over \$100 million. Interestingly there is a list of the private shareholders on the web site.
- **New Headquarters** - A new headquarters building was opened in Portage during 1961. This was Building 88, on the S.W. corner of the Portage Rd/Romence Rd intersection. It was state of the art and luxurious, with a great deal of marble. We called it the Taj Mahal. Everything in the executive bathrooms was marble. It was demolished about 10 years ago. The 1960s was still a very profitable time for the company. Numerous new buildings were constructed in Portage and Kalamazoo from the 1960s through the 1980s. Upjohn continued to manufacture bulk drugs, tablets, fluids, sterile products, biologics and medical devices in Portage.
- **Public Tours** - From 1960 to 1989 there were organized tours of Building 41 that the public could take. Tour participants started in a museum at the west end of the basement (next to the concourse), climbed to the first floor and walked to the East end through manufacturing, then returned to the museum via the basement. They ended up in the cafeteria for refreshments.

Upjohn History Presentation 2018

- **The Upjohn Rockwells** – In the late 1930's, The Upjohn Company recruited the famous artist Norman Rockwell to help bolster public support for the company's move away from medicines made from plant-based products to ones derived from animal extracts and chemicals. Over the next twenty years, Rockwell created eight paintings for Upjohn that appeared as both print and display advertisements in pharmacies, hospitals and doctors' offices. The cost that Norman Rockwell charged was \$2,000 per painting. Alas, all the Rockwell originals were sold in 2004. I don't know what price we got for them in 2004 but nine years later in 2013 you can see the prices that two of our Norman Rockwells sold for.
- **Consumer Products** - In the 1980s the consumer products some of you may remember seeing in your parents or grandparents houses were still being made here – Kaopectate, Mycitracin, Unicap, Cheracol, Cortaid, Motrin and Pyroxate.
- **The Upjohn Airforce** - The "Upjohn Airforce" started in 1956 with a Learstar turboprop plane and a company-owned hanger. The goal was to fly executives and high-level employees around the country as needed. In 1959 a Grumman Gulfstream that held 16 passengers was added. By the mid-1980s there were 4 planes and 7 pilots. 1100 employees per month used the planes. The final plane was the Pfizer Air Shuttle that ended in 2007 when all R&D moved out of Kalamazoo.
- **Upjohn Awards** - When W.E.Upjohn died in 1932, he set aside a block of Upjohn stock to fund an annual award for employees. These were the fabled Upjohn Awards. It truly was a honor and the high-point of a career to get this. In the 1980s there were 50 to 60 awards made each year, and each award would have included a check for 4 or 5 thousand dollars.

Upjohn History Presentation 2018

- **Centenary in 1986** - The centenary of The Upjohn Company was in 1986. There were 19 nights of parties for employees at the Hilton Hotel in Downtown Kalamazoo. The Hilton became the Radisson. At this time, the definitive book on The Upjohn Company “A Century of Caring” was published.
- **Merger with Pharmacia** - The last two major products for the company were Xanax and Halcion tablets. In 1989 the first layoffs in company history occurred. These layoffs were voluntary and financially lucrative by today’s standards.

By 1995 The Upjohn Company had run out of new products. Research had not been successful. In desperation it merged with a Swedish company called Pharmacia, forming the Pharmacia & Upjohn Corporation. At that time, Upjohn sales were 4 billion dollars and they employed 16,900 people.

So The Upjohn Company ended in 1995 after 109 years.

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