National Inventors Hall of Fame®

2020 NIHF FEATURED INVENTION

1-MCP

Enjoying flowers for days and fruits beyond their harvest season can be traced back to the work of one mighty compound!

In the 1990s, horticulturalist **Sylvia Blankenship** and biochemist **Edward Sisler** discovered a compound that inhibited ethylene production. The North Carolina State University researchers concentrated their efforts and identified 1-methylcyclopropene (1-MCP) – a compound that prevents ethylene from interacting with plant cells. Ethylene stimulates plant growth and fruit ripening by docking in receptor sites within cells, sending signals that drive cellular processes. 1-MCP works by docking in the same receptor sites and taking ethylene's place. Since 1-MCP does not trigger cellular processes, produce and flowers treated with it take longer to decay. Development of 1-MCP has increased the understanding of postharvest degradation and helps sellers ensure longer-lasting freshness. For this breakthrough, Blankenship and Sisler are being honored as part of the 2020 Inductee class of the National Inventors Hall of Fame® (NIHF).

FAST FACTS

1 | 1-MCP is applied in enclosed indoor sites such as coolers, greenhouses and storage facilities.

2 | The patent for 1-MCP was initially licensed to Floralife, a floral preservative company.

3 | AgroFresh brought 1-MCP to the fruit market through its commercial product SmartFresh™.

4 | SmartFresh™ 1-MCP technology is used worldwide on everyday fruits such as apples, pears and tomatoes.

5 | 1-MCP brought more than $25 million in licensing fees to North Carolina State University, the highest royalty revenue in the university's history. *(NCSU)*

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SOCIAL POSTS

This year, horticulturalist Sylvia Blankenship and biochemist Edward Sisler are being honored as a part of the 2020 class of @InventorsHOF Inductees for their discovery of 1-MCP, a compound that delays fruit and plant ripening, and provides fresh fruit and vibrant flowers all year long. bit.ly/NIHF2020Inductees

Name
@Username

This year, Sylvia Blankenship and Edward Sisler are being honored as a part of the 2020 class of @InventorsHOF Inductees for their discovery of 1-MCP – a compound that delays fruit and plant ripening, providing fresh fruit and flowers all year long. #NIHF2020 bit.ly/NIHF2020Inductees

No matter the season or time of year, fresh fruit and cut flowers are purchased daily thanks to 1-methylcyclopropene, or 1-MCP. This year, the inventors behind this compound are being inducted into the @InventorsHOF. bit.ly/NIHF2020Inductees

Name
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No matter the season, fresh fruit and cut flowers are purchased daily thanks to 1-methylcyclopropene, or 1-MCP. @InventorsHOF is inducting the inventors behind this compound, Sylvia Blankenship and Edward Sisler. #NIHF2020 bit.ly/NIHF2020Inductees

DATES TO CONSIDER POSTING

February 14
Valentine's Day

May 7
National Inventors Hall of Fame 48th Annual Induction Ceremony

October 12
National Farmer's Day

October 17
Sweetest Day

National Inventors Hall of Fame®

2020 NIHF FEATURED INVENTION

AUTOMATIC SURGICAL TOURNIQUET

Modern, state-of-the-art technology has taken the guesswork out of applying tourniquets for surgery, increasing safety for patients while decreasing pain, complications and injuries!

Biomedical engineer **James McEwen** invented the first microprocessor-controlled automatic tourniquet system for surgery. Almost all modern tourniquet systems that are now used in western countries are based on the tourniquet-related inventions and subsequent developments made by McEwen and his colleagues. Devices based on his innovations are used in thousands of surgeries each day around the world – with more than 80 million surgeries performed to date. For his revolutionary surgical technology breakthrough, McEwen is being honored as part of the 2020 Inductee class of the National Inventors Hall of Fame® (NIHF).

