THE VARIOUS MEANINGS OF DIVERSIFICATION: UCB AND ITS TRANSFORMATION INTO A BIOPHARMA COMPANY (1928-2008)

- Kenneth Bertrams -

The business-historical literature on drugs and pharmaceuticals companies is quite scarce and confidential at the international level.[1] It may even be considered as nonexistent at the Belgian scale.[2] This is hardly a surprise when one knows the reluctance of pharma businesses to open up their archives to scholars. Alongside the obstacles to access first-hand material, the pharma industry can rightly be depicted as a secretive business sectors, one among many others, it should be said. Although UCB was listed as a public joint-stock company since its creation in 1928, its communication with the outside world was limited to the quintessential means, the bulk of which were produced due to legal requirements – proceedings of general assembly meetings, annual activity reports, and, more recently, marketing-based public information on drugs and their potential side effects. Occasionally, for instance in the wake of commemorations, press releases and semi-private presentations on the company's structure and development would come to the fore. As a matter of fact, the commemorative setting applies to this article as it draws largely on research initiated as a commissioned book aimed to circulate during UCB's 90th anniversary in 2018.[3]

This article follows three interrelated objectives. First, it can be seen as a pioneering albeit modest contribution to advance our knowledge of UCB, perhaps one of the most famous unknown Belgian big businesses still active. Second, it seeks to open part of the black box surrounding the historical development of the pharmaceuticals industry, particularly in its relation with the closed world of personal capitalism and family governance. Third, it intends to buttress the topic of this special issue focusing on the international expansion of early Belgian multinational companies, but it may do so in a special manner. Although I fully subscribe to the idea of various stages of business expansion,[4] I will argue that, in the case of UCB, international commercial strategy preceded and permitted the development of a strategy of industrial research and development (R&D), which in turn triggered the transformation of the multi-products chemical company into a full-fledge biopharma company. In the following pages, I will first give a brief account on the birth and early years of the company, whose initial story is closely related to the personal history of its founder and first leader, Emmanuel Janssen. I will then try to show how the pharmaceuticals division outgrew from an ancillary position in the company's strategy and structure to become a major department from the 1950's onwards. The final section, focusing ever closer on the pharma sector, will test the core argument, namely that UCB used its international commercial strategy made of trade partners, bridgeheads, and relays as a learning base to expand its in-house R&D development and ensure its industrial presence abroad as a biopharma company.

I. Crises and consolidation

After the First World War, the chemical industry underwent a worldwide process of industrial consolidation. In 1920 the formation of Allied Chemical & Dye Corporation witnessed the creation of the largest American chemical company. Four years later, the three biggest German chemical companies – BASF, Bayer, Hoechst – united to form a single "community of interests", the notorious I.G. Farben Industrie.[5] Echoing the German concerns, British industrialists and government officials reacted by launching Imperial Chemical Industries (ICI) in 1926, an amalgamation of four chemical companies under the joint leadership of Brunner, Mond & Co. and Nobel Industries.[6] Only the French failed to form a national champion in chemistry during the 1920s. The Comité des industries chimiques de France set up in 1927 at the initiative of Kuhlmann Company was short-lived due to the reluctance of Saint-Gobain to chip into the project. The failure of this Comité prompted two chemical companies – Société chimique des usines du Rhône and Établissements Poulenc Frères – to join forces in 1928 and become an important supporting actor in this history : Rhône-Poulenc.[7]

1. See Jonathan Liebenau, *Medical Science and Medical Industry : the Formation of the American Medical Industry,* Baltimore, 1987 ; John P. Swann, *Academic Scientists and the Pharmaceutical Industry. Cooperative Research in Twentieth-Century America,* Baltimore, 1988 ; John P. Swann, The Evolution of the American Pharmaceutical Industry, *Pharmacy in History,* 37 (2), 1995, 76-86 ; Tobias Cramer, "Building the 'World's Phamacy' : The Rise of the German Pharmaceutical Industry, 1871-1914", *Business History Review,* 89 (1), 2015, 43-73 ; Edgar Jones, *The Business of Medicine : The Extraordinary History of Glaxo,* London, 2001 ; Christian Bonah (ed.), *Harmonizing Drugs : Standards in 20th-century Pharmaceutical History*, Paris, 2009 ; Patrick Radden Keefe, *Empire of Pain : The Secret History of the Sackler Dynasty,* New York, 2021.

2. A few noteworthy recent exceptions hinting at business history are Martijn Collijs, "De bittere pil van farmaceutische mechanisatie (1960-1970). Hoe de sixties-apotheker evolueerde van pillendraaier naar huisvader van het volk", *Brood & Rozen,* 2022 (3), 5-31.

3. Kenneth Bertrams, *UCB, 1928-2018. The First Ninety Years,* Tielt, 2018 (only accessible as e-book : https://www.ucb.com/the-first-ninety-years/flipbook.html).

4. See Tobit Vandamme, "Beyond Belgium : The Business Empire of Edouard Empain in the First Global Economy (1880-1914)", unpublished PhD, Ghent University, 2020, as well as the introduction in this issue.

5. Werner Abelshauser, Wolfgang von Hippel, Jeffrey Allan Johnson & Raymond G. Stokes, *German Industry and Global Enterprise : BASF : The History of a Company,* Cambridge-New York, 201-212.

6. W.J. Reader, *Imperial Chemical Industries : A History. The First Quarter-century, 1926-52,* vol. 2, Oxford, 1975, 12-28.

7. Youssef Cassis, *Big Business. The European Experience in the Twentieth Century,* Oxford, 1997, 36-37 ; Jun Sakudo, *Les entreprises de la chimie en France de 1860 à 1932,* Bruxelles, 2011, 251-253.

