

Alfred Boddy

Aldrich

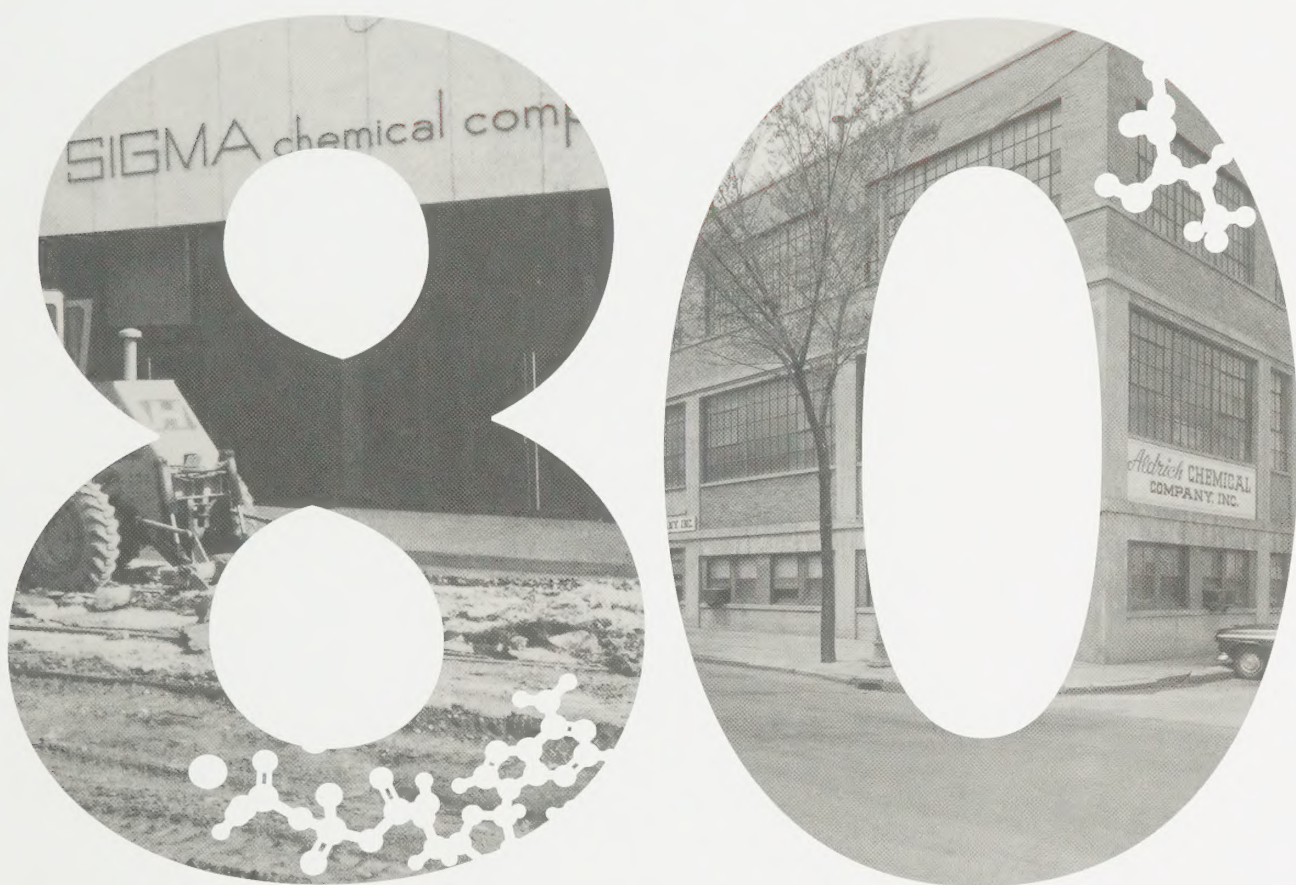
[Sigma - Aldrich : Felling Scientific Discovery
For 80 years]

2015

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· 2015 ·

FUELING SCIENTIFIC DISCOVERY FOR



YEARS

SIGMA-ALDRICH®





IN

1935

THE ROOTS OF A GREAT ORGANIZATION

were planted in a small storefront operation in St. Louis, Missouri. That company, Midwest Consultants, would eventually give birth to Sigma Chemical Company. It wasn't too much later that a similarly humble enterprise called Aldrich Chemical Company was founded in Milwaukee, Wisconsin. Eventually these two businesses would join forces to become the organization we know today as Sigma-Aldrich Corporation.



It is unlikely that anyone involved in those early days could have envisioned that in the decades that followed we would evolve to become a global leader in life sciences and high technology. They could not have imagined that our workforce would grow to an incredible 9,300 employees working in 37 countries or that we would be responsible for developing, manufacturing and distributing hundreds of thousands of products and customized solutions to more than 1.4 million global customers each year. The notion of billions of dollars in annual revenue and \$17 billion dollars in market value would have been unthinkable.

Yet today all of this is true.

The growth of Sigma-Aldrich through the years has been truly incredible. Analysts and industry observers have long tried to pinpoint the secret of our continued success. Many theories have been put forward. Most have been wrong.

Those of us who have had the privilege of being a part of this exceptional organization know that the true success of Sigma-Aldrich cannot be traced to a specific product or business unit. It isn't about our supply chain or our strategic acquisitions.

Our success derives from our people.

Although we come from diverse cultures, speak dozens of languages and fulfill many different functions for our Company, there are some common attributes that unite our global team. These include a tendency toward modesty, a devotion to collaboration, a dedication to hard work, an obsession with customer service, and a passion for helping to fuel scientific discovery. These were the qualities of our Company founders, and they continue to be found in abundance among our employees today.

As we celebrate 80 years of Sigma-Aldrich and prepare to begin a new chapter in our story, please join me in taking a look back at our rich history.

We dedicate this book to those who helped build this Company and to those who continue to grow it today. Your work has created value for our customers, our shareholders and you, our employees. You *are* Sigma-Aldrich.

Sincerely,

A handwritten signature in black ink, appearing to read 'Rakesh Sachdev'.

Rakesh Sachdev

President and Chief Executive Officer



THE EARLY YEARS: *Midwest Consultants and Sigma Chemical Company*

Midwest Consultants was run from a storefront on Easton Avenue before it moved to the 3500 DeKalb Street location in 1956.

On paper, 1935 was not an auspicious year to launch a new business in the United States. With the nation mired in the depths of the Great Depression, few Americans were feeling optimistic enough to strike out on their own. Brothers Aaron Fischer and Bernard Fischlowitz, both chemical engineers, proved to be the exception when they incorporated Midwest Consultants that year in St. Louis, Missouri.

The firm's nondescript name spoke volumes about the brothers' business approach. Believing that the type of products they produced was less important than their devotion to quality control and excellent service, the brothers began helping local businesses develop and manufacture a vast array of products, ranging from cosmetics to signal flare components to glue.

Their approach worked and, in turn, growth came quickly.

One of the first beneficiaries of this rapid growth was another young chemical engineer named Dan Broida who was hired to join the burgeoning company in 1936. In the

years to come, Broida would repay the confidence of Aaron and Bernard by helping to lead the firm to even greater expansion and – eventually – the formation of Sigma Chemical Company in 1946.

It did not take long for Midwest Consultants' new venture to emerge from the shadow of the parent company. Sensing a growth opportunity created by a major sugar shortage precipitated by World War II, Broida was determined to make Sigma Chemical Company a major player in the manufacturing of the sweetener saccharin. Broida's intuition paid off and Sigma was off to the races.

ATP v10
 2-2-90
 5-28-52
 810

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SIGMA • 1935-1975

In the early days, Lou Berger and the Sigma team kept handwritten notes on how to produce ATP in various quantities and purities.

Soon the Company diversified into a broad range of products including everything from gold plating costume jewelry to corrosion-resistant paints. The Company carried on in this way for several years, casting a wide net for any product that might catch on in the marketplace. But a change was coming.

 EXPANSION

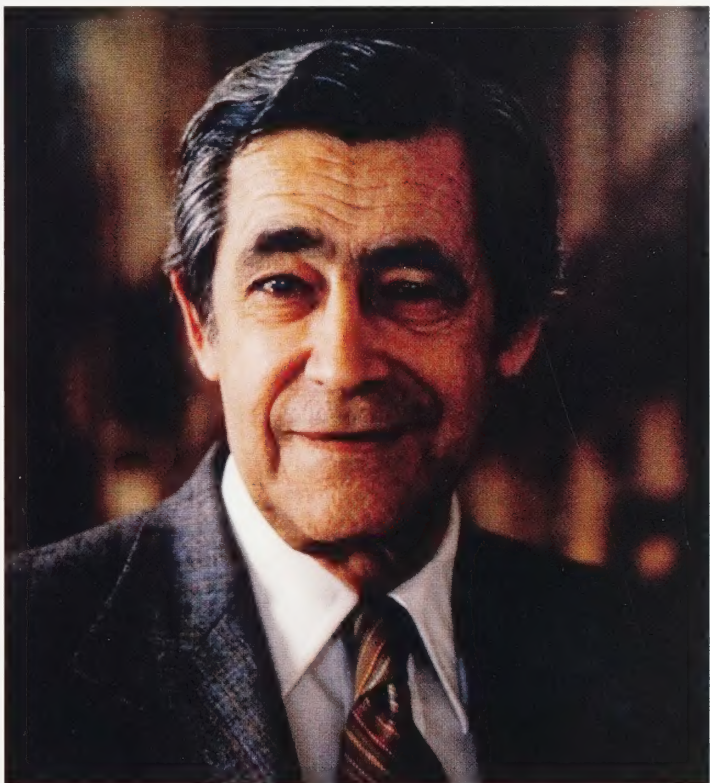
1964	United Kingdom
1970	Israel
1974	Germany

In the 1950s, Broida befriended a young biochemist named Lou Berger and invited him to use laboratory space at Sigma Chemical Company. At the time, Berger was finishing up graduate work at St. Louis' Washington University School of Medicine in the laboratory of the Nobel Prize-winning doctors Carl and Gerty Cori. The Coris' work involved the catalytic conversion of glycogen (how energy is used by the muscle), and required large amounts of Adenosine Triphosphate (ATP), which is a major source of energy in living organisms, and derived from rabbit muscle. Convinced that ATP would have broad research applications, Berger was soon working with Broida's team to produce large quantities of the molecule, which was regarded as the "currency of energy" in biological systems. Within months, as more and more scientists realized they didn't have to spend their valuable time producing their own ATP, researchers were beating a path to Sigma Chemical Company's door. In perhaps its first example of rising to meet customer centric requirements, Sigma Chemical Company went on to manufacture eight additional ATP derivatives of greater purity than researchers could make themselves.



Above: Bernard Fischlowitz, brother to Aaron Fischer was the co-founder of Midwest Consultants and served as Company President until his death in 1969.

Aaron Fischer is one of the brothers that co-founded Midwest Consultants, parent company to Sigma Chemical Company. A very astute businessman, his contributions to the Company's success was rooted in his broad business experience and in his well-researched, clearly defined planning. He is credited for mentoring many of Sigma-Aldrich's future leaders.



Left: Dan Broida was the driving force behind Sigma Chemical Company. His philosophy and personality shaped the Company culture from the beginning. Providing the best quality and service to our customers is a legacy that still prevails today.

"If we have the people, there is no limit to the new horizons we can conquer. As big and important as Sigma is today, we could easily become a much greater force of international goodwill."

- Dan Broida



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Since we knew nothing about our work, we simply worked long hours trying to establish the conditions which would yield purities that we thought would be acceptable to the medical schools and research institutions that were to become our customers and friends. In our ignorance, we didn't know that the goals we were achieving had never been achieved before – even by the experts. Being unfamiliar with the literature, we didn't know that what we were attempting couldn't be done, so we worked night after night until we did it, not even recognizing that our accomplishments were unique!

— **Dan Broida** in reference to the initial production of ATP

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The large-scale production of ATP proved to be a turning point for Sigma, fueling an era of tremendous growth and expansion while at the same time helping to focus the Company's energies toward serving the needs of research scientists.

Under Broida's leadership, Sigma Chemical Company would spend the next several years building a reputation as a leading biochemical producer, first in the United States and then globally. As the Company's product line grew exponentially, so did its reputation for peerless customer service.

Broida's commitment to service became the stuff of legend. He published his home phone number on the cover of the Company's widely circulated catalogs, which were designed to be a size that would fit into a labcoat pocket and thus, be accessible when needed. He encouraged customers around the globe to call him collect – day or night – to discuss their research needs. At Company headquarters, he directed employees to answer phones within three rings, a practice that lasted even after the advent of voicemail. Researchers took notice of this commitment to quality and service, and Sigma soon became one of the scientific community's leading sources of biochemicals for research laboratories. The Company's mission statement of *"It's a pleasure doing business with Sigma,"* rang true.

As Sigma Chemical Company forged a sterling reputation at home, it also began making inroads in overseas markets. Sigma London was incorporated in 1964 and was followed six years later by Sigma Israel.

In the early part of the 1970s, the Company made its first acquisition with the purchase of B-Line Systems Inc., a small metal manufacturing Company with big potential for growth.

On the heels of this expansion and diversification effort, the stage was once again set for major changes at Sigma Chemical Company.

Sigma Chemical Company went from a privately held firm to a publicly traded Company in 1972. The public offering was an immediate success and signaled the way for future growth.

But an even bigger evolution was on the horizon. In 1975, biochemistry-focused Sigma Chemical Company joined forces with a flourishing organic chemicals reagent company, the Milwaukee, Wisconsin-based Aldrich Chemical Company in what would prove to be a very successful merger.

The Sigma Creed

Let NO NON-PROFIT research organization anywhere in the world, suffer for lack of SIGMA Reagents.

Let NO ONE have cause to say a SIGMA Product was misrepresented.

Let NO ONE have cause to say that SIGMA was not MORE THAN fair, friendly, reasonable, and cooperative in every way.

Let NO ONE have cause to say that a SIGMA Product was not absolutely the finest available anywhere.

Make EVERYONE feel that doing business with SIGMA is a revelation and a pleasure! EVEN IF YOU CAN'T PAY.

AS LONG AS WE HAVE THE FUNDS, NO LEGITIMATE CALL FOR HELP WILL BE DISREGARDED.

The above Creed was published many years ago when research was generally carried out in "Research Organizations". The current trend within preparatory schools, hospitals, and clinics to do "Research" as a teaching function or as a part-time exercise, has created a demand for Sigma-financing not intended to be covered by this Creed. However, specific inquires are invited.



ACQUISITIONS

1971

B-Line Systems, Inc.



Above: Lou Berger was the biochemist who worked with Dan Broida's team at Sigma Chemical and developed the methods to make ATP in large quantities and higher levels of purification.



Sigma-Aldrich's first acquisition, B-Line Systems, manufactured steel struts, metal cable trays and components, and was purchased as part of a diversification and financial optimization strategy.