FAST FACTS

1

The global surgical tourniquets market reached $347 million in 2019, and it is projected to reach $509 million by 2024.
(MarketsandMarkets)

2

Hospitals and trauma centers are the major end users of surgical tourniquet products. The need for joint replacement surgeries and rapid increase in the geriatric population across the globe are key factors driving the growth of hospitals and trauma centers.
(MarketsandMarkets)

3

More than 600,000 knee replacements are performed each year in the United States.
(Agency for Healthcare Research and Quality Surgeons)

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SOCIAL POSTS

More than 600,000 knee replacements are performed each year in the United States – most using technology derived from @InventorsHOF Inductee James McEwen's automatic surgical tourniquet. bit.ly/NIHF2020Inductees

Thousands of devices based on @InventorsHOF Inductee James McEwen's automatic surgical tourniquet system are used each day – with more than 80 million surgeries performed to date. bit.ly/NIHF2020Inductees

Name
@Username

More than 600,000 knee replacements are performed each year in the United States. This is expected to increase to 3.5 million per year by 2030 – most using technology derived from @InventorsHOF Inductee James McEwen's automatic surgical tourniquet. #NIHF2020 bit.ly/NIHF2020Inductees

Name
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Thousands of devices based on @InventorsHOF Inductee James McEwen's automatic surgical tourniquet system are used each day – with more than 80 million surgeries performed to date. #NIHF2020 bit.ly/NIHF2020Inductees

DATES TO CONSIDER POSTING

March 30
National Doctors' Day

April 7
World Health Day

May 6
National Nurses Day

May 7
National Inventors Hall of Fame 48th Annual Induction Ceremony

National Inventors Hall of Fame®

2020 NIHF FEATURED INVENTION

IBUPROFEN

Life can be full of aches and pains, but this pharmaceutical landmark has taken the edge off for more than 50 years!

Pharmacologist **Stewart Adams** and chemist **John Nicholson** developed ibuprofen during the 1950s and 1960s at the Boots Pure Drug Co. in England. Today, ibuprofen is a popular first-line treatment for reducing pain, fever and inflammation stemming from conditions like headaches, the common cold, arthritis and muscle aches. For their groundbreaking pharmaceutical invention, Adams and Nicholson are being honored as part of the 2020 Inductee class of the National Inventors Hall of Fame® (NIHF).

FAST FACTS

1

Ibuprofen is a nonsteroidal anti-inflammatory drug (NSAID). It works by reducing hormones that cause inflammation and pain in the body.
(Drugs.com)

2

In 1969, ibuprofen became available by prescription in the United Kingdom as Brufen, and in the United States as Motrin in 1974.

3

In 2016, Ibuprofen was the 35th most prescribed medication in the United States, with more than 21 million prescriptions.
(ClinCalc)

4

In 2018, private label brands of ibuprofen had nearly $1.2 billion in sales in the United States. The highest-selling name brand was Advil, at $472 million.
(Statista.com)

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SOCIAL POSTS

It's hard to imagine there was ever a time when "take some ibuprofen" wasn't a go-to response for anyone feeling under the weather. Thanks to 2020 @InventorsHOF Inductees Stewart Adams and John Nicholson, we now have this helpful solution on hand at any time! bit.ly/NIHF2020Inductees

Name
@Username

It's hard to imagine there was ever a time when "take some ibuprofen" wasn't a go-to response for anyone feeling unwell. Thanks to this invention from the 1960s, we have this helpful solution on hand at any time! #NIHF2020 bit.ly/NIHF2020Inductees

This year, pharmacologist Stewart Adams and chemist John Nicholson will be inducted into the @InventorsHOF for their creation of ibuprofen. #NIHF2020 bit.ly/NIHF2020Inductees

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DATES TO CONSIDER POSTING

April 7
World Health Day

May 7
National Inventors Hall of Fame
48th Annual Induction Ceremony

September 25
World Pharmacists Day

National Inventors Hall of Fame®

2020 NIHF FEATURED INVENTION

SPORTS BRA

Two decades before Brandi Chastain famously celebrated her 1999 FIFA Women's World Cup goal in a sports bra, the creators of this iconic sportswear fashioned an entirely new industry while providing women unprecedented access to athletics.

In 1977, **Lisa Lindahl, Hinda Miller** and **Polly Smith** were living and working in Burlington, Vermont, when they invented a revolutionary garment. As an avid runner, Lindahl was all too familiar with the discomfort of exercising in a regular bra. She asked childhood friend and costume designer Smith to help her devise a more secure bra that wouldn't chafe or slip. As someone who had been physically active since childhood, Miller also enthusiastically joined the project. A joke about wearing a jockstrap then turned into inspiration when Smith sewed two jockstraps together and Lindahl tried the prototype while running. The design was a success, and soon enough the three women patented the invention. Lindahl and Miller went on to incorporate their business, Jobgra Inc. For this sportswear innovation, Lindahl, Miller and Smith are being honored as part of the 2020 Inductee class of the National Inventors Hall of Fame® (NIHF).