Emmanuel Janssen had observed these transformations from Solvay & Cie's window. The second son of Charles Janssen, an influential lawyer and politician in Brussels, and of Berthe Poelaert, sister of the architect Joseph Poelaert, Emmanuel Janssen (1879-1955) was not predestined to become a businessman.[8] In 1906, he married Paule van Parijs, granddaughter of Ernest Solvay. The latter, a man of action without any formal university training, shared many traits with his grandson-in-law.[9] Emmanuel Janssen was recruited by Solvay & Cie in 1910 as assistant to the Executive Committee *(gérance)* ; three years later he became its Secretary General. Head of the Relief section of the National Commission for Relief and Food *(Comité National de Secours et d'Alimentation)* during the war, Janssen worked in close interaction with the Commission's indisputable leader, Emile Francqui. While expanding his personal network, Janssen was appointed at Solvay & Cie's *gérance* in 1916, not long after the death of his wife. An in-law in the Solvay family, Janssen was above all a newcomer in the family company's top executive committee. He was in charge of overseeing several promising ventures owned or controlled by Solvay & Cie. Fours à coke Semet-Solvay was one of them.[10]

Running a technology invented by the engineer Louis Semet – one of Ernest Solvay's brother-in-law – and improved by the Solvay brothers in the mid-1880s, Fours à coke Semet-Solvay operated as a specific section within Solvay & Cie. It was first designed to recover valuable materials formerly wasted in the coking process. But the huge expansion taken by the Semet-Solvay system, especially in Britain and the United States, led to the creation of a public company in 1912 with a capital firmly under the control of Solvay & Cie. With the exception of a couple of plants, the First World War forced the Belgian ovens to a standstill. In September 1920, it was decided to merge the firm with a French competitor ; the result was the Fours à coke Semet-Solvay & Piette. Emmanuel Janssen became its vice-president but the overall manager of the firm was the engineer Olivier Piette, who had designed an efficient alternative by-product recovery process bearing his name. Under their joint management, Fours à coke Semet-Solvay & Piette experienced a steep growth with the building, by 1928, of some 9,000 patented recovery coke ovens and the creation of plants and subsidiaries across Europe and well beyond (United States, Mexico, India, Australia, and Japan).[11]

The glass industry was another of Emmanuel Janssen's favorite playground. A flourishing sector of the Belgian industry, the glass industry underwent a major reorganization after the First World War with the breakthrough of a new American mechanization process. In just over a decade, the industry went from traditional craftsmanship to full mechanization.[12] This was disruptive technology at its peak. Named after its co-inventors, the Libbey-Owens sheet glass process and company started out in Toledo, Ohio in 1916. The management looked for a partner to develop and manufacture the process in Europe after the war, and a deal was concluded in November 1920 with a group of Belgian industrialists and financiers. Emmanuel Janssen was instrumental in the negotiations, bringing together Solvay & Cie (through its private investment bank), Société Générale de Belgique, Banque de Bruxelles and the electro-holding Sofina. In April 1921, they formed

8. Interview with Daniel Janssen (19 March 2018). Unless otherwise noted, all interviews were conducted and transposed by Martine Maelschalck.

9. Ginette Kurgan-van Hentenryk, « Mythe et réalité du self-made man au sein du patronat belge », *Bulletin de la Classe des lettres et des sciences morales et politiques,* t. 10, n° 1-6, 1999, 81-96.

10. This section draws largely on Kenneth Bertrams, Nicolas Coupain & Ernst Homburg, *Solvay : History of a Multinational Family Firm,* Cambridge-New York, 2013, Chapter 7 ; *passim.*

11. *La Belgique scientifique, industrielle et coloniale,* Special issue *Chimie & Industrie,* 1930, 31-32, 1195-1198.

12. Jean-Louis Delaet, « La mécanisation de la verrerie à vitres à Charleroi dans la première moitié du XX^{e} siècle », in Ginette Kurgan & Jean Stengers (eds.), *L'innovation technologique. Facteur de changement (XIX^{e} - XX^{e} siècle),* Bruxelles, 1986, 113-152 ; Jean-Louis Delaet, « Emile Fourcault », in Ginette Kurgan, Serge Jaumain & Valérie Montens (eds), *Dictionnaire des patrons en Belgique,* Bruxelles, 1996, 284-288.

the Compagnie Internationale pour la Fabrication Mécanique du Verre (nicknamed Mécaniver), which was granted the exclusive right to run and manufacture the Libbey-Owens sheet glass process in Europe.[13]

Last but not least, Emmanuel Janssen had a knack for financial engineering. Under his guidance, the discrete family bank of the Solvay's, the Mutuelle Mobilière et Immobilière, was transformed into an all-around investment bank, gradually reaching third position behind the Société Générale and the Banque de Bruxelles. With a controlling position in Semet-Solvay, huge stakes in firms interlocked with Solvay's international subsidiaries, and other personal initiatives (from Mécaniver to private banks and mining companies), the portfolio of the Mutuelle was rapidly expanding. Business was thriving, too. At a meeting of the gérance in August 1923, Emmanuel Janssen told his colleagues that the capital gain of the Mutuelle was of some 150% since the Armistice.[14] With the strategy in mind to use the Mutuelle as a multi-oriented investment vehicle (which including banks, railways, electricity, colonial enterprises, and other valuable assets), Janssen hoped to get the free reins to transform Solvay & Cie likewise. Underlying this strategy was the assumption, for the chemical industry at least, that diversification was the only viable answer to the waves of consolidation taking hold of the international chemical industry during the interwar.