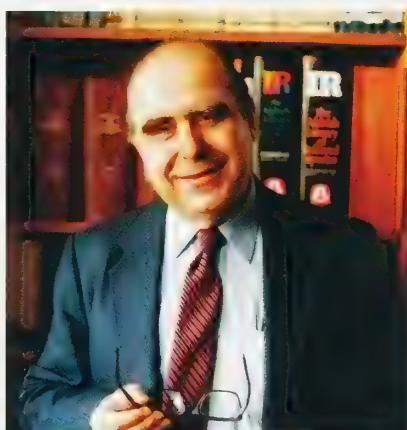
THE EARLY YEARS: *Aldrich Chemical Company*

In 1958 Aldrich moved from rented lab space to this North 29th Street building. Two years later, it purchased a 70,000 sq' building on 30th Street. Both sites served as headquarters until 1969.

Around the same time that Sigma Chemical Company was beginning to specialize in research chemicals, a recent Harvard Ph.D. graduate working in Milwaukee, Wisconsin, had similar notions. Austrian immigrant Alfred Bader joined forces with attorney Jack Eisendrath in 1951 to launch a company designed to meet the growing needs of chemists who were desperate for access to a wide range of research chemicals that could be delivered with superior service.

The new Company's name was determined by a coin toss, won by Eisendrath. He named the new entity Aldrich Chemical Company after his fiancée Bettie Mae Aldrich.

Upon the Company's launch, Bader chose 1-methyl-3-nitro-1-nitrosoguanidine (MNNG), widely used as a methylating reagent, as the first Aldrich Chemical Company product. They wrapped up their first year with \$1,705 in sales and a \$40 profit. By the end of 1952, the Company had expanded its product line to a dozen chemicals. Although their sales figures more than tripled in the Company's second year, \$5,400 was hardly worth writing home about. Still, Bader and Eisendrath – along with their part-time employee Lorraine Worby – knew that they were on to something special.



Above Left: Jack N. Eisendrath, co-founder and first Aldrich President, (1951) who sold his 50% stake in Aldrich to Bader in 1955 for \$15,000.

Center: Alfred R. Bader, (1980s) Aldrich co-founder and second President recognized early on the vital role suppliers play in Company growth, and worked to develop many mutually beneficial relationships.

Right: Early Aldrich employees Lorraine Worby (1st), George Skeff (3rd), Stella Ward (5th) and Beverly Horwick (4th). By 1958, Aldrich had about a dozen employees

During the first three years of Aldrich's existence, Bader frequently shuttled back and forth to Europe in order to develop key relationships with chemical producers on the continent. He built the foundation of his Company by maintaining these strong relationships and on offering customers same day service. By 1954, he was convinced that his Company could become a major success if he devoted his full attention to it. He quit his job at Pittsburgh Plate Glass Company and began focusing all of his energy toward Aldrich.

In 1955, Bader and his wife Helen, also an Aldrich employee, bought out the Eisendraths to become sole and equal owners of the Company. They spent

the following years growing the business with new staff and office space, as well as a huge number of new products delivered to hundreds of customers. By the end of the 1950s, their portfolio of chemicals had grown from a single offering to several thousand. During this time, Aldrich was building a strong name for itself among organic chemists, mirroring what Sigma Chemical Company in St. Louis was doing among biochemists.

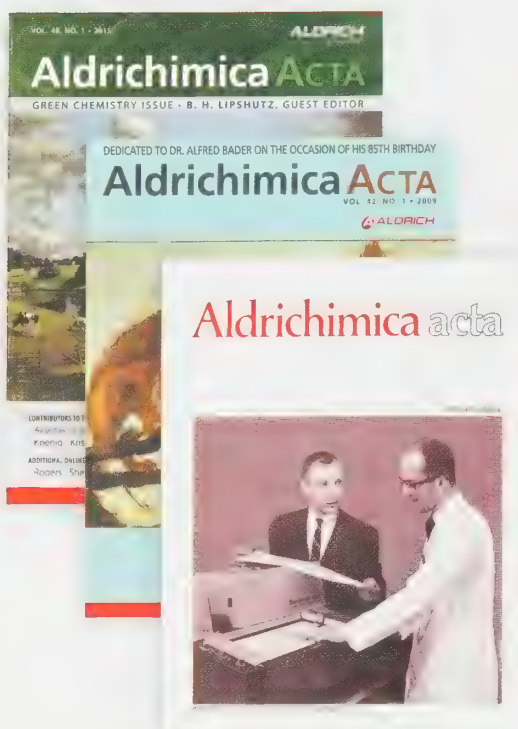
Aldrich Chemical Company was finding new ways to grow, including an increased focus on custom manufacturing and bulk sales of chemical products. Eventually these efforts would evolve to support SAFC Commercial and Applied business unit customers.



1965
Alfred Bader
Chemical Co
1972
Diaprep



Bader grew the Rare Chemical Library by collecting valuable research samples from such notable scientists as Robert Burns Woodward, known as the 'grandfather of organic chemistry' and Henry Gilman, known as the 'father of organometallic chemistry'



The *Aldrichimica Acta* evolved from the Kardindex Sheets that Aldrich mailed to its best customers to keep them informed of new products. A preview issue was printed in 1967.

While Bader was expanding Aldrich, he also found time to amass a huge collection of valuable research samples from universities and scientists. His resulting Rare Chemical Library (RCL) now boasts over 90,000 listings of hard to find chemicals. Over the years, the Rare Chemical Library has been invaluable to researchers in the chemical sciences.

In 1962, barely a decade after its founding, Aldrich Chemical Company was thriving. What began as a shoestring enterprise had grown into a business with more than 10,000 product offerings and annual sales exceeding \$1 million. The Aldrich Catalog began to establish itself as a chemical reference book – well beyond an ordinary product catalog. In 1967, the catalog premiered a fine art painting on its cover and eventually changed its name to “The Aldrich Handbook of Fine Chemicals,” further establishing its reputation as ‘the chemists’ chemist.’ In 1968 the Company launched the *Aldrichimica Acta* which has become the leading high-impact review journal in organic chemistry. While growth brought other changes to the Company, the core focus remained the same – a tireless commitment to its customers and dedication to their success.



Above: An early Aldrich Handbook of Fine Chemicals.

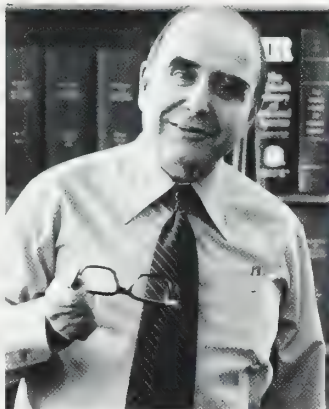
The 1967/1968 edition of the Aldrich Catalog was the first issue to feature a cover with a fine art painting. This idea came from Bernie Edelstein, an Aldrich employee.

Below Top: Early order taking meant answering the phone and processing mail orders by hand. By 1965, sales reached \$1.8 million and Aldrich had 100 employees. Below Bottom: In the mid-sixties, the prior practice of listing only products that were not offered by Eastman Kodak's Fine Chemicals division was abandoned in favor of listing products based on their usefulness and marketability.

Right: Dr. Clint F. Lane, future Aldrich Chemical President, (1999) was the first chemist hired for Aldrich-Boranes, Inc. in 1972.



"Please Bother Us."



One of the most pleasurable aspects of my work is talking to our customers. I spend several days a month going from lab to lab at universities, and meeting with our industrial customers to ascertain that the quality of our service is good and the purity of our chemicals excellent, and to get suggestions from fellow chemists about new products we could add to our Catalog/Handbook.

Occasionally I may even get a complaint—hardly ever about purity, but sometimes about delays in deliveries. We list over 8,000 organic compounds in our Catalog/Handbook. Well over 95% of these are in stock, ready for immediate delivery. A few products are back ordered, and we make a great effort to reduce their number.

Nothing is as important to me as having our customers know that we think of them as individuals, not as names on a printout or numbers on a list. It would be unthinkable to

send our customers to intermediary dealers who cannot possibly give as good service or know as much about our products as we do. At Aldrich, we want no barriers between us and our customers. Order from Aldrich directly, and if you have any questions, ask us. We want to be bothered.

I hope Aldrich will never become so large that we cannot be "bothered" by our customers. We care immensely and sincerely, and if you should ever wish to discuss a problem directly with me, please call me at (414) 273-3850. Chances are that, if I'm in Milwaukee, I will answer the phone myself. It is important to me that we preserve our tradition of service and quality. So please, bother us.

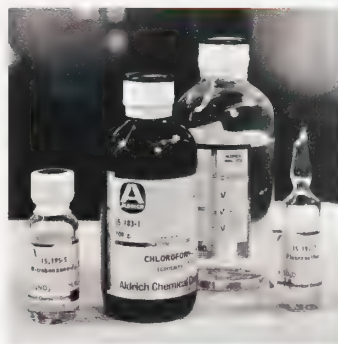


Alfred Bader

Dr. Alfred Bader, President, Aldrich Chemical Company, Inc.

Aldrich Chemical Company, Inc.

940 West Saint Paul Avenue, Milwaukee, Wisconsin 53233 • Telephone (414) 273-3850



Above: In 1972, Aldrich, through its acquisition of Diaprep, a manufacturer of deuterated solvents, became one of the leading manufacturers of stable isotope products

Bader's personal touch with chemistry customers encouraged them to contact him directly with questions, ideas and issues. He made certain his personal phone number appeared in literature. In 1978 the Aldrich slogan transitioned into "Chemists Helping Chemists".

By the middle of the decade, the Baders sold some of the Aldrich stock, first to friends and colleagues, and later to the public. In 1966, Aldrich went public, with its stock rising quickly to \$23 a share. This served as a precursor to another period of significant growth and expansion, which included new product lines and markets and the bolstering of the business with several strategic acquisitions.

In the early 1970s, Dr. Herbert C. Brown, a professor at Purdue University in Indiana, and 1979 Nobel Prize winner, approached Aldrich about further developing and commercializing some of his patented research. In 1972, Aldrich-Bornes Inc., a wholly owned subsidiary of Aldrich Chemical Company, was

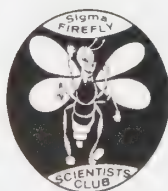
launched. The new Company manufactured a number of hugely successful hydroboration reagents and products based on Brown's research.

By the mid-1970s, Aldrich Chemical Company was an unqualified success. But like its St. Louis counterparts at Sigma Chemical Company, the leadership team at Aldrich recognized that the emphasis on science, complementary product lines, the shared customer focus, and business practices of the two companies presented an opportunity to change the world of scientific research. So, in 1975, these two storied firms joined forces by merging into the Company known today in labs around the world as Sigma-Aldrich Corporation.

THE MERGER OF SIGMA AND ALDRICH: *Unrivaled Scientific Knowledge and Service*



Above: Alfred Bader and Dan Broida in Bader's office after the 1975 merger of Sigma and Aldrich. The merger positioned the new Company at the top of the specialty chemical industry



In the mid 1970's children who joined the Sigma Firefly Scientists Club were paid to send in fireflies, which contained luciferase, used in medical and biochemical research. To the dismay of children throughout St. Louis and beyond, the program ceased in the early 1980s.

The economic climate that the newly merged Sigma-Aldrich Corporation faced in the mid-1970s may not have been as dire as the Depression-era conditions that the Company's forebears faced at Midwest Consultants, but it was hardly rosy. In 1975, the American unemployment rate was hovering around 9%, and inflation was skyrocketing.

However, at the new Sigma-Aldrich, business remained solid. With their combined line of nearly 17,000 chemicals and biochemicals, the Sigma and Aldrich teams came together to notch an impressive \$43 million in sales during their inaugural year. In the years to come, the Company's extraordinary growth would eventually make that figure pale by comparison.

With Dan Broida serving as Chairman of the Board and Alfred Bader in the President's chair, both the Sigma and the Aldrich brands continued to flourish. Because their product lines were largely complementary rather than competitive, both units were able to thrive under this new business structure.

In the initial years of the merger – and, in fact, for many years to come – the Sigma and Aldrich groups continued to operate largely independently of one another. Both companies retained their

brands and continued to sell their own products to their respective customers. Sigma was headquartered in St. Louis, focusing largely on biochemistry, while Aldrich maintained its headquarters in Milwaukee, working in the areas of organic and inorganic chemistry.

By the dawn of the 1980s, any doubts about the marriage of Sigma and Aldrich had been cast aside. Annual sales now topped \$100 million, and the Company had grown to 1,700 employees spread across the United States, United Kingdom, Israel and Germany.

The new decade would see continued – and even accelerated – growth. But it also represented the end of an era: In 1981, Dan Broida, long-time Sigma head and leader of the combined Sigma-Aldrich Corporation, died at the age of 68, merely a year after his retirement.

Although the loss was tremendous, the Company was able to weather the winds of change. Fortunately, for Sigma-Aldrich, a new leader with a strong vision and a tireless drive was waiting to take charge.

Dr. Carl T. Cori (Tom) joined the Sigma Chemical Company in 1970 as a production chemist, but even before his arrival the Cori name was well-known within the Company. Tom was the son of the very scientists, Nobel Prize Laureates Drs. Carl and Gerty Cori, whose research led to the commercial production of ATP, Sigma's flagship product in the Company's early years.

Cori rose quickly through the Company's ranks. When the merger between the two companies took place in 1975, he became President of the Sigma division. Two years later he was elected to the Sigma-Aldrich Board of Directors.

With Broida's passing and Bader's ascension to Chairman of the Board, Cori was a natural choice to take on the presidency of Sigma-Aldrich. In 1983 he added Chief Executive Officer to his title.

Cori's assertive personality was well suited to the challenges that faced Sigma-Aldrich in the 1980s. Those who met him were not surprised to learn that he had attended college on a boxing scholarship. He was a man who knew what he wanted and was not afraid to jump into the ring to make it happen. He also shared his predecessor's devotion to exceeding customer expectation and weighed all Company decisions with an emphasis on the benefits they would provide for customers and the shareholders.

Under Cori's leadership, Sigma-Aldrich cemented its culture as an organization that would go to extreme lengths to get the job done. Employees endured long days and worked weekends, which became the rule rather than the exception, and while that environment sometimes proved difficult for employees, customers loved it.

"One of the stock analysts I used to work with was a scientist in Milwaukee," recounts Kirk Richter, former Vice President and Treasurer at Sigma-Aldrich. "He always told the story of how he was once doing an experiment and ran out of some chemical. He called us at midnight to place an order, came over to pick up what he needed and headed back to lab in the middle of the night to finish his experiment. So some of what proved challenging for our employees, was a great attribute for our customers."



Dr. Tom Cori joined Sigma-Aldrich in 1970 as a production chemist, became President in 1981, CEO in 1983 and Chairman of the Board in 1991.

YEARLY SALES
IN MILLIONS*



EARNINGS
PER SHARE*



* These metrics represent measures taken at the reporting date and have been adjusted for applicable stock splits only.



Above: Sigma Vice Presidents, Leo Bressler and Walter Stern joined Sigma as chemical engineers in 1946 and were instrumental in contributing to the development of the first diagnostic 'kits' aimed at clinical testing, launching the Company into the diagnostics market.

Below: Sigma-Aldrich Officers (1983): Peter Gleich, Kirk Richter, David Harvey, Tom Cori, Alfred Bader.