FAST FACTS

1. Before Title IX passed in 1972, one in 27 girls played sports. The sports bra was created just five years later, and today that number is two in five. *(Women's Sports Foundation)*
2. The first successful Jogbra included LYCRA®, the elastic fiber spandex material that became popular during the 1970s fitness movement.
3. Several years after the company was founded, Jogbra Inc. had annual sale increases of 25%.
4. An early Jogbra print advertisement featured Lindahl and Miller running in their newly created garment.
5. Sports bras make up a $13.8 billion global industry.

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SOCIAL POSTS

A joke about wearing a jockstrap for better support while running turned into inspiration when @InventorsHOF Inductees Lisa Lindahl, Hinda Miller and Polly Smith teamed up and created the first sports bra. bit.ly/NIHF2020Inductees

Name
@Username

What began as a simple solution to discomfort while jogging – the sports bra – now makes up a $13.8 billion global industry. #NIHF2020 bit.ly/NIHF2020Inductees

What began as a simple solution to discomfort while jogging – the sports bra – now makes up a $13.8 billion global industry. The sports bra is the invention of three innovative women who are being inducted into the @InventorsHOF this year. bit.ly/NIHF2020Inductees

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A joke about wearing a jockstrap for better support while running turned into inspiration when @InventorsHOF Inductees Lisa Lindahl, Hinda Miller and Polly Smith teamed up and created the first sports bra. #NIHF2020 bit.ly/NIHF2020Inductees

DATES TO CONSIDER POSTING

February 23
Play Tennis Day

March 8
International Women's Day

May 7
National Inventors Hall of Fame 48th Annual Induction Ceremony

June 23
International Women in Engineering Day

National Inventors Hall of Fame®

2020 NIHF FEATURED INVENTION

SYNTHETIC LUBRICANTS

Most people think about motor oil only every few thousand miles. But without the invention of synthetic lubricants, the industry could not have been driven forward to protect our car engines!

Thanks to chemists like **Margaret Wu**, lubricant products have continued to improve over the years to meet the high-performance needs of our cars. Wu is an industrial chemist who is known for her contributions to synthetic lubricants, resulting in widespread commercial and environmental impact. Products based on her research help improve engine oil life, reduce engine wear and improve fuel economy. Her work has changed how automobile and industrial lubricants are designed and synthesized. For her work, Wu is being honored as part of the 2020 Inductee class of the National Inventors Hall of Fame® (NIHF).

FAST FACTS

1. The global automotive engine oil market size was valued at $35.67 billion in 2017 and is projected to expand at 3.7% from 2018 to 2025. The global synthetic lubricants market size was valued at $4.4 billion in 2017. *(Grand View Research)*

2. The motor oil manufacturing industry consists of synthetic motor oils, conventional motor greases, conventional motor oils and other product types. *(IBIS World)*

3. The companies holding the largest market share in the U.S. motor oil manufacturing industry include BP PLC, Royal Dutch Shell PLC, Exxon Mobil Corp. and Valvoline Inc. *(IBIS World)*

4. Synthetic lubricants offer superior performance compared to their mineral counterparts, in terms of high temperature operation range, low friction and higher load-carrying capacity. They are used in automotive applications in forms like diesel engine oils, gearbox lubes, and transmission oils in passenger and commercial vehicles and motorcycles. *(IBIS World)*

5. The price of motor oil is largely dependent on fluctuations in crude oil prices.

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SOCIAL POSTS

Without synthetic lubricants, drivers would experience less efficient fuel economy, risk greater engine wear and have the pesky "check engine oil" light appear more often. This year, the @InventorsHOF is inducting the woman who revolutionized the field of synthetic lubrcants, Margaret Wu. bit.ly/NIHF2020Inductees

This year, Margaret Wu will be inducted into the @InventorsHOF for her contributions to synthetic lubricants, which have resulted in widespread commercial and environmental impact. bit.ly/NIHF2020Inductees

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DATES TO CONSIDER POSTING

April 17
Ford Mustang Day

May 7
National Inventors Hall of Fame 48th Annual Induction Ceremony

July 14
Collector Car Appreciation Day

October 2
National Name Your Car Day