Time and again, he tried to convince his colleagues in the *gérance* of the opportunity to set up an international chemical holding revolving around Solvay & Cie through the Mutuelle. Mergers and amalgamations occurred with Solvay & Cie's foreign subsidiaries but without the Belgian multinational company having a say in these global transformations. Hence, its foreign stake was diluted: after the absorption of its subsidiary in the United States, Solvay Process Company, Solvay & Cie now owned ca. 16% of Allied Chemical & Dye. Janssen sharpened his plan in November 1925 after a return trip from the United States: "We are surrounded by giants on the verge of fighting each other. Being their most significant shareholder, there is no doubt we will suffer the most. Therefore, we have to intervene instead of being drawn into the battle."[15] His determination was cut short by the remaining *gérants,* who feared that the international share-exchange scheme Janssen had in mind would divert the company from its historical mission and transform it into a kind of global financial holding. When the project finally petered out, the British fired back with the creation of ICI, a British-only solution. Solvay & Cie, which owned 18% of Brunner Mond, the major constituent of ICI, saw its stake diluted again. Emmanuel Janssen's position at Solvay & cie proved untenable He distanced himself from the group but made sure to launch his new entrepreneurial venture before officially resigning from the executive management of Solvay & Cie.[16]

Union Chimique Belge on track

Union Chimique Belge (U.C.B.), which was incorporated on 18 January 1928,[17] was thus the outcome of a frustrated businessman with a grand design, and certainly not the product of a thorough process of rationalization of the Belgian chemical industry. Concretely, the new company consisted in the merger of four distinct chemical companies, whose industrial perimeters were not overlapping, nor particularly complimentary: Fours à coke Semet-Solvay & Piette, Société Générale Belge des Produits Chimiques, Société des Produits Chimiques de Droogenbosch (later spelled

13. Jean-Pierre Daviet, *Un destin international. La Compagnie de Saint-Gobain, 1830-1939,* Paris, 1988, 427; Bertrams, Coupain & Homburg, *Solvay,* 216-219.
14. Archives of the Solvay Corporate Secretariat, Brussels (hereafter ACS), Réunion de gérance, August 7, 1923.
15. ACS, Note de la Gérance, Emmanuel Janssen, « Voyage aux États-Unis: octobre-novembre 1925 », November 1, 1925, 20.
16. W.J. Reader, *Imperial Chemical Industries : A History. The Forerunners : 1870-1926,* vol. 1, Oxford, 1975, 459-465; Bertrams, Coupain & Homburg, *Solvay,* 230-234.
17. *Annexe au Moniteur Belge,* 2 February 1928, Constituent n°1287, 1221-1228.

as « Drogenbos »), Produits chimiques et pharmaceutiques Meurice.

Not surprisingly, Semet-Solvay & Piette was the pivotal company of the merger, and it was the most capitalized too. A rough estimate of the respective financial weight of the four constituent companies is illustrative of the distribution of capital and power relations. Semet-Solvay & Piette accounted for 51.8 % of the shareholding; S.G.B. Produits Chimiques came second at a distance with 22.7 %; S.P.C. Droogenbosch was near the latter with 20.7 %; Meurice was the smallest player with the remaining 4.8 %. In other words, Solvay & Cie, which fully owned Semet-Solvay & Piette, was the reference shareholder of U.C.B.

Casting a glance at the firms, one could say with a dash of humor that diversity was the most significant commonality of the four constituent companies of U.C.B. In a first phase, however, the amalgamation was seen as a profitable move for each link in the chain. As noted by Jacques de Saint-Hubert, Secretary General of U.C.B. at its inception and the first house historian of the company, "…the merger has enabled the rationalization of the four companies involved, leading them to exchange their improvements, group their energy, unify their services and increase the global productivity."[18] But how could the whole become more than the sum of its parts?

In order to substitute structural unity for the diversity of components, the Executive Committee set up three distinct divisions, which were largely reminiscent of the constituent companies themselves: Division of Coke Ovens and Synthetic Ammonia; Division of Chemical Products; Division of Pharmaceuticals. By the end of the war, U.C.B. owned outright thirteen plants, originating from a dozen companies.[19] Until the 1940s, their integration into a single body and unit of command was carried out through a rather loose organizational scheme and a series of transversal units. One of the cross-divisional areas that could benefit most from the consolidation of industrial units was scientific research. The First World War had ushered in a new impetus for the interaction of science and industry, which had been prolonged in peace time by a far-reaching drive for basic and applied science that led most industrial countries to set up national institutions for the advancement of scientific research.[20] In Belgium, the decisive launch of this movement was the famous speech delivered by King Albert Ist at the Cockerill steelworks in Seraing on October 1, 1927 that paved the way for the creation of the National Fund for Scientific Research (F.N.R.S.-F.W.O.) the very next year. The creation of U.C.B. stemmed from this momentum for scientific research. Against this backdrop, it did not take long for the management to understand the potentialities of enhancing the circulation of knowledge and know-how within its group of plants. A cross-divisional Department for Research and Documentation was set up, which coordinated the newly established central research laboratory at the Droogenbosch plant with the laboratories operating on different sites, as well as with the series of study and information bureaus. Another original idea, which had aroused attention in the most innovative American enterprises of the time – General Electric, Eastman Kodak, and DuPont – but was almost unknown at the Belgian level, was the creation of a formal scientific committee made up of national and international academics with the objective of delivering some form of scientific and technical consultancy. Even in the case of the US pharmaceutical industry during the interwar period, the development of research infrastructures, as well as the hiring of trained technicians and specialists, remained confined to a handful of companies (Abbott Laboratory, Eli Lilly & Cy,

18. Jacques de Saint-Hubert, *Historique de l'Union Chimique Belge, 1928-1961,* s.d., 22-23.
19. Archives of UCB Corporate Secretariat, Brussels (hereafter AUCBS), box 14, Union Chimique Belge, registre PV du C.A., folder 1.
20. Sophie Onghena, "The Survival of 19th-Century Scientific Optimism: The Public Discourse on Science in Belgium in the Aftermath of the Great War (ca. 1919-1930)", *Centaurus,* 53 (4), 2011, 280–281; Kenneth Bertrams, *Universités et entreprises. Milieux académiques et industriels en Belgique (1880-1970),* Bruxelles, 2006, 125-132.