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Veterans of the Company also tell the story of the infamous blue phone. “Every night, someone took this portable phone home, and customers were able to call from all over the world at any hour, day-or-night, with complaints or concerns. We printed the phone number right on the front of our catalog. That’s the kind of service this Company grew up on and continues to offer today.”

— Frank Wicks, current Executive Vice President of Sigma-Aldrich and President of the Applied Markets Business Unit.

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THE 5+5+5 APPROACH TO STRONG GROWTH

In the early 1980s, the Company's leaders implemented an aggressive strategy to double sales and profits every five years based on its model of unrivaled scientific knowledge, unsurpassed service and unparalleled range of products. Remarkably, the Company achieved and exceeded these sales goals with minimal advertising and virtually no sales force. Instead it chose to focus its marketing and sales efforts on the Company's brand catalogs, wide array of product offerings and delivery cycles within 24 hours.

To achieve annual growth of 15%, the Company followed what would become known as its "5+5+5 Approach," seeking 5% annual growth in each of three areas: pricing, new products and volume. For more than two decades, "5+5+5" would be a mantra among staff and leadership, and continue to fuel the Company's growth.

To achieve pricing goals, Sigma-Aldrich formed a dedicated team, called the Competition Department, which closely monitored the competitive landscape to ensure that the price of the Company's products contributed their fair share to annual growth. The group would scour competitors' catalogs and evaluate

market price. Then, purposely price Sigma-Aldrich products 3–5% lower than the lowest competitor. They marketed this competitive advantage in their catalogs, informing customers that "you never have to pay a premium to do business with Sigma-Aldrich."



Top Left: The Aldrich Sheboygan site manufactured materials in 2,000 liter reaction vessels. Top Right: Scientists at Sigma Israel laboratories worked purification columns to support demands for immunochemistry requests.

Above: In the 1980s, Company growth followed the pace of new scientific developments in immunology, microbiology, and endocrinology, and investments were made to exploit opportunities in these new areas of science.

Leadership
TOM CORI - 1981-1999

With the addition of Supelco's 1994 catalog, nearly 2.8 million Sigma-Aldrich catalogs were in the market, describing over 76,000 products.



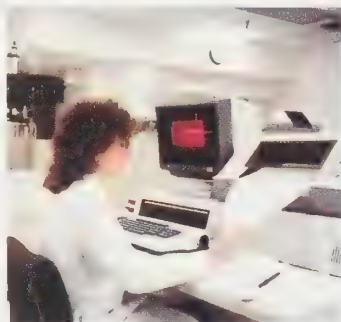
To keep the product offering current, new products were continually added. Customers and collaborating research institutions alike suggested new products and Sigma-Aldrich product managers monitored research publications for new product ideas. The growth of the Sigma Catalog and the Aldrich Handbook of Fine Chemicals was also supported by the Competition Department's continual evaluation of competitors' catalogs. They looked for new or deleted products from each competitor catalog, which were carefully documented to determine whether the addition of these products could help to grow the Company's breadth of offerings. It was common belief with management that "1,000 new products would generate a million dollars in new sales." All these efforts resulted in about 5,000 new products per year, contributing 5% to annual Company growth. New products introduced in the previous five years accounted for about 25% of that year's total sales.

The annual Company catalogs offered proof of the ever-expanding portfolio. Within a few short years, the Company's two primary catalogs would swell to become volumes almost three inches thick, containing upwards of 30,000 listings of chemicals and products in each book.

The Company also placed a premium on quality. Company founders understood that research depended upon the quality of the reagents used. Every Sigma-Aldrich product, whether manufactured in-house or purchased to resell, was evaluated and run through a battery of tests in the Company's quality control labs to ensure that the highest quality standards were met. This enabled the Company to develop a wide range of testing protocols to determine purity and application information on thousands of chemicals and reagents. This quality stance continues to play a key role in building the Company's reputation to this day and served as a solid entrée for its future focus on the analytical markets.

Another quest to increase the Sigma-Aldrich product line came in the 1980s when the Company took its first steps into the diagnostic market that would play an important role in the coming years.

To achieve increased volume target of 5%, the Company continually scoured the domestic front for new researchers and laboratories to support and assist. It also began to pay an increasing amount of attention to overseas markets by opening new offices and subsidiaries.



Left: QC scientists run samples through a NMR Spectrometer to provide analysis of the products sold to customers. Right: Shipping departments (St. Louis, 1990's) worked tirelessly to uphold the Sigma-Aldrich promise of overnight delivery for customer orders. Order pullers would begin arriving in the early afternoon and pull thousands of products each day.



INTERNATIONAL EXPANSION

Sigma-Aldrich's early international expansion efforts gave the Company a foothold in key markets. Often these initial endeavors into foreign countries were modest – sometimes a single agent working out of his home or a small office. But in keeping with Sigma-Aldrich's do-it-yourself mindset, the Company scaled up quickly in new markets, opening distribution warehouses to ensure local inventories were close to the customer, growing sales teams and strengthening supply chains in key strategic areas. Between the 1980s and 1990s, the Company entered 31 new countries, extensively expanding its geographic footprint.

"We were always very focused on getting closer to the customer and cutting out the middle man," said longtime Sigma-Aldrich executive Pete Gleich. "We



wanted customers in each market to be able to pick up the phone, make a call to a local office, talk to someone who speaks their language and place an order in their local currency. That was our approach in every market: Deal directly with the customers locally if at all possible."

As was so often the case at Sigma-Aldrich, success in its international approach hinged on customer service. "The number one driver of our success in Europe, Asia and Latin America through the years was our system of setting up our local subsidiaries and going direct. This allowed us to significantly improve our product delivery and overall service," said Gilles Cottier, current Executive Vice President at Sigma-Aldrich and President of the SAFC Commercial business unit.

Of course, the international expansion was not without its challenges. Complex legal aspects and tax implications met the Company at every turn. But the biggest challenge, according to Gleich, was finding the right men and women for the job. "People – that was our biggest challenge," he said. "The success of our expansion into each new market derived from our ability to find the right people and build a strong team. We were very fortunate to identify and hire so many dedicated employees around the globe who understood our culture and shared our commitment to providing excellent service to customers."



EXPANSION

- 1984 – Belgium
- 1984 – Canada
- 1987 – France
- 1987 – Japan
- 1988 – Italy
- 1990 – Spain
- 1991 – Australia
- 1992 – Brazil
- 1992 – Czech Republic
- 1992 – India
- 1993 – Holland
- 1993 – Hungary
- 1993 – Korea
- 1993 – Mexico
- 1993 – Scotland
- 1993 – Singapore
- 1993 – Switzerland
- 1994 – Poland
- 1994 – Sweden
- 1996 – Austria
- 1996 – Norway
- 1996 – Russia
- 1996 – South Africa
- 1996 – The Netherlands
- 1997 – Argentina
- 1997 – Finland
- 1997 – Greece
- 1997 – Ireland
- 1998 – Denmark
- 1999 – Malaysia
- 1999 – Portugal



Above: Gilles Cottier started the Lyon, France office (1987) and quickly hired, Eva Mullor and Gilles Fellous. The first piece of office equipment Cottier purchased was a fax machine as large as his desk with a price tag of more than \$5,000.

Bottom From Left: Order taking at Sigma Germany (1972) and Customer Service at the Sigma Benelux (1996) offices served customers in their respective countries and worked tirelessly to grow the business in Europe.

Leadership
TOM CORI • 1981-1999



In 1991 the SAF Bulk Chemicals division was established to handle bulk fine chemicals sales. Peter Gleich, former Vice President and Chief Financial Officer, is the division's first leader.

STRATEGIC ACQUISITIONS STRENGTHEN THE FUTURE

Strategic acquisitions also played a major role in Sigma-Aldrich's growth in the decades after the merger. Although these efforts began modestly in the late 1970s, acquisitions ramped up steadily in the 1980s and 1990s and many of the companies acquired during this period played a significant role in Sigma-Aldrich's evolution into a multi-billion dollar global operation.

One of the most significant acquisitions came in 1989 with the purchase of the Swiss company Fluka Chemie AG. Founded in the mid-1950s, Fluka

quickly built a reputation for producing high-quality organic compounds and was recognized in the market as the 'gold standard'. By the time Sigma-Aldrich acquired Fluka decades later, Fluka had become a highly respected competitor in Europe.

"Purchasing Fluka gave us entry into the Swiss market, which would have been difficult otherwise," remembers Tom Cori. "Just as importantly, it allowed us to take advantage of their strong technical abilities."



Top: In 1989, Fluka Chemie AG, known for high quality organic chemicals and biochemicals, and a main European competitor, was acquired for \$39.1 million.

Bottom: Supelco, located in Bellefont, Pennsylvania was acquired in 1993 to add chromatography products to the growing Sigma-Aldrich portfolio.

The acquisition continued to build on Sigma-Aldrich's entry into larger scale or "bulk" chemical sales. Another strategic acquisition included the 1993 purchase of Supelco, Inc., which brought the Company important gains in the chromatography market.

By the time the 1990s were winding down, those who had witnessed Sigma-Aldrich's early days would have had a hard time recognizing the Company. Employees numbered in the thousands and were spread across the globe. Product lines grew at an incredible pace. New companies and subsidiaries were added to the Sigma-Aldrich portfolio nearly every year. And annual sales that had once been a few million dollars had exploded: In 1999, Sigma-Aldrich achieved a remarkable milestone with much celebration when it hit \$1 billion in annual sales.

It was a remarkable time, remembers Tom Cori of his years at the Company's helm. "We never had a down quarter," he said. "Our numbers each quarter were better than those of the previous year. There were very few other companies who could say that. There was a steadiness and regularity to our growth. It almost got to be boring. And, of course, boring, steady growth is very attractive to investors. The Company's success had a very positive effect on our stock price."

The changes during this time meant that the Company could not be content to just grow - it also had to do a bit of growing up. "There was a time when our finance team was jokingly referred to as the bean counters," remembers Kirk Richter. "But that changed as the Company grew and evolved. We developed and

integrated the finance function throughout the Company. We also placed an increased emphasis on investor relations. When I joined Sigma-Aldrich in 1978, we were a public Company, but the founding families still held about 80% of the stock. As that changed, we really had to market the Company to the shareholder community both in the United States and abroad."

These efforts would become increasingly important in the first years of the 21st century, as Sigma-Aldrich entered a new chapter in its history.



Above Left: In 1995, Aldrich's Sheboygan, Wisconsin manufacturing plant expansion came on-line for the production of high-purity solvents, air sensitive materials and bulk raw materials.

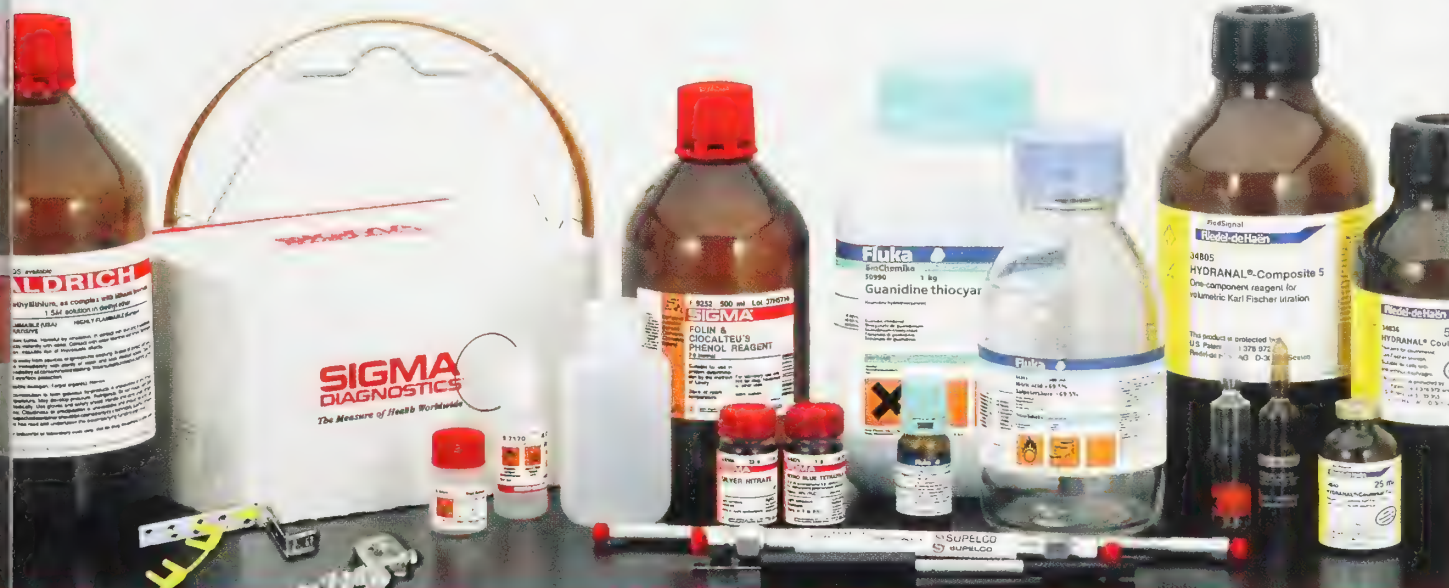
Top Right: St. Louis' Broadway facility manufactured cell culture media and serum to support growing demand for cell culture research products.

Bottom Right: The Sigma Diagnostics division (1986), led by President Art Caprio, developed and sold clinical testing kits used in hospital and clinical testing laboratories. This division was discontinued in 2002.



ACQUISITIONS

- 1978
Makor Chemicals
- 1984
Pathfinder
- 1986
Bio Yeda
Bristol Organics
- 1989
Fluka Chemie AG
- 1993
Supelco
- 1994
LabKemi AB
- 1997
Research Biochemicals
International
Riedel-de-Haen
Fechcares Systems
Carbolabs
YA Kemia
- 1998
Genosys



BECOMING A GLOBAL LEADER *In Life Sciences and High Technology*



The initiative to become 'One Company' encouraged alignment across the Organization through Vision, Strategic Plan, Common Knowledge, Common Systems, Unconditional Teamwork, Values, Safety and Quality, Process Improvement and Role Model Behavior. As a reminder, the 'One Company Pyramid' sat on practically every desk in the Company.

During the first decade of the new millennium, Sigma-Aldrich was able to maintain and even enhance the highly effective trends of its previous decades. It continued to experience steady growth that seemed almost workmanlike, maintaining its sterling reputation for unrivaled service and high-quality products. And this was achieved even while venturing into entirely new fields and markets.

The Company's continual evolution of its identity coupled with its unyielding stability of performance was evident in the change of leadership that took place late in 1999. After two decades at the helm, Tom Cori retired. His successor, David Harvey, represented both change and continuity at the same time.