Merck & Cy, Parke Davis, Squibb Institute for Medical Research).[21]

Crossing the lines

In spite of these efforts, U.C.B. struggled during the Depression of the 1930s. The company announced three consecutive losses (1931-1933) and paid no dividends between 1931 and 1935.[22] In order to avoid bankruptcy, waves of layoffs took place early on, which resulted in the reduction by a third of the workforce between 1931 and 1932. Financially, the Board organized a capital increase in which Solvay & Cie took part through the Mutuelle Solvay. All these measures allowed U.C.B. to survive but left the company in a dire condition. The outbreak of the Second World War constituted even a bigger threat for its recovery. The internal integration process through the divisions system, which had started to pay off in terms of performance, was brutally interrupted. Worse, U.C.B.'s most dynamic production lines, which were particularly exposed to international exports, became vulnerable throughout the conflict. As a result, a great deal of the effort during the fifteen years that followed the war consisted of coping with the war's haunting presence.

Coming to terms with the charges of wartime industrial collaboration was unsurprisingly the most delicate challenge to tackle. The episode has been examined in-depth in various accounts.[23] U.C.B. was not directly concerned but it was affected indirectly through Fabrique de soie artificielle de Tubize, the main financial holding companies of the Janssen family. Among significant stakes in various textile companies, Tubize controlled Fabelta, which was itself the result of a movement of concentration of the industry of artificial silk. In partnership with the German firm Zellwolle und Kunstseide Ring (ZKR) and the French company Comptoir des Textiles Artificiels (CTA), Fabelta contributed to create the Société belge de Fibranne (Fibranne) on April 23, 1941 with the plan to erect a brand-new high-capacity plant in Zwijnaarde (Ghent). Fibranne would finally be absorbed by Fabelta, which also purchased the only independent acetate rayon plant in Tubize in 1942. As a result, Fabelta had become the one and only Belgian producer of artificial textile thread (acetate, rayon, and fibranne).[24] The Zwijnaarde plant was eventually on-stream in February 1943, two years after the initial agreement had been concluded.[25] Up to the Liberation, the factory delivered some 10,000 tons of fibranne to the Belgian textile industry. The Board justified these production activities to stimulate employment and avoid market disruption "just in time to prevent the complete interruption of the textile industry due to shortage of raw materials."[26] Some observers and criminal prosecutors saw things differently. Fabelta and its managers were severely sanctioned by postwar justice authorities, which considered that the company's wartime activity went beyond the threshold of the Galopin Doctrine.

Against this backdrop, U.C.B.'s founder Emmanuel Janssen inevitably passed the leadership to the next generation. His three sons, Charles-Emmanuel, Roger and André, were in their late thirties and had very different educational backgrounds and business experiences. Roger, trained as a civil engineer, had worked very closely with his father during the crisis and war years, becoming U.C.B.'s General Manager in 1940. Charles-Emmanuel, the eldest, had followed a political career as a Member of the Parliament from the Liberal Party

21. David Hounshell & John Kenly Smith, *Science and Corporate Strategy : Du Pont R&D, 1902-1980,* Cambridge, 1989, 223-248 ; John Parascandola, "Industrial Research Comes of Age : the American Pharmaceuticals Industry, 1920-1940", *Pharmacy in History,* 27, 1985, 12-21.
22. AUCBS, box 14, Union Chimique Belge, registre PV du C.A., folder 2.
23. Etienne Verhoeyen, *België bezet 1940-1944,* Brussel, 1993, 181-182 ; Dirk Luyten, *Burgers boven elke verdenking ?,* Brussel, 1996, 176-177 ; Patrick Nefors, *La collaboration industrielle en Belgique, 1940-1944,* Brussel, 2006, 273-276.
24. Jacques de Saint-Hubert, *Historique,* 239-245.
25. *Recueil Financier (RF),* 1943, t.1, 158, 160 ; *RF,* 1944-1945, t.1, 165.
26. AUCBS, box 14, U.C.B., *Annual report 1942-43,* General Assembly of November 4, 1943, 6.

from 1938 to 1946. André, the youngest, had joined the British Royal Navy at the beginning of the war. All three came back from the war equally eager to relaunch the company and their other Belgian activities. François Boudart, trustful lieutenant to Emmanuel Janssen, completed the team of executives and became Chairman of the Board in May 1948.

II. Longing for stability, betting on pharmaceuticals

On June 24, 1954 Roger Janssen invited Solvay & Cie's *gérance* to dinner at his estate of La Hulpe.[27] At the end of the "very pleasant evening," Ernest-John Solvay confirmed his company's intention to sell its stake in U.C.B. For both firms, the deal was hovering in the air but there seemed to be no haste in bringing it down to earth. Yet, this was an important sale : Solvay & Cie owned no less than 24.09 % of U.C.B. since the rescue operation of 1937. This was slightly more than the Janssen family as a whole. After several years of standstill, discussions between both families resumed. They were facilitated by a new generation taking over. At a partridge hunt in September 1958, Jacques Solvay closed the deal with Roger Janssen at the speed of a bullet. The Janssen brothers agreed to raise the option for the purchase of the full package of 144,552 shares owned by Solvay & Cie (108.4 million BEF ; ca. 15.62 million EUR). "A solution was found that puts an end to a sensitive situation by getting rid of a 'passive' shareholder."[28] The only talks supported by the evidence concerned the definition of a "frontier zone" between both companies' respective fields of action, especially in terms of research on chlorine-based products. After the 1959 deal, U.C.B. thus became a single-family business. Literally speaking, the Janssens were now fully in charge.[29]

Unsurprisingly, the overall ambition of the second generation was to stabilize the company after the stains of wartime industrial collaboration and the long period of economic turbulence that characterized the preceding era. The primary concern of the executive committee was to buttress U.C.B.'s financial strength, which had been the group's Achilles' heel since the impact of the Great Depression up to the mid-1930s. A capital increase took place in November 1948 – the fourth in 11 years –, which brought the capitalization to 600 million BEF (115,1 million EUR).

Several objectives were laid out that converged in strengthening the potentially contradictory imperatives of plants consolidation and products diversification. First, the management agreed to gradually shift the production lines towards added-value specialty chemicals derived from in-house research. At its creation in 1928, U.C.B.'s production capacity revolved around 33 chemicals pertaining to the field of processing products, the bulk of which needed further improvement before their commercialization. Twenty years later, the company's portfolio of chemicals had increased to an impressive number of 361, of which roughly 200 were laboratory-based pure chemical products.[30] In 1948, an experimental station laboratory was installed at the estate of Roncière in La Hulpe with the aim to encourage agriculture-based research, which could be of interest for U.C.B. The research station was open to the public throughout the 1950s. A second feature of this drive was the ambition to cover the whole spectrum of one particular field, e.g. chemicals for the textiles industry, automotive industry, construction, but also for plants (phytopharmaceuticals). The liaison with the commercial level was strengthened through the implementation in the late 1940s of a dense network of sales points. Even giant multinational concerns such as Solvay & Cie had to admit that U.C.B.'s joint technical

27. This section draws on ACS, 1323-40-5A.
28. ACS, 1323-40-5A, Ernest-John Solvay to Robert Hankar, 11 March 1959.
29. AUCBS, box 19, U.C.B., « Étapes principales de l'évolution du capital et de sa représentation (1928-1987) ».
30. Jacques de Saint-Hubert, *Historique*, 316.

Plants	Products	Main uses
Zandvoorde	Ammonia and by-products	Nitrogen fertilizers
	Nitric acid	Explosives and fertilizers
	Nitrogen fertilizer	
	Coke	Metallurgy, heating
	Ethylene oxide derivatives	Various industries, chemical specialties
	Phosphoric acid derivatives	Phosphates, manufacture of detergent powders
Wondelgem	Sulfuric acid and derivatives	Various industries
	Hydrochloric acid and derivatives	Textile bleaching
	Lithopone	Paints
	Hydrogen peroxide and derivatives	Gelatins, pickling
	Hydrofluoric acid and derivatives	
	Copper salt	
	Sodium sulfate	Glasswork, paper pulp
Ghent	Ossein, gelatins and derivatives	Glue and gelatins, food gelatins, photographic gel, industrial gelatins
Havré-Ville	Tar and light oil derivatives	Road, steelworks, wood impregnation, coal agglomerates, motor benzol, explosives, solvents, dyestuffs
Schoonaarde	Naphthalene and benzene derivatives	Insecticide, manufacture of phthalic anhydride, plastic, resins and glazes, plasticizers, ore flotation agents
Drogenbos	Chemicals specialties	
	Mixtures and packaging	
	Carbon disulphide	Artificial textiles, cellulosic films, synthetic organic products
	Tricresylphosphate	Gasoline additives
Forest-Brussels	Pharmaceuticals specialties	

U.C.B. plants, products and uses (1957-58), Source : ACS, 1323-40-5A, November 1956.

and commercial capacities were above theirs.[31] This dynamism prompted the first wave of Europeanization of the company with the opening of exclusive sales offices in Madrid (Union Comercial Belgo-Española) and in Milan (Unione Chimica Italo-Belga for pharmaceuticals, reinforced in 1954 with the Societa Italiana della Union Chimique Belge for chemicals). These European bridgeheads would pave the way for the international expansion of the Pharma sector fifteen years later.

Pharma at the forefront

Until the war, U.C.B.'s Pharma division, which was modest in scope, manufactured galenic and synthetic pharmaceutical products. Three laboratories existed in 1936 : a laboratory directed by chemists worked on new synthetic products ; a second lab conducted by physiologists verified products and made in vivo studies and a third lab, a bacteriological laboratory, studied and prepared drugs.

31. ACS, IDL, « Note sur l'Union Chimique », March 30, 1945.

A colonial department also existed to study colonial sickness and prepare medications. This was hardly a surprise since U.C.B.'s constituent company – Produits chimiques et pharmaceutiques Meurice – had already developed a profitable business in the Belgian Congo with the commercialization of Tryponarsyl for the treatment of the sleeping sickness.[32] By early 1949, it was decided to double the Pharmaceuticals Division's research and development (R&D) capacity in terms of highly skilled personnel but also in terms of infrastructure. Due to cramped conditions at the laboratories of the Berkendael Street in Brussels (Forest), some of the research staff was allocated new facilities at the Ghent plant (in anticipation of their full transfer to Drogenbos). At the same time, the central laboratory at the Drogenbos plant was extended with two adjacent wings focusing on physical chemistry and organic chemistry. The impulse for the R&D drive seemed to pay off, as the number of patents increased from 67 in 1956 to 116 the following year.[33] Last but not least, the activity of the semi-industrial experimental stations at Schoonaerde, Ghent, Zandvoorde, and Saint-Ghislain was now oriented in such a way that it supplied the necessary raw materials for the Pharmaceuticals Division.