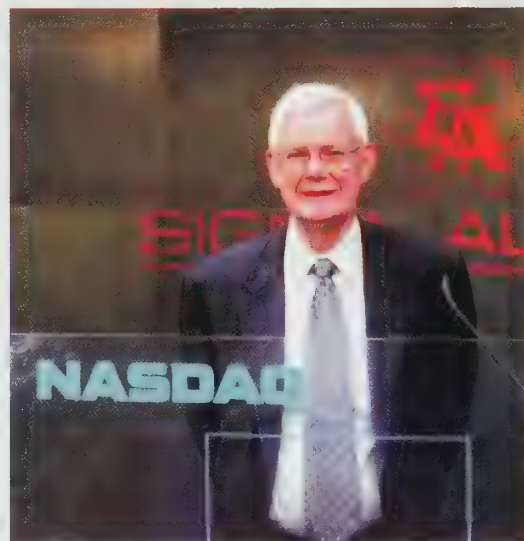
The Oxford University-educated Harvey got his start in the pre-merger days, joining the UK office of Aldrich Chemical Company in 1974 as Vice President of European Operations. In 1981, he succeeded Alfred Bader as President of Aldrich. During his time in that role, Harvey achieved a number of crucial successes including the relocation and modernization of Aldrich's distribution center and the significant expansion of the Company's capabilities at its Sheboygan, Wisconsin site, which was formerly owned by Joseph Schlitz Brewing Company.

Upon replacing Cori, Harvey became the first CEO of Sigma-Aldrich Corporation with Aldrich roots.

His new role was hardly the only transformation taking place during the first years of the new century. The Company also was moving toward a more formal strategic planning approach.

"In the early days, we may have spent an afternoon sitting around jotting ideas down on the backs of envelopes," Frank Wicks recalls with a laugh. "By

Right: These phrases served to engage employees in the strategic plan implementation. We continued to build on our strengths – obsession with service and a passion for process improvement – to move the Company forward to become the leader in Life Sciences and High Technology.



Above: Dr. David Harvey, President and CEO (1999) led the Company in developing its first strategic plan, which resulted in organizing into four business divisions: Laboratory Products, Life Sciences, Fine Chemicals, and Diagnostics.

the latter half of the 1990s, we were having off-site meetings where leadership got together to come up with an actual document detailing how we were going to do things differently. However, the strategic plan of 1999 was brought about by a completely different process, and we really dedicated ourselves to the task. For six months, our planning team worked on nothing else. We visited customers all over the world, conducted surveys and gathered all kinds of information. It was the most thorough endeavor undertaken to date, and it set in motion an even greater reliance on strategic planning over the course of the next 15 years."



Unleash Our Talents

Delight Our Customers

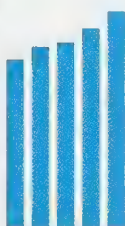
Thrill Our Shareholders

KNOW NO BOUNDARIES

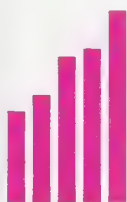
One of the key architects of the Company's formal strategic planning was former Chief Financial Officer, Mike Hogan. "Originally management wanted the strategic plan done in six weeks," said Hogan. "This place always placed a premium on completing tasks quickly, but we also liked to do things well. So, after numerous conversations, I convinced David Harvey that we needed to take our time and use the strategic planning process to better understand our Company and the challenges we faced."

Hogan advised forming a small team of the Company's "best and brightest" to develop the plan. "In the process, we built a group that was willing to crawl naked through barbed wire in order to make the strategy work," he said.

YEARLY SALES
IN MILLIONS



EARNINGS
PER SHARE



Top and Bottom: In 2002, an aggressive drive was put in place to build up the Company's portfolio of products. Many new materials were developed in-house or were purchased for resale from reliable suppliers. An active in-licensing program for new technologies was also implemented

Leadership
DAVID HARVEY - 1999-2005



Above: The \$55 million state-of-the-art Life Science and High Technology Center located in St. Louis helped the Company focus on developing genomics, proteomics and other cutting-edge products aimed at the biotechnology market.



SAFC

In 2004, the fine chemicals division was relaunched into the marketplace as SAFC. The new brand positioned the business as the 'customization expert' for pharmaceutical development to commercialization customers.

The strategic plan launched in 2000 led to a number of big adjustments, including the sale of one of the larger Company subsidiaries, B-Line Systems, to Cooper Industries for \$425 million.

The decision to divest the B-Line metal business reflected Sigma-Aldrich's desire to focus its energies toward being a global leader in life sciences and high technology.

That approach would manifest itself in the construction of a major new life science research center in St. Louis, Missouri designed to encourage interactions and innovation among scientists. From the time the Company broke ground for the project in 2000, until it opened its doors late the following year, Sigma-Aldrich would grow its cadre of experienced life science researchers from 70 to more than 200.

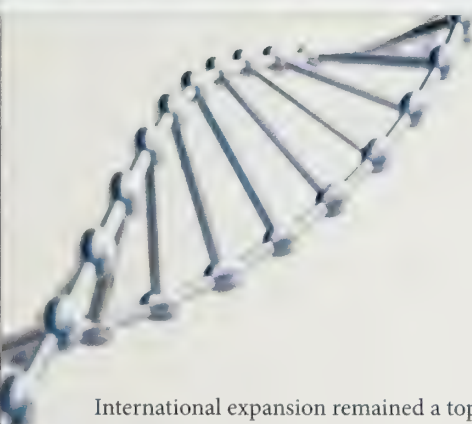
During this period, plans were also announced for a major expansion of the chemical manufacturing plant in Sheboygan, Wisconsin, in order to produce organometallic compounds.

Acquisitions also played a major role in Sigma-Aldrich's growth and expansion in the 2000s. In the middle of the decade, 175 companies and business units were identified as potential acquisition targets

and goals were set to acquire two to three such companies each year. These activities did much more than enhance Company revenue – they allowed Sigma-Aldrich to more completely fulfill on a global basis, its newfound mission of enabling science to improve the quality of life.

In 2001, Sigma-Aldrich purchased ISOTEC, a leader in stable isotope production and isotopically labeled compounds used in life science research and medical diagnostics. In 2004, Ultrafine, a supplier of contract manufacturing services for drug development, was acquired. That same year, Tetronics, a producer of pharmaceutical ingredients, joined the fold. JRH Biosciences, a major industrial supplier of cell culture and serum products, was brought on board in 2005, setting the tone for a leadership position in the production of custom cell culture media for the biopharmaceutical market.

Strategic acquisitions weren't the only activities to enhance capabilities. Partnerships with other companies also helped Sigma-Aldrich expand its reach in the 2000s. Company collaborations during this period included Chromagen Inc., Chlorogen, Benitec, LTD., Pfizer, Dendritic Nanotechnologies and Sangamo BioSciences.



International expansion remained a top priority for Sigma-Aldrich in the 2000s, particularly in major, developing markets like China and India. Consistent with earlier global expansion efforts, entry into these markets began modestly.

“Wilson Wang began our China operation in 2001 with a small rep office in Shanghai with a couple of employees,” said Eric Green, former Executive Vice President and President of the Research business unit, who spent much of his Sigma-Aldrich career focused on developing a presence in the Asia Pacific and Latin America regions. “Today they have a leadership position in the market, and China is one of the growth engines in the Company. Raja Ram had similar success in India and both businesses remain crown jewels at Sigma-Aldrich. What started in these regions are entrepreneurs with the passion and vision to build a direct sales organization, backed by robust distribution networks that efficiently served their local markets.”

In 2004, Sigma-Aldrich re-energized its SAF Bulk Chemicals division. Under Frank Wicks, the new brand launched as SAFC and has since emerged as a global leader in specialty and custom chemical manufacturing. After Wicks, Gilles Cottier, SAFC's current President, has led this business unit to new heights. Today, it contributes approximately 25% of the Company revenue.



Top: The 2012 expansion of the Bangalore, India, campus with new distribution and packaging to enhance distribution capabilities in the Asia-Pacific region. The addition added to existing R&D, custom synthesis and manufacturing infrastructure to better support customers.

Bottom: The purchase of Ultrafine and Tetricons paved the way for SAFC to become known for its expertise in highly specialized manufacturing that serves the pharmaceutical drug development market.



2002 - China
2004 - New Zealand



2000
First Medical Inc
2000
Amelung GmbH
ARK Scientific
2001
ISO 11 C
2004
Ultrafine
Tetricons
2005
IRH Biosciences
Proligo

CHANGING MARKETS And Changing Leadership



Process Improvement has been an integral part of the Company's culture. The model used to implement major change is one of "trial and learning", the principles of which are outlined in *The Improvement Guide*, co-authored by long-time consultant and advisor Tom Nolan, the 2000 recipient of the prestigious Deming Medal from the American Society for Quality.



EXPANSION

2007 – Taiwan
2008 – Vietnam
2009 – Chile
2010 – Thailand



ACQUISITIONS

2006
Beijing Superior
Iropharm
Pharmorphix
Advanced Separation Technologies
2007
Epicchem
Molecular Medicine Bioservices
2009
ChemNavigator
2010
Cerilliant Corporation
ACE Animals Inc.

In late 2005, another leadership conversion took place with the appointment of Jai Nagarkatti as President and CEO.

Like his predecessor, Nagarkatti got his start with the Aldrich team. Jai joined the Company in 1976 as a process development chemist, and he quickly worked his way through the ranks, becoming Vice President of Production for Aldrich in 1985 and then President of the business unit just two years later.

During his four years at the helm of Sigma-Aldrich, Nagarkatti continued the work of his predecessors by maintaining the Company's focus on service, quality, innovation and process improvement.

In the first years of Jai's tenure, acquisitions served as a significant part of growth strategy. Several businesses were acquired that would prove crucial to gains in subsequent years. Across 2006 and 2007, to serve Research customers, Beijing Superior Chemicals and Instruments Company was acquired to better serve China and establish a local base for future growth. Advanced Separation Technologies was purchased to extend the chiral chromatography product line. To accelerate growth of SAFC, Frank Wicks, as President, focused on numerous targets including the Prologo Group, a supplier of genomics research tools, Iropharm, a large-scale chiral manufacturing operation, Pharmorphix, whose expertise was in solid-form chemistry and Molecular Medicine Bioservices, a manufacturer of viral drug products.



Left: Jai Nagarkatti, President and CEO (2005), joined Aldrich Chemical Company as a chemist in 1976. He was named President of Aldrich in 1987. In 2000, he transferred to St. Louis to lead the Company's fine chemical division and in 2003 became President of the Scientific Research Division. In 2004, Nagarkatti was promoted to President and Chief Operating Officer.

To further the Company's diversification efforts, the Epicchem Group was purchased as an inroad into the high technology market for SAFC Hitech with products offered in semiconductor manufacturing and LED lighting. On the heels of these acquisitions, Sigma-Aldrich Corporation achieved a major milestone in 2007 when it hit \$2 billion in annual sales, doubling its total a mere seven years after reaching the \$1 billion mark.



THE SIGMA-ALDRICH STRATEGIC PLAN Enabling Science to Improve the Quality of Life



How do your activities support the Sigma-Aldrich* Strategic Plan?

Above Right: In 2010, the ABCSM Strategic Plan was put in place to focus on the key growth initiatives of Analytical, Biology and Chemistry-Materials Science; Go-to-Market accelerators covered the emerging markets, the sales force and eBusiness; Improvement initiatives focused around alignment, operations and systems. The plan's foundation was built upon the One Company core principles of Quality, Service, Selection, Innovation, Trust and People.

The Company realized that it couldn't rest on past achievements. In 2009, Sigma-Aldrich commenced another strategic planning process. Rather than handle everything in-house, the Company engaged the highly regarded consulting firm McKinsey & Company to help lead the effort. "They really gave us the framework to develop an 'outside-looking-in plan,'" said Karen Miller, Senior Vice President of Corporate Development and Corporate Communication. "We went to the outside world – the markets, the dynamics, the competitors – and we analyzed what was going on there to determine where the most attractive future growth opportunities were. Then we performed some really difficult soul searching to

analyze what we were really good at doing as a Company. Next, we took those findings – the opportunities and our strengths – and we married them together to come up with the initiatives that would form the foundation of our ABC^M strategy."

The ABC^M strategy centered on growth in the areas of Analytical (A), Biology (B) and Chemistry (C) with a focus on Materials Science (M). This strategy led to the acquisition of several technology platforms, an increased presence in the Asia-Pacific and Latin America markets, and an expansion into high growth, Applied markets, both through internal investments and the 2010 acquisition of Cerilliant Corporation.

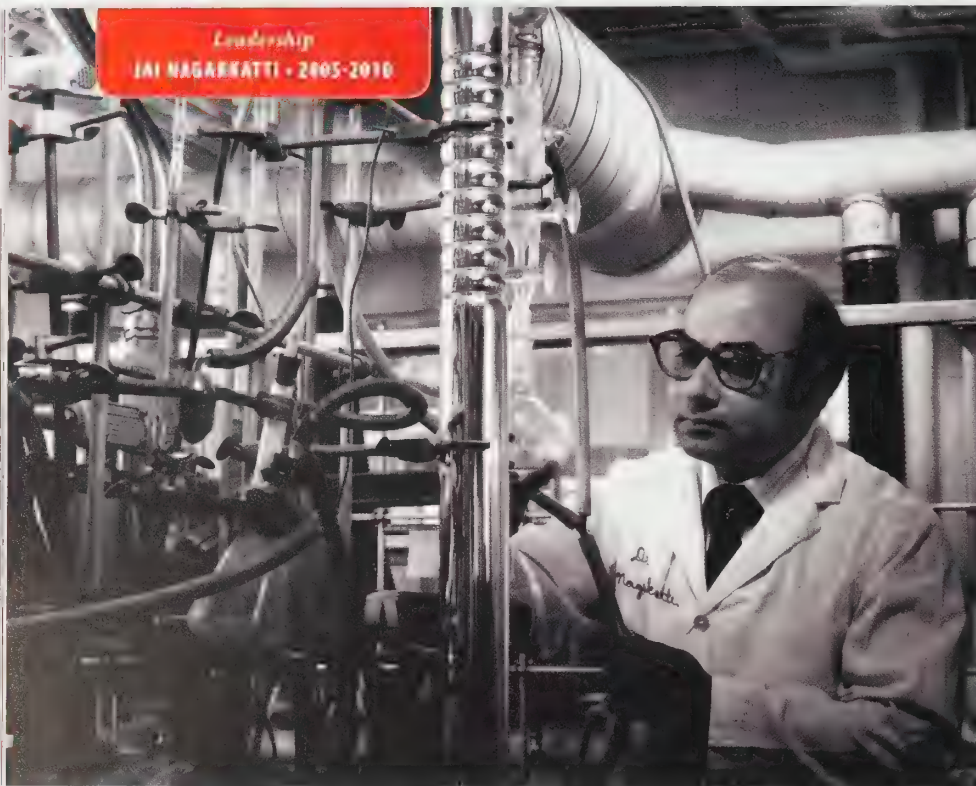


* These metrics represent measures taken at the reporting date and have been adjusted for applicable stock splits only



During his leadership, Jai focused the Company on the latest strategic plan and was instrumental in working with his executive team to expand in emerging markets, especially the Asia-Pacific region. This was done through key acquisitions and launching of offices in those strategic areas.





Above Left: Jai early in his career at Aldrich Chemical Company in Milwaukee, Wisconsin.

Above Right: Frank Wicks, Dick Kalin and Jai Nagarkatti at the ribbon cutting ceremony to open the N1 cPMG extraction and purification project at the Cherokee Street site in St. Louis, Missouri.

Bottom Right: Jai presenting the first Global Citizenship award to Samy Ponnusamy for developing a green chemistry process that was also awarded a US Patent.