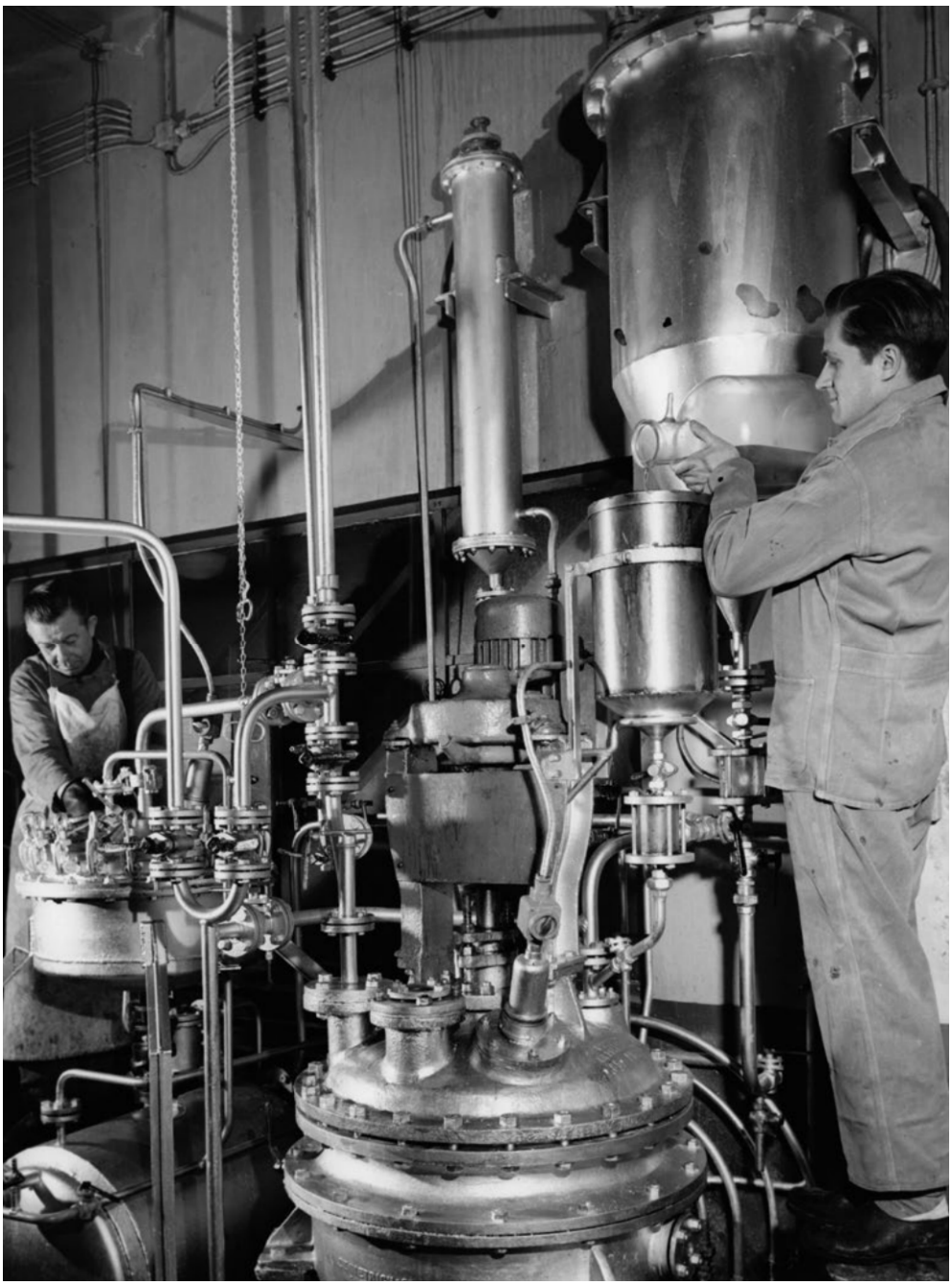
This was the case, for instance, with aniline, chlorobenzene, methyl chloride, and phenothiazine, all organic compounds, which fundamentally expanded U.C.B.'s learning base in pharmaceuticals (phenothiazine's derivative, chlorpromazine, was a well-known antipsychotic medication manufactured in the 1950s by Rhône-Poulenc under the trade name of Largactil in Europe and Thorazine in the United States).[34] Overall, the Pharmaceuticals Division pursued its action of supplying the Belgian Congo with quinine (cinchona) products based on its plantations of quinquina trees in the Kivu region. All relations with this highly profitable sector had been severed during the war. At the Liberation, the management was happy to discover that the industrial activity was in full swing. It prompted them to set up a full-fledged company devoted to the development of U.C.B.'s pharmaceutical activity in the Congo and neighboring countries. Africhimic, as it was called, was launched on June 1, 1949. With sales offices in Kinshasa (formerly Léopoldville) and Bukavu (Costermanville), Africhimic soon grew to become an essential supplier of raw materials as well as a strategic bridgehead for U.C.B.'s pharmaceuticals in Africa.

With annual sales growth around 15 %, half of which came from exports, the Pharmaceuticals Division was booming during the 1950s. Even in 1953, which marked a short but brutal downturn for the economy as a whole and coincided with a new body of legislations setting a maximum sales price for drugs, U.C.B. was able to withstand the recession thanks to its pharmaceuticals. Among the first drugs to set the stage of a successful commercialization, Balsoclase (pentoxyverine) was a non-codeinic antitussive medicine, often cited by British and American observers as one of the most powerful in its category. But the first advance came in 1953 when Postafene was introduced, an efficient antihistaminic drug based on meclizine which came directly from U.C.B.'s in-house R&D facilities. The setback of this discovery was that the company had no significant commercial capabilities that could launch this drug in extra-European markets. As a result, a deal was reached with the young and promising American drugs company Pfizer (then Chas, Pfizer & Co.), which was granted the manufacturing and sales license for the drug in the United States, Canada, Latin America, and Asia under the brand name Bonamine. The pill was advertised as "one of the most effective drugs ever used", especially for motion sickness and the "morning spin".

32. Myriam Mertens, *Chemical Compounds in the Congo. Pharmaceuticals and the 'Crossed-History' of Public Health in Belgian Africa (1905-1939),* unpublished PhD, Ghent University, 2014, 142-159 ; Myriam Mertens & Guillaume Lachenal, 'The history of "Belgian" tropical medicine from a cross-border perspective', *Belgian Journal of Philology and History,* 90 (4), 2012, 1249-1271.

33. Jacques de Saint-Hubert, *Historique,* 332.

34. See Judith P. Swazey, *Chlorpromazine in Psychiatry. A Study of Therapeutic Innovation,* Cambridge, MIT Press, 1974.



Technicians busy at the distillation of Postafene antihistamines products at the Berkendael laboratory. (ca. 1958)
Courtesy of UCB Company Archives.

The success of Postafene was only a start for the real breakthrough came the very next year (1954) with the introduction of Atarax, a drug for the relief of anxiety and tension. Based on hydroxyzine, which also belonged to the first generation of antihistamines, Atarax was prescribed as a tranquilizer and sedative in addition to its use for the treatment of allergic conditions. The Swiss company Ciba was the first to use the word "Tranquilizer" to promote a hypertension drug. As U.C.B.'s annual report described it, Atarax provided "the patient with emotional stability, in ataraxia, which enables the subject to tolerate the most varied affective shocks without excessive reactions."[35]

Although Smith Kline was gaining pace in the up-and-coming market of tranquilizers (and eventually became the American licensee of Rhône-Poulenc's Thorazine), Pfizer was once again chosen by U.C.B. for the granting of the license. Atarax' tremendous success was crucial for both Pfizer and U.C.B., as it clearly set the Belgian company on the map of international drugs producers. By 1960, U.C.B. was happy to inform shareholders that the tranquilizer had performed beyond expectations, boosting the Pharmaceuticals Division and contributing to the increase of the company's overall revenues. To the management, this success did not come from nowhere. Nor was it an unexpected outcome of blue-sky science. Atarax was the product of the visible hand of an in-house R&D strategy initiated in the late 1940s. It was but one of the numerous therapeutic chemical specialties produced in U.C.B. labs since the R&D drive. U.C.B was on its way to becoming a company in which R&D and experimental research would assume a central role. In developing pharma as a core activity, U.C.B stimulated ongoing and continuous research in order to develop new drugs and products. François Boudart, head of U.C.B's Board, wrote in 1957 that "the development of new substances is the key function of the pharmaceutical industries."[36] Such development first required basic research in the laboratory to see whether the molecules could be brought together as imagined in the bright minds of the many company chemists. After that, a long clinical study and test-phase of the product would follow, which could take another one to four years. Beside time, space was also a concern. Given the high investment costs of new drugs development, the Belgian market for pharmaceutical products was clearly too small. New medicines were tested by 200 doctors across the globe, in a wide array of potential markets ranging from Canada, Czechoslovakia, and Sweden to South Africa. But these small-scale incremental measures could hardly sustain the international development of the Pharma division on a long-term basis. Solving these constraints required to adopting a strategy that ran counter the more down-to-earth production practice of standardized chemical substances, which characterized the other departments of the company.

Then, on November 27, 1961, U.C.B. joined forces with three other companies : the Société Industrielle de la Cellulose Sidac (Sidac), the Union des Fabricants Belges de Textiles Artificiels (Fabelta), and the Compagnie Continentale du Pégamoïd. The merger elicited the creation of a new legal entity called Union Chimique – Chemische Bedrijven (UCB).[37] The amalgamation was the reaction of the trading boost triggered by the European Economic Community, while its precise timing corresponded to a tax break incentive proposed by the Belgian government as evidenced by the mechanisms of the operation (an official takeover of U.C.B. by Sidac). The new name – which ingeniously preserved the UCB acronym in the professional and public eye – showed the extension of the company's geographical scope as it no longer referred to Belgium. The move can be interpreted in diverse ways. On the one hand, it was a purely

35. AUCBS, box 14, U.C.B., *Annual report* General Assembly Meeting of November 4, 1955, 16. On the global market of tranquilizers in the mid-1950s, see Gerald Posner, *Pharma : Greed, Lies, and the Poisoning of America*, New York, 2020, 139-157 ; Andrea Tone, *The Age of Anxiety : A History of America's Turbulent Affair with Tranquilizers*, New York, 2020.
36. François Boudart, *Enkele beschouwingen over de pharmaceutische nijverheid.* Brussel : U.C.B, 1957.
37. AUCBS, box 8, Fusion UCB/Fabelta/Sidac (1962), folder 12.

financial operation. Fabelta and Sidac had already strong ties with (the former) U.C.B. through cross-capital ownership : stakes were held through the Gillet family holding Comptoir des Textiles Artificiels and two financial holdings controlled by the Janssen family – Fabrique de soie artificielle de Tubize the Fabrique de soie artificielle d'Obourg. According to estimates, the Gillet group' stake in UCB was of 7.8 % (which reached 15 % with the contribution of their long-time partners, the Carnots and Bernheims).[38] In terms of ownership, therefore, the new amalgamation strengthened the position of the Lyons-based Gillet family.[39] On the other hand, the merger increased the tendency toward products diversification, which in turn reinforced the image of UCB as a hybrid company. This was a much-debated issue within the Board. Some members saw the merger as a welcome way to mitigate the risks of cyclical crises taking place in some of the divisions. Others, on the contrary, considered this an ill-advised operation likely to waste energy and resources. Outside events would ultimately cut the discussion short. A context of social turmoil in the early 1960s led the management to accelerate a large program of divestment. UCB first sold Pégamoïd in 1966 ; then, three years later, it swapped Fabelta with the Cellophane branch of AKU (Algemene Kunstzijde Unie, part of the Akzo group shortly thereafter).[40] UCB got out of synthetic fibers just before the terrible collapse of the European textile industry in the 1970s (Akzo would ultimately close down Fabelta plants under harsh circumstances throughout that decade).[41] The series of divestment, as well as the profits made by the new Cellophane unit, provided UCB with sufficient cash-flow to cover investment expenses aimed at reinforcing the three other Sectors, and the Pharma Division in particular.