Undeniably, it was an exciting time at Sigma-Aldrich, but a terrible blow would rock the Company to its foundation. On Saturday, November 14, 2010, President and CEO Jai Nagarkatti suffered a sudden and fatal heart attack. He was 63 years old and a mere four years into his tenure as leader. He sadly left behind his loving wife Susan and daughter Shanti, and an entire Company of shocked and saddened employees.

Nagarkatti's death represented a very personal loss for many at the Company. During his three and a half decades at Sigma-Aldrich, he had earned not just the respect but also the deep affection of his coworkers.

The feelings of his colleagues were summed up in a simple statement by Frank Wicks: "We lost a great friend that day."

Compounding the personal loss that so many were feeling was a deep concern about the future. In explaining the sense of uncertainty in the hours that followed the news of Nagarkatti's passing, Russell Gant, former Vice President of the Sigma-Aldrich Analytical business said, "In addition to the tremendous grief we were all feeling, there was a real fear of 'Well, what's going to happen now? Who will run the Company? Where are we going from here?'"

But in a manner which had become typical for the highly successful Sigma-Aldrich, the Company responded to the challenge and made a series of difficult, but necessary decisions. "We got the call with news of Jai's passing on Saturday night. On Sunday we were all in the office and by Monday, the Company issued a news release and held a conference call to announce our new corporate leadership," said Frank Wicks. "We were able to mourn our friend, yet move forward as a Company at the same time. That one tragic weekend really reflected the importance of management succession planning that had been instilled in us by our Board of Directors."



Above: February 20, 2008, Jai presides over the NASDAQ opening bell to celebrate two Company milestones: the first year of sales exceeding \$2 billion, and 33 years on the NASDAQ.

In Memoriam

Dr. Jai Nagarkatti

Chairman, President and CEO
Sigma-Aldrich Corporation
(1947-2010)



“

“Under Jai’s leadership, Sigma-Aldrich continued its focus on service, quality and innovation and he led the Company to become an industry leader. His vision also drove the Company’s focus on sustainability and corporate responsibility, touching countless persons within the Company and in the areas in which it operates. Jai was a gracious, thoughtful and visionary leader.”

— *Rakesh Sachdev, current President and Chief Executive Officer*

”

TRANSFORMATION *to Customer Centricity*

Company priorities to Achieve Financial Goals, Improve Customer Relationships, Expand Products and Services, Accelerate Operational Excellence, and Develop Our Enterprise were cascaded to all employees. To ensure alignment, individual employee goals were written with these priorities in mind.

Chief Financial Officer Rakesh Sachdev first heard the news of Nagarkatti's passing as he boarded a plane in Los Angeles. What he didn't know was that during his flight back to St. Louis, Sigma-Aldrich's Board of Directors had already met and quickly and decisively elected him to succeed Nagarkatti as President and CEO.

For a company with a track record of taking swift action, this should come as no surprise. However, his appointment marked a departure from the Company's past leadership. Unlike his predecessors, Cori, Harvey and Nagarkatti, Sachdev was not a homegrown talent, and at the time of his appointment, he had been with Sigma-Aldrich for just two years as its CFO. Sachdev also was not a scientist, having spent most of his career in engineering, finance, strategy and general management.

Admittedly, he spent his first year with the Company "drinking from a fire hose," satisfying his intellectual curiosity. Sachdev's resolve to learn about the many disciplines and areas of science that uphold Sigma-Aldrich's mission to enable science to improve the quality of life would serve him well as he assumed the role of CEO.

As it turns out, this break from Sigma-Aldrich's traditional leadership mirrored several changes that were taking place globally at that time, including a rapid evolution in the scientific world. With an ability to see things from a different perspective, Sachdev began to develop his own vision for what Sigma-Aldrich could become for its customers, shareholders and employees.



Above: Rakesh Sachdev joined Sigma-Aldrich in 2008 as Chief Financial Officer and was appointed President and CEO in November 2010 by the Board of Directors. Rakesh centered his tenure around driving the customer-centric strategy throughout the organization.



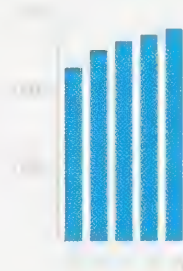
Left: In May 2013, Rakesh rang the opening bell at NASDAQ in celebration of the Company's long-term stock performance.

“It has been a very interesting time for our Company and for me personally,” Sachdev stated of his years leading Sigma-Aldrich as its President and CEO. “Where there is change, there is opportunity, and that is how we looked at trends in the industry. I think we have done a great job of positioning this Company for huge success during a time of tremendous change. It’s a real testament to our people.”

As many of the large pharmaceutical companies began to rethink their businesses and place a greater emphasis on developing biological drugs, Sigma-Aldrich leadership recognized this as another opportunity. “With many blockbuster drugs no longer under patent protection, they had to redefine themselves and move their pipelines away from chemical drugs toward biologically based drugs,” said Sachdev. “We had to evolve as well. Over the past several years, we have transformed

into a very strong player in helping to discover and manufacture these kinds of drugs. It was not all that long ago that we – and particularly the Aldrich side – were seen as just a chemical company, but today more than 50% of Sigma-Aldrich’s business is tied to biology.”

YEARLY SALES
 IN MILLIONS



EARNINGS
 PER SHARE



TARGETING A BETTER QUALITY OF LIFE
Material Matters™
 Innovative Polymers Engineered for Drug Delivery and Tissue Engineering

DISCOVER A NEW PERFORMANCE STANDARD
TITAN™ UHPLC COLUMNS
Totally Porous, Monodisperse Silica

[READ MORE](#)

ZINC FINGER NUCLEASE TECHNOLOGY
Edit any genome the proven way.
Genome editing with engineered nucleases: Nature Methods' Method of the Year 2011

Above: In 2010, the Company’s ABCSM strategy was firmly in place and its efforts focused on serving the fast-growing Analytical, Biology and Chemistry-Materials Science markets with innovative and traditional products and technologies. Over the next months, under the guidance of Rakesh, this foundation would evolve into a new customer-centric strategy

Leadership
RAKESH SACHDEV • SINCE 2010

“

“This was about much more than reorganization. It was about transformation.”

— Rakesh Sachdev

President and Chief Executive
Officer of Sigma-Aldrich

”



Above: We have state of the art equipment and processes, as well as a stringent quality control check at all of our biological manufacturing sites.

Under the continuance of its ABC^M strategy, the Company increased its efforts in the Biology sector where work in the area of zinc finger nucleases, a class of engineered DNA-binding proteins that facilitate genome editing, was taking place. This leading edge technology earned the Company a Silver Medal in *The Scientist* magazine's review of Top Innovations for 2010 and moved the market recognition needle for Sigma-Aldrich, as the place 'Where Bio Begins'.

Sigma-Aldrich also pushed forward in the Analytical business with a renewed focus on innovation-driven analytical solutions and white-coat selling (scientists selling to scientists) with the goal of becoming the "Aldrich" of standards. This was complemented by the acquisition of Cerilliant to expand its product portfolio. The tone was set for providing a wide range of products and services for the high-growth markets of environmental, food safety and pharmaceutical testing.

Of course, Chemistry remained a vital component of the Company's success, not only thanks to its strong Aldrich traditional chemistry focus, but also due to entry into another high-growth opportunity in the Materials Science R&D market.



Historically, Sigma-Aldrich approached its customers specifically with its products, which made total sense for a company with such a robust catalog of product offerings. The ABC^M strategy supported this direction with a focus on attractive market segments. In turn, this sparked a growth phase for this particular period in the Company's history. This product-focused strategy, coupled with an industry-leading e-commerce channel to market and the acquisition of BioReliance, which provides biological safety testing services, helped expand Sigma-Aldrich's reach into a broad spectrum of customer segments.

However, the landscape of the life science market was changing, and as a result, customer needs began to evolve as well. Sachdev's vision for the Company began to take shape by looking through a different sort of lens. In 2012, he spearheaded an extensive strategic planning process intended to elevate Sigma-Aldrich to the next level of growth. What resulted from this extensive process could only be described as a major overhaul of the Company's operations. In early 2013, the Company reorganized into three distinct market-facing business units, each

with a laser focus on unique customer segments and their needs. The newly formed Applied Business Unit was created to serve the fast-growing market segments of diagnostics and testing and industrial customers. The Research, Applied and SAFC Commercial Business Units were now able to tailor their product innovation programs, sales and marketing channels and customized solutions in a manner that best suited the specific needs of the customer segments they serve. The Company was now positioned to be more intimate with its customers and engage in rich, meaningful discussions and step away from the mindset of simply being a product-focused company. Sigma-Aldrich became more problem solver than product provider and could now play an integral role in product development from beginning to end.

But this change went much deeper than mere reporting lines on an organizational chart. "This was about much more than reorganization. It was about transformation," said Sachdev. "We had been a very product-led company, maybe to the point of being



ACQUISITIONS

- 2011
Resource
Technology Corp
- Vetec Quimica
Fina. Ltd
- 2012
BioReliance
Holdings, Inc
- Research
Organics Inc
- 2014
Cell Marque

CUSTOMER-CENTRIC STRATEGY



RESEARCH

Reagents, Consumables, Kits, and Workflow Solutions for Life Sciences

- Academic/Government Research
- Pharma/Biotech Research
- Dealers



SAFC COMMERCIAL

Customized Manufacturing and Services for Commercial Products in Life Sciences and Electronics

- Life Science Products
- Life Science Services
- Hitech Electronics



APPLIED

Raw Materials and Solutions for Testing in Clinical and Industrial Applications

- Diagnostic & Testing
- Industrial Applications

Substantiating the drive for customer centricity, in 2014, Sigma-Aldrich Technical Service was ranked #1 in North America, according to Bioinformatics LLC's Life Science Industry Awards. Globally, Technical Service Support increased its ranking by seven points to a number four ranking. The North America Technical Service team handles over 210,000 support requests each year.

inwardly focused. We had stopped having substantial discussions with the customers in order to understand where they were going. So, in 2013 we reorganized our business in order to become much more customer-centric. It was a simple change on a piece of paper, but it was a very significant change in terms of the way we work as an organization. Today, we are much more focused on offering solutions than in offering products."

Karen Miller expanded on this transition: "Sigma-Aldrich had always been customer focused from a service standpoint. But Rakesh pushed us to rethink what it means to be truly customer-centric, to really understand and anticipate our customers' needs. He instilled in us the idea that everything we talk about should be through the lens of the customer."

As part of this new customer-focused strategy, the organization launched an employee engagement initiative entitled FUEL. With Sachdev's full support, this campaign was a simple reminder for each Sigma-Aldrich employee to Focus on our customer, Understand our strategy, Engage to support our strategy and Lead our success through results. The intent of the award-winning campaign was to offer each of the 9,000 employees a clear line-of-sight from what they do on a daily basis to how it directly contributes to the work Sigma-Aldrich customers do to make the world a cleaner, healthier and safer place to live.

FUEL is the Sigma-Aldrich catalyst

- that challenges our employees
- to embrace our customer-centric strategy
- and focus our attention on creating solutions
- that will benefit our customers around the globe
- and improve the quality of life for all of us.

RESEARCH

SAFEC COMMERCIAL

APPLIED

LEAD

fuel
Growth at Sigma-Aldrich

HOW CAN YOU PLAY A ROLE?

Focus on your customer	Understand our strategy	Engage to support our strategy	Lead our success through results
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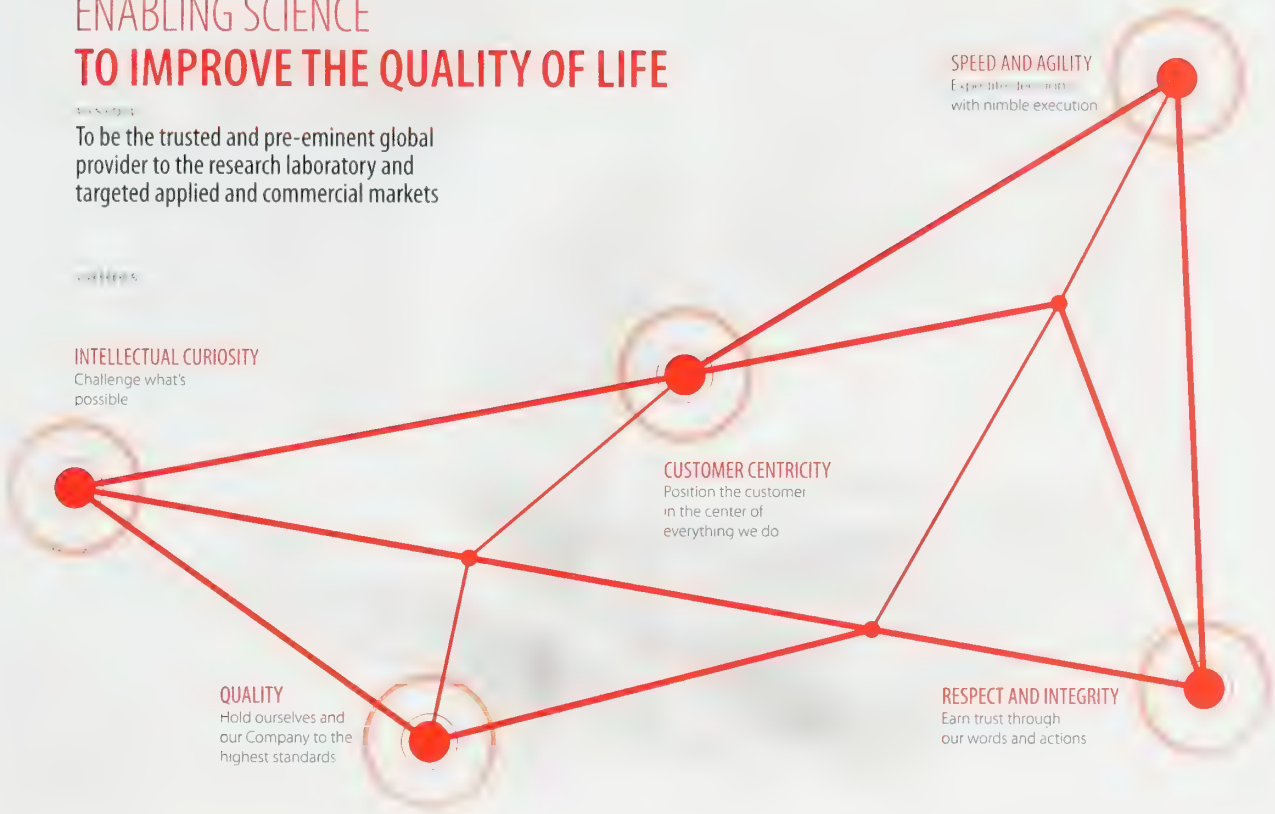
SIGMA-ALDRICH



Left: A Company-wide FUEL initiative was put in place (2013) to remind employees of the value and connection points between the work they do every day and how it contributes to ensuring customer success. The FUEL acronym stands for: Focus on your customer; Understand our Strategy; Engage to support the Strategy; and Lead our success through results.

ENABLING SCIENCE TO IMPROVE THE QUALITY OF LIFE

To be the trusted and pre-eminent global provider to the research laboratory and targeted applied and commercial markets



Above: Sigma-Aldrich values guide the execution of the Company's mission and influence the actions of its employees. To help integrate the values into daily life, they are clearly presented on walls and appear on desktop computer screens throughout the organization.

With clarity on the Company's strategic vision in place, in 2014 Sachdev introduced a refreshed set of corporate values to guide both the execution of the Company's mission and employees in their actions and decisions. Respect, integrity and quality were considered foundational values and have been at the core of the Company's identity since its inception. Of course, customer centricity was a key component of the refreshed values, but Sachdev also included a personal mantra of intellectual curiosity. A self-described "student of life," Sachdev remains a firm believer in continuous learning and always asking the next question to solve problems.

One specific aspect to Sachdev's problem solving is the ability to understand the dimension of the problem. "Rakesh challenges anyone presenting an idea for innovation and improvement to measure the size of the opportunity and assess the risks and the costs before taking the leap. Dimensioning is about making sure the possible prize is worth the time, investment and effort. This simple step served to keep our teams from getting too excited about small opportunities or not excited enough about the big ones," said Kevin Krosley, Chief of Staff.



Above: Our Customer Service teams embrace our customer-centric value every day in their work. In 2014, they won the Life Science Industry Award for Best Customer Service.

Sachdev's dedication to the dimensioning process can be seen in the commitment to the Company's IT initiative. Recognizing the benefit of a strong virtual systems platform, he kicked it into high gear with the hiring of Silji Abraham, Chief Information Officer. Abraham came to the Company with years of experience and a strong vision for what a comprehensive SAP Next upgrade could do to improve the way the business operated and link global business systems together in a dynamic and functional environment. The benefits received from SAP Next, coupled with the Company's world-class e-commerce platform and digital presence rich with content, will enable the Company to become a true "real-time enterprise" for the first time. The Company's systems will offer a tremendous competitive advantage by connecting its customers, suppliers and employees in real-time for a 360 degree view of the business.

With the three Business Units relentlessly executing Sigma-Aldrich's customer-centric strategy, the Company is helping its customers discover new drugs, develop new diagnostic tests for human and environmental health and partnering in the manufacture of the next generation of cancer and biological drugs. As a solutions provider, Sigma-Aldrich is truly helping its customers to make the world a cleaner, healthier and safer place to



Above: The SAP Next Platform initiative is working to transform unstructured content into data that is controlled by an enterprise system that will drive reliable and dependable business intelligence across the enterprise.

“

“We are not here to change the world, we are here to help our customers change the world.”

— Rakesh Sachdev

*President and Chief Executive
Officer of Sigma-Aldrich*

”

live. “We are not here to change the world,” said Sachdev. “We are here to help our customers change the world.” Several examples follow:

The SAFC Commercial business unit expanded its facilities to support drug manufacturers' efforts to efficiently bring new targeted, highly effective oncology therapies to market. Investments have been made in commercial-scale manufacturing capacity for antibody drug conjugates. Considered among the newest wave of cancer drugs, they are more selectively targeted in delivering cytotoxic agents than many existing cancer treatments. Because they can potentially reduce side effects observed in traditional chemotherapies, they may someday replace them.

The Research Business Unit has developed products that are used in research applications to understand disease mechanisms. This intricate knowledge will help diagnose and treat diseases such as cancer, Alzheimer's and Parkinson's diseases, among others. The Research Business Unit produces stable isotopes that have led to new advances in diagnostic imaging that will greatly improve the early detection of prostate cancer.

Leadership
RARESH SACHDEV • SINCE 2010



Above: The SAFC Commercial business unit continues to invest in focused, strategic areas to support the changing requirements of its customers. In 2015, new antibody drug conjugation manufacturing suites were built at the Cherokee, St. Louis site to support the pharmaceutical industry's growing demand for highly targeted cytotoxic therapeutics.

The Applied Business Unit's Seppro® product helps customers detect a rare biomarker for lung cancer. This can be performed using a simple blood test rather than a more invasive lung biopsy. Its Radiello® air monitoring product has been instrumental in ensuring that children in France can breathe easy when going to school. Recently, this product has been recommended by the Environmental Protection Agency for oil refineries and chemical manufacturers to test the air around their perimeter fences. This helps ensure air quality for the surrounding communities.

"Sigma-Aldrich has come a long way in a short period of time," said Sachdev. "We have created a lot of value for our shareholders. It took our company 75 years to build an enterprise with \$6 billion in market value and then just another five years to triple that."

Right: As the first company to commercially offer targeted genome editing technologies, like CRISPRs, no one has more expertise in this field than Sigma-Aldrich.

Yet Sigma-Aldrich's successes are not merely a matter of dollars and cents. "My predecessor Jai once said – and it remains true today – that there is no drug in the world today, that at some point did not use Sigma-Aldrich products in its discovery or development. That's a mind-boggling fact, and it's a testament to the people who have been a part of this organization through the years and made it successful."



DIVERSITY

WOMEN IN LEADERSHIP



Throughout its 80 years, change has been a constant at Sigma-Aldrich. As the Company evolved from two small chemical

manufacturers to a global leader in life sciences, it became an increasingly diverse organization.

To encourage and create a truly diverse and inclusive culture, perhaps one of the most significant initiatives was the launch of the Women In Leadership (WIL) Network in 2010. The initiative, led by executive sponsors Karen Miller, SVP, Corporate Development and Corporate Communications, and Doug Rau, VP, Human Resources, had the full support of Rakesh and his executive team.

The WIL Network's mission is to create an inclusive community that connects the needs and interests of women leaders in order to promote both personal and professional growth, fostering an environment which results in increasing representation of women in leadership positions.

The WIL network holds meetings and events each quarter ranging from interactive workshops to speaking engagements to support for charitable organizations. Topics include motivating others, conducting business in a global environment, sharpening public speaking and negotiation skills, and career development planning.

"WIL focuses on three main areas: connecting women leaders, sharing experiences and celebrating successes," explains Karen Miller. "We put a lot of emphasis on mentoring and coaching, and enhancing professional development skills."

"Five years later, the WIL Network is thriving," Miller says. "Today we have more than 350 members in the United States, and we are currently extending the initiative globally."

BLACK LEADERSHIP NETWORK



The Company has expanded the concept of affinity networks to our

African-American colleagues in the form of the Black Leadership Network (BLN). With the support of executive sponsors George Miller, Senior Vice President, General Counsel and Secretary and Doug Rau, Vice President, Human Resources this group's mission and focus is dedicated to personal growth and professional development, much like the WIL initiative.

Right: WIL teams from around Sigma-Aldrich.

Left to right from top: European WIL group, WIL hosts Connections to Success Professional Women's Group for Laclède tour, St. Louis, Missouri, Sheboygan, Wisconsin





Above: Team-Sigma Aldrich events shown in USA, Israel and Australia

GLOBAL CITIZENSHIP

From the beginning, Sigma-Aldrich has been a company dedicated to enabling its customers' efforts to improve the quality of life through scientific discovery, a role the Company has always taken great pride in playing.

While over the years Sigma-Aldrich had supported many civic and community-based organizations, as well as sustainability initiatives, the Company made a large commitment to addressing these questions in 2007 with the launch of the Global Citizenship department, the first dedicated group of employees to lead Sigma-Aldrich's environmental sustainability, social responsibility and fiscal accountability efforts.

In 2010, the organization made another significant step by establishing the Global Citizenship Initiative, also known as GC1015. The program put measurable corporate social responsibility goals in place to reduce water, waste, carbon footprint and energy use throughout the Company, as well as provide greener alternative products for customers and increase our engagement and contribution to the communities where we live and work.

"GC1015 marked a turning point in our Global Citizenship efforts as it helped us to focus our efforts to quantify our impact," said Jeffrey Whitford, Global Citizenship Manager. "Our strategic approach helped frame corporate social responsibility as business critical rather than a nice to have."

The Company also established goals related to social responsibility efforts, which are centered on three

main initiatives: charitable giving, employee volunteerism and creating a fair and safe workplace.

A cornerstone of the Company's social responsibility efforts is "Team Sigma-Aldrich," a group founded in 2004 that has rallied more than 6,000 employees in 21 countries to donate their time and money to a host of causes. From helping to inspire the next generation of scientists through STEM education to supporting research on disease, greener chemistry or other important issues, "Team Sigma-Aldrich" has logged more than 32,000 volunteer hours in the past four years alone.

"It's about more than just writing a check," said Rakesh Sachdev, Sigma-Aldrich President and CEO. "A lot of people can write a check, but we believe to truly have an impact we need to be actively involved in the organization to help fuel progress."

Sachdev was proud to note that in a relatively short period of time the Company's Global Citizenship efforts have received recognition from leading organizations and news media, including *Newsweek's* Green Rankings, the Corporate Knights Global 100 at the World Economic Forum at Davos, Dow Jones Sustainability Index, and *Corporate Responsibility Magazine's* Top 100 Corporate Citizens where Sigma-Aldrich, often one of the smallest companies by market cap yet ranked in the top quartile of businesses globally.



Leadership and employees began asking questions: "What impact could Sigma-Aldrich make in our communities through science?" "How could our efforts be a differentiator and set us apart?" And, perhaps most importantly, "How can we contribute to making the world a healthier, cleaner and safer place to be?"

LEADERSHIP



Executive Management Team: Kevin Krosley, Chief of Staff, Gerrit van den Dool, Vice President and Managing Director, Europe, Middle East and Africa, Karen J. Miller, Senior Vice President, Corporate Development and Corporate Communications, Frank Wicks, Executive Vice President and President, Applied, Silji Abraham, Vice President and Chief Information Officer, Daniel Key, Vice President, Chief Supply Chain Officer, Rakesh Sachdev, President and Chief Executive Officer, Douglas W. Rau, Vice President, Human Resources, Jan A. Bertsch, Executive Vice President and Chief Financial Officer and Treasurer, George L. Miller, Senior Vice President, General Counsel and Secretary, Jason T. Apter, Vice President and Managing Director, Asia Pacific, Gilles A. Cottier, Executive Vice President and President, SAFC Commercial

EXECUTIVE MANAGEMENT TEAM

- ~296,000 Products
- #1 Life Science Website
- >9,000 Employees

Throughout its tenure, the Sigma-Aldrich Executive Management Team has continually evolved to meet the ever-changing demands of its worldwide customer base of scientists, clinicians, engineers and manufacturing professionals. To remain an industry leader in life sciences and high technology, their vision and diverse experience has led the organization through

the many challenges of change, putting global expansion plans in place; acquiring companies; broadening product lines; opening new markets; enhancing operational efficiencies; and implementing new and better ways to serve the customer, engage employees and reward shareholders.



2014 Board of Directors: Michael L. Marberry, *President and CEO, J.M. Huber Corporation*, Avi M. Nash, *Managing Director of Avi Nash LLC*, Rebecca M. Bergman, *President, Gustavus Adolphus College*, D. Dean Spatz, *Former Chairman and CEO, Osmonics, Inc.*, Rakesh Sachdev, *President and CEO, Sigma-Aldrich Corporation*, J. Pedro Reinhard, *President of Reinhard & Associates, Former CFO, Dow Chemical Company*, Barrett A. Toan, *Former Chairman and CEO, Express Scripts, Inc.*, George M. Church, Ph.D., *Professor of Genetics at the Harvard Medical School and Director of the Center for Computational Genetics in Cambridge, Massachusetts*, W. Lee McCollum, *Former Executive Vice President and Chief Financial Officer, S.C. Johnson & Son, Inc., Former Partner, Goldman Sachs*, Steven M. Paul, M.D., *President and CEO, Voyager Therapeutics, Inc., and Adjunct Professor of Neurology, Psychiatry and Pharmacology at Weill Cornell Medical College*

BOARD OF DIRECTORS

The Company's Board of Directors is composed of top professionals in the fields of science, finance and management. The Board has had a long-term strategy of creating shareholder value by working with the Company's CEO and Executive Management team to grow sales (both internally and through acquisition), profits and cash flow and to return cash to shareholders via share repurchases and dividends. The Company's track record of 40 consecutive years

of increasing adjusted earnings per share and 39 consecutive years of increasing dividends are unparalleled by its peer group and among only a select handful of all the publicly traded companies in the world. This strategy has attracted long-term institutional and individual investors of the Company's stock (NASDAQ: SIAL) and has led to strong share price appreciation over the last 40 years.

40 Consecutive
Years of
EPS Growth

—
~2.8 Billion in
Annual Sales

INDUSTRY-LEADING BRANDS

with Unrivaled Scientific Knowledge

Right: Our Aldrich Handbook of Fine Chemicals is recognized around the globe for its fine artwork always represented on the cover as well as for its value as a reference book.



Sigma-Aldrich has a well-earned reputation for quality, service and scientific knowledge. Over the last 80 years, the Company amassed a collection of over 296,000 products and put a powerful brand portfolio together that serves the requirements of its global customers. Its approach of building in-house capabilities or purchasing best-in-class companies with innovative products and technologies has helped Sigma-Aldrich to remain unequalled as a manufacturer and supplier of Life Science and High technology products.

Today's customers have requirements that go beyond product selection. They seek a partner that understands science and can provide solutions to their research or manufacturing problems. Add in the wide variety of scientific disciplines that these requests cross and this becomes an advantage for a Company like ours that understands science and how to resolve issues. Market leaders whose main focus is in providing scientific knowledge, the Sigma-Aldrich brands are well positioned to serve today's needs across the many areas of the Research, Applied and Commercial markets.

Our brands are industry leaders. The Sigma brand remains recognized worldwide for biochemical products used in life science research. From basic buffers, carbohydrates and enzymes to antibiotics and cutting edge genomics tools like CompoZr® Zinc Finger Nuclease (ZFN), the Sigma Catalog appears on the

shelf of practically every lab in the world and the Sigma-Aldrich website is referenced often for scientific content and for product selection that helps complete research tasks.

Alfred Bader's approach of strong scientific collaborations continues to pay dividends for the Aldrich brand. As a world leader in organic and inorganic chemicals, the Aldrich promise of 'chemists helping chemists' continues to ring true even today. Scientists can secure basic 'building blocks' for their chemical synthesis, access laboratory chemicals, high purity solvents and a wide variety of other materials at up to 99.9999% purity, then converse with Sigma-Aldrich personnel that speak the language of chemistry.

The Fluka and Supelco brands are both recognized as leaders in the Research and Applied markets – where their materials can help to analyze the composition of products or measure the purity levels of materials used in science, the environment, or in the foods we eat. Cerilliant, RTC and Cell Marque are the newest brands to join the Applied Business Unit's analytical portfolio.

To support the customer journey through the drug development and commercialization pipeline, SAFC has grown its brand from a mere idea into a business unit with revenues over \$600 million. Its highly specialized manufacturing and scientific expertise resolves production issues and provides raw materials to accelerate the development of new drugs. It also offers safety and efficacy testing of drugs through its BioReliance services. SAFC Hitech supports specialized products for the High Technology market.

SIGMA-ALDRICH

SIGMA

ALDRICH

Fluka

SUPELCO

SAFC

SAFC Hitech®
Enabling Technology™

BioReliance™
by **SAFC**

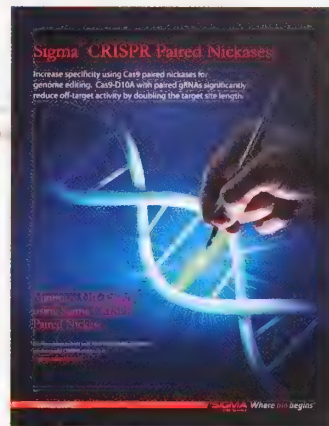
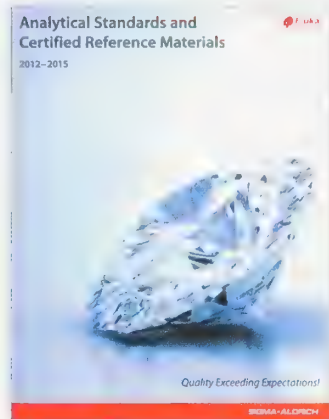
Cerilliant™
Analytical Reference Standards
a SIGMA-ALDRICH company

RTC™

CELL MARQUE™
a SIGMA-ALDRICH company

VETEC™
Everyday Reliability

CORE STRENGTHS



Above: We maintain the integrity and value of our individual brands while also reinforcing the strength of the Sigma-Aldrich Corporate brand behind it. This reminds our customer of the core strength behind any brand they may order – breadth of products and services, delivery, supply chain and quality.



MARKET CHANNELS

Sigma-Aldrich Catalogs

BIOCHEMICAL AND ORGANIC COMPOUNDS
for Research

and

DIAGNOSTIC CLINICAL REAGENTS

SIGMA
PRICE LIST
MAR. 1965

SEE PAGES 169-170 FOR
LAST-MINUTE ADDITIONS.

CONGRATULATIONS UNCLE SAM!

You have used rare good judgment in terminating the "Catalog Controversy".

Yes, believe it or not, we have been advised by the Veterans Administration, which administers the routine Contracts for Research Biochemicals, that the Contract requirement specifying 8" X 11" Catalogs as a prerequisite for being awarded a Government Contract, has been deleted from the 1965 Contracts. They have agreed to accept the well-known 6" X 9" Sigma Catalog - or any other size offered by Private Enterprise dealers. Thus, Round One of the "Sigma Stands Alone" drama is ended. Our sincere thanks to the hundreds of fair-minded scientists who joined our side in the battle, and those scientists in Government Laboratories who insisted on Sigma Reagents - without a Contract.

At the same time we can't help but regret the attitude of a few individuals who failed to comprehend the principle we were fighting for or who urged us to fall in line with the sheep-like dealers who quietly obeyed the Government edict for an 8" X 11" Catalog, "because uniform catalogs are nice to file".

Unfortunately, the battle of Horse-Sense is not over. Sigma still refuses to sign a lopsided, ridiculous "Contract". The V. A. still demands a quantity of delivery of every item in our catalog, in any quantity, they suddenly decide to order. They can't get it through their heads that Research Reagents and Enzymes can't be turned out on an assembly line like aspirin tablets. They might suddenly cover more of an item than the entire World has ever seen. They don't understand that it is impossible to be prepared for any size order of excess item. They don't realize that Sigma is probably the only general and-chemical Dealer that won't ship unless each item ordered has been assayed and meets our specifications - and we won't mix a 1-gram package in stock with 1-gram NaCl to fill a 2-gram order promptly. Yes, it does happen elsewhere. Since the "Contract" does not specify quantities that will be ordered during the year, we can't possibly guarantee to deliver everything in any quantity. Yes, other dealers have assigned the Contract and they do guarantee delivery, we are told. However, investigation will show that numerous defaults have occurred and yet no penalty has been assessed. Why should a clause (which is not enforced) be included in a Government Contract? Sigma won't be a party to such a farce!

Sigma will sign a Contract on any reasonable, logical basis - but no other until that time arrives we hope all Government Scientists will continue to specify, "Must be Sigma - no Substitute." to safeguard their Research and foster our fight for Free Enterprise.

Dan Broida

SIGMA
CHEMICAL COMPANY
3500 DEKALB ST., ST. LOUIS, MO. 63118 U.S.A.
CABLE ADDRESS: SIGMACHEM, ST. LOUIS, MO.

Right: Catalog production evolved from hot lead to typesetting to database publishing. In the 80s and 90s it took a team of six graphic artists six months to produce the Sigma catalog. With the advent of automation, production time was reduced to two people and four months.



Price List
JULY, 1949

ADENOSINE TRIPHOSPHATE, Di Barium Salt, SIGMA	1 - 5 gms.	Per Gram \$15.00
Enzymatically Assayed	6 - 10 gms.	14.75
Animal Origin	11 - 50 gms.	14.50
	500 mg.	9.00

ADENOSINE DIPHOSPHATE, Barium Salt, SIGMA	Per Gram \$ 95.00
Enzymatically Assayed	500 mg. 57.00
	100 mg. 12.50

NOTE SUBSTANTIAL PRICE REDUCTIONS

Biochemical
Price
List
JULY, 1949

Preparations now available for
immediate delivery from



UNCONDITIONALLY GUARANTEED

Full credit allowed within 60 days of shipment if any product is found to be below represented standard.

SIGMA CHEMICAL CO.
4648 EASTON AVENUE - SAINT LOUIS 13, MO.
U. S. A.

Phosphorus as ADP	
phosphate	
(Muscle Adenylic Acid)	1 - 5 gms. @ \$ 25.00
	50 gms. @ 20.00
	25 mg. 7.50
19. C	
with	1 - 5 gms. Per Gram \$ 50.00
phosphoryl	6 - 10 gms. 49.00
phosphoryl	500 mg. 30.00
	250 mg. 17.00
	100 mg. 8.00
Stable Solutions:	Lots of 20—Each \$ 5.00
	Less than 20—Each 7.50
Ammonium Salt	Free Acid
\$ 5.00	\$ 6.00
4.75	5.70
4.00	5.00
3.90	4.90

The 1949 Sigma price list and Dan Broida's open letter to the U.S. Government on the 1965 Catalog.

By any measure, the success of Sigma-Aldrich is remarkable. That the Company was able to achieve this level of success for decades with virtually no sales force or advertising is even more incredible.

For many years, the Company's print catalogs were the primary drivers of sales at Sigma-Aldrich Corporation.

At the height of the catalog era, the Company printed close to a million copies each of its Sigma and Aldrich catalogs, as well as several hundred thousand copies of its Fluka and Supelco catalogs. To meet the needs of global customers, the catalogs were printed in multiple languages and currencies.

"We don't often think of it in these terms, but during the height of our print catalog era, Sigma-Aldrich was a world-class publisher," says former Chief Financial Officer Mike Hogan. "Our catalogs sat in thousands of labs around the world. That's a huge undertaking."

Through the years, the Sigma catalog grew to become a massive tome, almost three inches thick and filled with thousands of products. But despite its growing



In the late 1980's, to focus on specific research areas, specialty catalogs were produced in multiple currencies and distributed to the market.



The 2012-2014 Sigma Catalog and Aldrich Handbook of Fine Chemicals cover and intro pages were printed in more than 30 languages. The books contained over 30,000 products each



size, the catalog's cover dimensions remained relatively diminutive – even defiantly so. When the federal government required that all chemical companies submit catalogs that were 8½ by 11 inches in order to be considered for a contract with the Veterans Administration, Sigma leader Dan Broida refused. He went so far as to write an open letter to the government decrying the order. He even published the letter on the front of the Company's next catalog – which was printed in its standard format of 6 by 9 inches.

The Aldrich catalog, meanwhile, was an eagerly awaited arrival at labs across the world, not just for its expansive offerings but also for its distinctive covers. Disproving the notion that science and art made strange bedfellows, each issue of the catalog featured a reproduction of a famous painting by artists like Rembrandt or Van Gogh. The Aldrich catalogs also featured occasional articles on art history, written anonymously by Company founder Alfred Bader whose love of art would lead to his eventual recognition as an expert on the Old Dutch Masters.



Whether it was the Sigma, Aldrich, Fluka, Supelco or any of the other catalogs published by Sigma-Aldrich, the books were ever-present in labs on every continent.

Mike Hogan stated, "In the 10 years I was with the Company, I traveled all over the world visiting our customers, and on every lab desk you would find the history of Sigma-Aldrich. Our past catalogs would be lined up like soldiers. The scientists never threw out the old catalogs because they would be filled with Post-It Notes™ with their scribbled notes."

Executive Vice President Frank Wicks concurs. "When it came to our catalogs, our goal was simply to provide all of the information that the customer really needed to make their choices," he said. "So when you would go into a laboratory to visit a customer, they would have these catalogs with tabs in them and notes all over the pages. These things were like their Bibles. Every customer around the globe would have one sitting in front of them every day ready to be called upon when needed."

MARKET CHANNELS

eCommerce

2005
i.merchant
AWARDS



The Sigma-Aldrich website has been well-recognized for the quality of its content, ease of use and functionality.

The site has received numerous awards, including the Innovator of the Year award in 2000 from Network World and the i.merchant award in 2005 for website excellence.

Despite the Company's long-standing reliance on its print catalogs to drive sales, executives at Sigma-Aldrich were quick to grasp the importance of the Internet.

"I was sitting in my office one day in 1993 when one of our founders, Aaron Fischer – who was probably 85 at the time – came in and said to me, "There's this thing called the Internet. You need to look into this," said Frank Wicks, Executive Vice President and President, Applied.

The Company's first steps into eCommerce in the 1990s were tentative. "Our system in the beginning really didn't have the back-room support necessary to offer real-time online ordering," said former Vice President and Treasurer, Kirk Richter.

"Our customers might place an order online, but in the early days we would just print that order, carry it into the back room and figure out how to process it," said Wicks.

But Fischer's words were prophetic. It wasn't long before Sigma-Aldrich began a much more aggressive push into eCommerce, and the Company quickly faced some healthy competition.

"In the late '90s, a new company was launched that had developed software they believed would make them the 'Amazon' of chemicals," recalled Wicks. According to Wicks that company approached Sigma-Aldrich with an offer. "They came to us and asked us to cooperate and make our catalog available through their website for a percentage of our profit."

It wasn't surprising that a company that made a habit of cutting out the middleman, declined. As a result, Sigma-Aldrich became locked into a heated battle with the new upstart. Other competitors were soon feeling the heat, and they too approached Sigma-Aldrich about creating a combined website to fend off the new threat.

"Once again, we said no," said Wicks. "We just decided we can do this on our own, and from that point on we committed resources every year to being eCommerce leaders in the industry."

Former CFO Mike Hogan said – with a hint of satisfaction – that Sigma-Aldrich emerged victorious over its competition with this new, very credible threat. "That company no longer exists, and we went from having a website that was a glorified brochure with pretty pictures to what exists today – a fully integrated ordering system and a world-class website."

Trizma[®] base
Sigma
Primary Standard and Buffer, ≥99.9% (titration), crystalline

System(s): 2-Amino-2 (hydroxymethyl) 1,3-propanediol
THAM
This base
Tris(hydroxymethyl)aminomethane
Tris(hydroxymethyl)aminomethane

Molecular Formula: C3H8N2O3
Molecular Weight: 181.14
CAS Number: 77-86-1
Business Registry: 143881

Product Number: 43312-6
Product Name: Acetone, 99.9+%, HPLC grade

Product Information	Quantity	Package Size	List Price	Your Price	Available	Comments
Product # 43312-6	400-100-4048	320.00	300.00	Yes	Complete	

Molecular Formula: CH3COCH3
Molecular Weight: 58.08
CAS: 67-54-1
Quality Application: HPLC grade
Assay: 99.94%
Evapor. residue < < 0.0002%
Water < < 0.003%
Purity: 0.991
EPC Number: 200-662-2
Merck Index: 12-64
Boiling Point: 56.3°C
Miscellaneous: This chemical is in the EPA inventory under TSCA
Label Precautions: Flammable liquid
Severe eye irritant
Target organ: liver, kidneys
Comments: 439126

Above: Progression of our web site through the years.

SIGMA-ALDRICH
Order | Login/Profile | Technical Service | Customer Service

The global leader in Life Sciences and High Technology research products, backed by extensive technical information and service support, we supply over 85,000 biochemicals and organic chemicals to the scientific community. For over 60 years, we've used our unrivaled scientific knowledge to make good on the promise of science.

Advanced Search
Information Search | Product Name | Product Number | Full Text

Local Web Sites
Americas | Europe | Pacific Rim

A New Medium for Adenovirus Production
By Terrell Johnson, Teresa Ruff, Brad Fuhr, Boyd Dickinson and Matthew Cape
Sigma-Aldrich Corporation, St. Louis, MO, USA

Over the course of just two years – from 1999 when real-time data first became available to customers on the Sigma-Aldrich website, to 2001 – web sales doubled from 5% of global sales to 10%.

The trend to online ordering continued, and the Company responded by bolstering its web presence. In 2004 alone, Sigma-Aldrich invested nearly \$6 million to enhance its eCommerce systems and made a similar investment the following year. By 2006, eCommerce represented a full quarter of the Company's global sales.

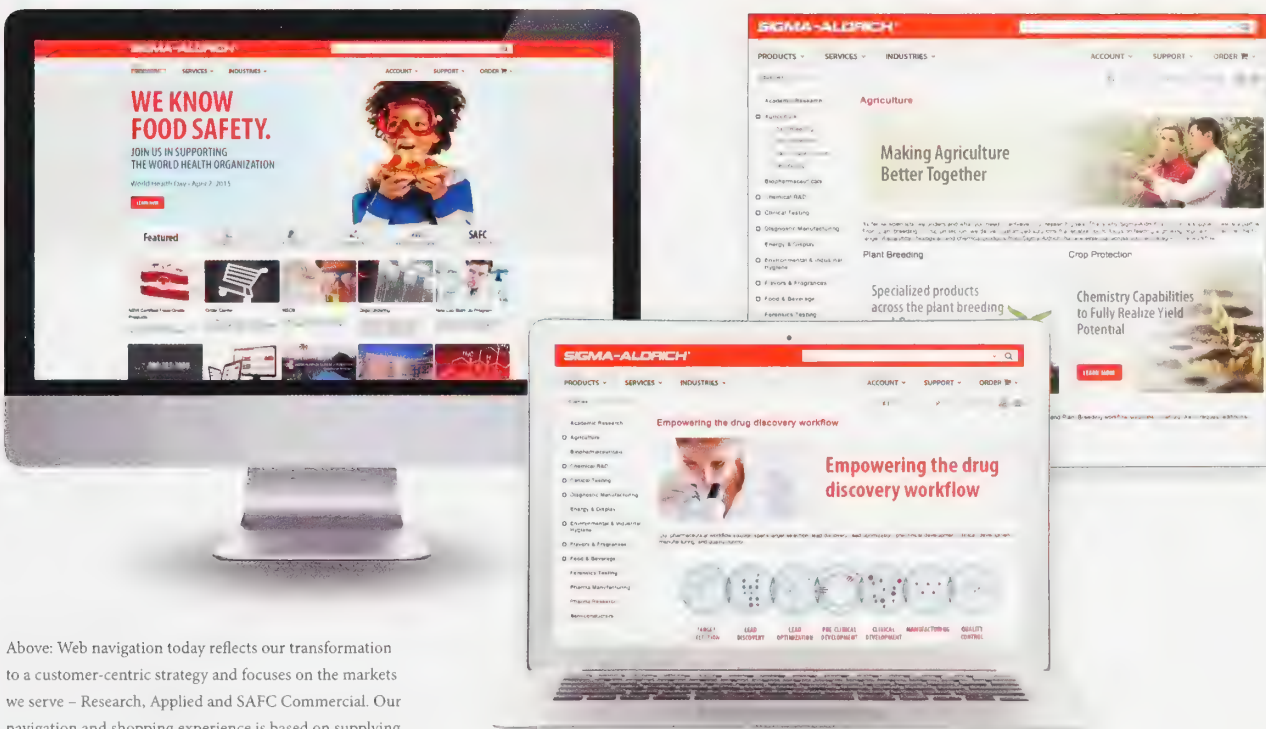
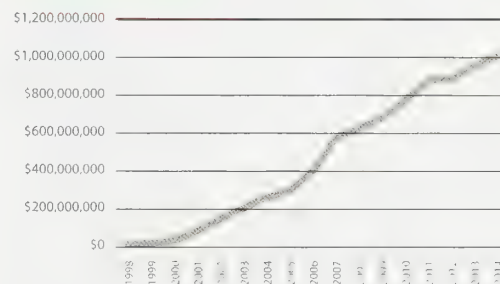
Enhancements to Sigma-Aldrich's eCommerce capabilities have been robust and continual in recent years. These improvements have included everything from the establishment of a dedicated web analytics team to the translation of product content into Japanese, Chinese and other languages.

In 2012, Sigma-Aldrich made considerable improvements to enhance its customers' shopping experience.

The following year the Company added real-time behavior-based targeting capability to its eCommerce platform. It also launched a new, integrated web experience for SAFC Commercial customers. Nearly 50% of Company sales are currently through the web channel because of these efforts.

With a 20-year track record of investments, improvements and enhancements, there is little wonder why Sigma-Aldrich is universally regarded as an industry leader in eCommerce.

Sales Through The Web



Above: Web navigation today reflects our transformation to a customer-centric strategy and focuses on the markets we serve – Research, Applied and SAFC Commercial. Our navigation and shopping experience is based on supplying our customers what they need to make their buying decision.

SUPPLY CHAIN

Right: From the earliest days, Safety has been part of the Company's culture.

From the beginning, both Sigma and Aldrich names were synonymous with quality products and exceptional service. A critical part of providing both to customers came from the functions of the Company that today is referred to as the "supply chain."

In the early days, all of these functions occurred in the same small buildings, mostly in Milwaukee or St. Louis. They were executed by employees who had multiple responsibilities. The theme never varied, said Larry Hummel, Chief Procurement Officer, "more new products, top quality and ship the same day." Backorders were the worst thing that could happen. The focus on service, though, proved to be a key driver for the success of the Company, which continues today.

There was also an intense emphasis on safety. The Company's culture has made safety an integral part of its operations. "The protection of our people, assets and the communities where we do business is always the first consideration for how we will operate," said Steve Walton, Vice President, Employee Health & Safety, Compliance & Sustainability. "We take employee safety very seriously and have ingrained a culture of safety into everything we do. Our objective is to provide employees a safe environment in which to work and ensure they will go home at the end of each shift in the same condition they arrive."

The hiring of Dan Key, Vice President of Operations and Supply Chain to serve as a senior operations leader for the Company has elevated accountability for safety through all levels of the organization. The actions Dan implemented raised the level of expectation, leadership and involvement to ensure employee safety.



While systems and structures may have evolved through time, the overarching belief remains the same: Sigma-Aldrich employees are the Company's greatest asset and keeping them safe is its top priority.

Sigma-Aldrich has spent decades making improvements and investments to support growing supply chain requirements. Today, the scale of those efforts is incredible. In 2015, the supply chain operated directly in more than 20 countries, is supported by more than 4,000 employees who can be considered the operations backbone of the Company. Sigma-Aldrich ships more than seven million orders to approximately 1.4 million customers in more than 100 countries. Not only do the supply chain teams have the responsibility to manage relationships with 10,000 vendors, they work to ensure forecasting and inventory and distribution planning are all in place and working together to effectively serve business demands.

Right: Sigma-Aldrich Supply Chain goes beyond just securing materials. Its operations cover a comprehensive focus on Safety, Quality, Delivery, Inventory, Cost Control and People all working together to ensure excellence behind each area.



CORE STRENGTHS



Left and Below: The Schnelldorf, Germany and Milwaukee (Teutonia) distribution centers serve the entire global network of Sigma-Aldrich warehouses



Manufacturing operations have grown throughout Company history. The Company's strong chemical and biochemical manufacturing expertise is well recognized throughout the industry. For example, Sigma-Aldrich is known for manufacturing buffers, an essential ingredient for virtually every area of the market. To support demands for highly active pharmaceutical ingredients and chemical precursors of SAFC clients, the Company has built highly specialized, cutting-edge manufacturing capabilities and put industry leading quality systems in place.

Packaging operations continued to evolve and expand over time and are now considered a key differentiator that supports Sigma-Aldrich's guarantee that products maintain their integrity no matter the shipping conditions. We have the ability to provide both routine, such as room temperature or specialized, such as dry ice and liquid nitrogen packaging solutions.

Since the earliest days distribution has been a core strength of the Company. Main distribution hubs in Schnelldorf, Germany and Milwaukee, Wisconsin feed a network of 42 extended distribution centers in 23 countries around the world. Today's business demands require

fulfillment of more than 4 million customer orders, 8 million order lines and 16 million units annually.

The number of products, orders, shipments and vendors across the supply chain are staggering, but really it all boils down to one thing – delivering quality products to each and every customer safely, accurately and on time.

And by the way, backorders are still the worst thing.



Above: Opening of the Wuxi, China facility (2012) that provides localized packaging, analytical services and quality control for products to support customers in the region.

FRANK WICKS

The Heart and Soul of Sigma-Aldrich



Top: Frank celebrates his 33 years with Sigma-Aldrich in a walk toward the stage at the 2015 Applied Business Unit Sales Meeting Awards Dinner held at the St. Louis Art Museum.

Bottom: Frank leads a discussion in a St. Louis' DeKalb conference room while Nick Dalton, Human Resources, prepares to speak.

In his 33-year history, no executive has had more influence in the tremendous growth and success of the Company than Frank Wicks. Frank has operated as the constant thread throughout numerous Company evolutions. Across his tenure, he was a leader whose Company knowledge, business prowess, scientific expertise and practical ideas could help develop strategic plans, then put teams in place to ensure their success.

In essence, his leadership was powerful enough to help shape the way the Company operated, and yet, Frank always remained approachable. People across the organization wanted to work with him because he provided guidance and insight and always demonstrated integrity. In many ways, Frank added his own heart and soul to the Sigma-Aldrich culture.

As former CFO Mike Hogan puts it, "Frank Wicks has forgotten more about this Company than anyone else will ever know. He understands every tiny facet of Sigma-Aldrich. He's also ridiculously smart."

Wicks came to Sigma-Aldrich in 1982 as an R&D scientist with a Ph.D. in Biochemistry from Oklahoma State University. Immediately upon arrival, he got a taste of the Company's commitment to problem solving and scientific discovery: "On the day I started, they handed me a bucket of cow brains and told me to make something from it!" he recalls with a laugh.

Frank rose to the occasion, creating a cyclic nucleotide activator that became a healthy seller for the company. "Sold for \$100,000 that year for a gram of powder," he says. "That's a pretty good powder."

That story, says Wicks, is indicative of the culture at Sigma-Aldrich. "From that very first day, I remember people sitting down with me and saying, 'If you have an idea, and you really want to make a difference, go for it.' I think that statement reflects a big part of this Company's personality."

Frank proved he was well on his way to making a big impact at the Company. He moved from R&D to eventually become Department Head of the Catalog, Competition, Graphic Services and Printing areas, where he pulled together the Sigma Catalog and oversaw the pricing function for the Company.



Above Left: Jan Bertsch, Gerrit van den Dool and Frank celebrate Sigma-Aldrich's 80th birthday at the European Sales Meeting in Rome, Italy. (2015)
 Above Top Right: Signing ceremony for land purchase in Wuxi, China to build a new facility. Wilson Wang, V.P., Managing Director, China is behind Frank. (2015)
 Above Right Center: Frank with several members of the Applied Business Unit team during the St. Louis Sales Meeting. (2015)
 Above Bottom Right: John Short and Frank share a chat before the final evening's festivities begin at the Atlanta, Georgia Sales Meeting in 2009.

With the acquisition of Fluka Chemie and the requirement for multi-currency pricing, Frank, with the help of a programmer, developed a pricing system that transitioned the Company from manual pricing of products into an automated methodology.

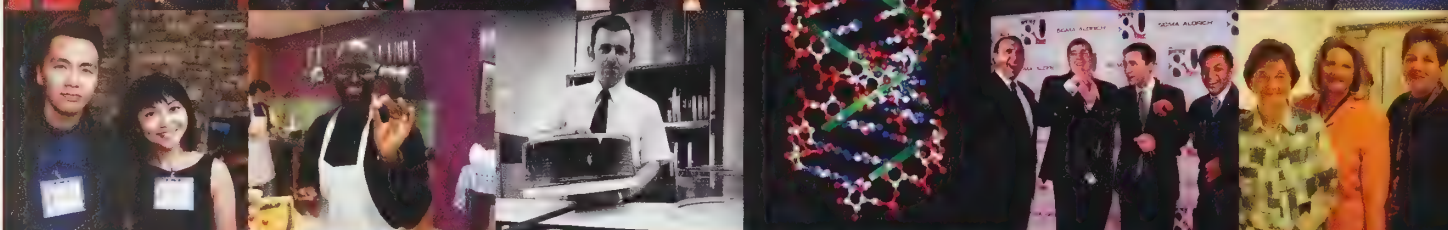
As President of Sigma Chemical Company (1994-1998), Frank led the way in instilling values that had a long-lasting impact on the Company's culture. From top leadership to every level of employee across the workforce, the values of "Respect and Dignity" became a foundation for the Company. "A big part of that shift was rooted in listening to our employees' concerns. I think I held more than 1,500 employee meetings over a three-year period," stated Wicks.

From 1998-1999, as Vice President of Global Operations, Frank was one of the drivers as a new channel called the Internet took hold. He was also charged with increasing efficiencies across the organization and championed the Process Improvement initiative. From 1999 to 2002, Wicks served as President of a newly formed Sigma-Aldrich Research Division and found himself locked in a room for six months with David Harvey and a team of six others, hammering out the Company's first Strategic Plan.

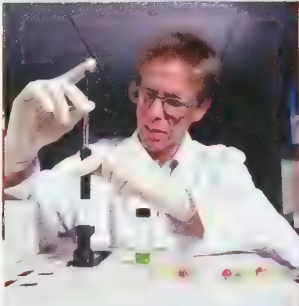
Moving beyond his research roots, he was promoted to President of the Fine Chemicals Division in 2002, where he put an aggressive acquisition strategy in play, most notably JRH Biosciences. Frank re-energized sales and drove a refreshed SAFC brand into the market. In 2009, he moved to President of Research Specialties and Essentials and in 2011 became Executive Vice President and President of the Research Business Unit. In 2013 he held that same title for the Applied Business Unit. The team, under Frank's leadership, has been extremely successful launching the new customer-centric strategy into Diagnostic & Testing, Industrial and Consumer markets.

"To me, Frank Wicks is Sigma-Aldrich," stated Karen Miller, Senior Vice President, Corporate Development and Corporate Communications. "I do not believe there is any part of the Company that he has not run during his tenure here. But aside from his deep understanding of Sigma-Aldrich, his strong scientific knowledge and his incredible intelligence, people admire and respect Frank because he is one of the nicest guys you're ever going to know. He genuinely cares about people. Respect and dignity is a mantra that is personified in Frank."







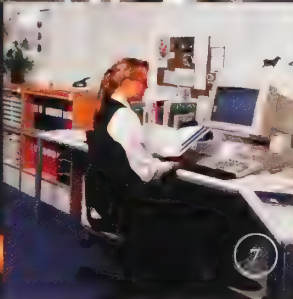




1. Italy customer service
2. Mexico office team



3. Canada office team celebrates \$2 Billion in sales
4. Australia office team
5. Italy office team



6. UK office team
7. Latin America office team
8. UK order taking
9. UK office team



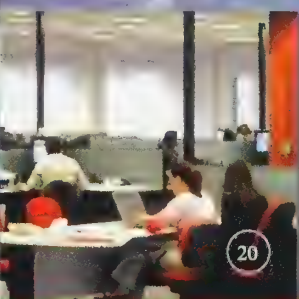
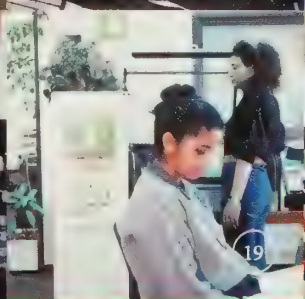
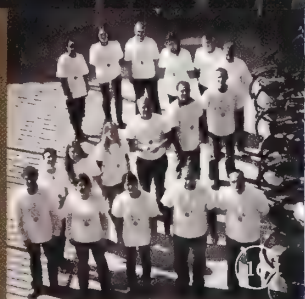
10. Japan ISO members
11. Hungary office team



12. UK office
13. Latin America office team
14. UK order taking



15. UK sales and service
16. The Netherlands office team celebrate \$2 Billion in sales
17. Wuxi, China office team



18. Spain office team
19. India office
20. Brazil office



BEGINNING A NEW CHAPTER

Corporate headquarters moved into the 3050 Spruce Street, St. Louis, Missouri location in May of 1980. Other buildings that are part of the St. Louis campus include Dekalb (1956), Cherokee – also known as South 2nd Street (1982), South Broadway (1985), Ewing (1989) and Laclede (2001).

The Sigma-Aldrich story is one in which change is a constant. Over the course of 80 years, the Company was built on a solid foundation achieving incredible growth through continued focus on understanding the needs of the customer and responding to those needs.

From the modest beginnings of both Midwest Consultants and Aldrich Chemical Company, to the merger of Sigma and Aldrich in 1975, to the rapid product and geographic expansion that followed, the Company demonstrated an absolute refusal to become complacent.

Along the way, Sigma-Aldrich knew how to attract the best people and how to get the best from its people. The Company provided products to help make the world a safer, cleaner, healthier place. And it was done with a sense of urgency that endeared the Company to its customers.

Through the past 80 years this incredible organization of dedicated employees has had a constant purpose that has driven the Company to its success. We have leveraged our core strengths and delivered value every step of the way on our journey.

2015 brings a new chapter in the evolution of the Company, as German chemical and pharmaceutical company Merck KGaA, located in Darmstadt, Germany, is expected to complete its acquisition of Sigma-Aldrich Corporation. And you, our employees, are well prepared to embrace the new opportunities this change will offer. After all, you are our core strength.

You ARE Sigma-Aldrich.



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