Nootropil and the European impetus for trade in pharmaceuticals

In spite of two successful drug discoveries in the 1950s – Postafene (1953) and Atarax (1954) – there was growing concern at UCB about the sheer market size of its pharmaceutical activity. In 1961, German experts discovered that the popular drug Softenon (based on thalidomide) had devastating side-effects. It prompted many countries to sharpen the test procedures and regulations for drugs. The Food and Drug Administration (FDA) played a leading role in this movement, followed by most European countries.[42] From the perspective of pharmaceutical companies, the complexities of these national regulations procedures considerably hampered their commercial expansion and required huge investments. But it also affected their R&D systems. At UCB, one such measure was the establishment of a brand-new laboratory in Braine-l'Alleud, in the southern suburb of Brussels, which was completed at the start of the 1970s.

It was soon followed by the setting-up, from the late 1960s onward, of a European network of foreign subsidiaries in the Pharma Sector. These investments by acquisitions led to a dramatic increase of UCB's commercial pharmaceutical presence on the European continent. The purchase of a series of small and medium lab companies brought the commercial and manufacturing power of UCB to another level. After the Belgian Bios-Coutelier and the French Ucepha, UCB acquired successively the Laboratoires Fraysse & Cie based in Nanterre, France (1970), Laboratori Biochimico-Farmaceutici Smit (1970) in Torino, Italy, and Laboratorios Pevya (1973) based in Molins de Rey, close to Barcelona, Spain.[43] The goal of the Europeanization drive was to level up the in-house R&D effort.

38. Hervé Joly, *Les Gillet de Lyon. Fortunes d'une grande dynastie industrielle (1838-2015),* Genève, 2015, 182 ; « L'affaire Fabelta », *Courrier hebdomadaire du CRISP,* vol. 722-723, no. 16-17, 1976, 7-8.
39. Pierre Cayez, *Rhône-Poulenc, 1895-1975,* Paris, 1988, 222.
40. Elie Brisaer, *Petit historique de Fabelta-Tubize,* November 1981, 8 (retrieved from http://www.museedelaporte.be/patrimoine/?p=3622). I express my gratitude to Michèle de Cannart for providing me with this crisp testimony.
41. « L'affaire Fabelta », passim.
42. Milton Silverman & Philip R. *Lee, Pills, Profits, and Politics,* Berkeley, 1974, 94-98.
43. AUCBS, box 19, U.C.B., *Annual report,* 1974, 42-46.

Aside from bringing their own range of drugs, this cluster of foreign lab companies helped to support the launching and commercialization of a new successful drug "made in Braine-l'Alleud" – Nootropil. Conceived as a cerebral function regulator designed especially for the elderly, Nootropil, based on the piracetam molecule, was marketed in Belgium and France in September 1972, and in the rest of Europe and the world in the following months (in Brazil, its success was "beyond expectations" and Soviet Russia represented a "privileged export outlet" for the medication). Unfortunately, the drug was never registered in the United States because it did not obtain the formal approval from the FDA, which would have brought Nootropil even higher levels of sales.

While the main impetus for the research drive came from the Braine laboratory, UCB mobilized its network of foreign labs to profile the drug according to national specifications and legislations. In this regard, Nootropil was first and foremost an "intellectual booster" at UCB itself. Even the architecture of the first building at the Braine complex seemed to mimic the molecular shape of the piracetam. The flagship molecule of the company's home-grown research program throughout the 1970s, Nootropil accounted for 20% of the Pharma Sector's revenues (from 1974 onwards). But it also took up the bulk of the Sector's team, time and budget. As a result, the management implemented measures to ensure that the "research effort could not be impeded by an excessive polarization on Nootropil's development."[44] Since 1965, a fraction of UCB's research seed-capital was also sown in the nascent field of biotechnology. The research made there mostly concerned peptide-based pharmaceuticals with a wide array of applications in biomedicine and bioengineering. After a modest start, a Bioproducts Peptide Department was created within the Pharma Sector in 1976, which became a full-fledged subsidiary in 1981. Overall, the planning and production of drugs absorbed half of the company's R&D budget.

III. Twilight of the hybrid company

The administrative and financial strains put on the drugs companies at the turn of the 1970s gave way to a sharp increase of R&D, testing, and regulations costs. Longer development times, in return, had two main consequences. First, whenever it was willing to launch a new product, a pharma company had to do so in as many different markets as possible, so as to reduce the economies of scale. Second, this required a company to reach a certain critical mass to bear the ever-greater R&D expenses necessary to cover the whole chain of production, from the lab to the patient. UCB was able to follow these transformations, but to a certain extent only. The strategy underlying the commercial development of Nootropil was to build up a network of European subsidiaries in order to have access to national markets (and regulations) and gain commercial independence. This strategy paid off very well despite the FDA's persistent refusal to endorse the drug.[45] But for the sake of the durability of its Pharma Division, the company needed to score a worldwide achievement, i.e. including the United States. The European strategy which had made the success of Nootropil, in other words, had to be scaled up.[46]

The Zyrtec Odyssey

A key decision in this respect was taken in the early 1980s. Though capital-intensive, the Board agreed to pursue research on previous lines of knowledge, more specifically on the hydroxyzine molecule – successfully marketed as the drug Atarax in 1954. Without knowing it, this decision paved the way to effective stabilization of second-generation antihistamines, and the making of UCB's first successful

44. AUCBS, box 19, U.C.B., *Annual report,* 1974, 24.
45. Interview with Michèle de Cannart (17 July 2018).
46. An attempt to concentrate the pharmaceutical activities of Solvay & Cie (held in their German-based subsidiary Kali-Chemie) and UCB failed in 1974. See Bertrams, Coupain & Homburg, *Solvay,* 438.

home-grown drug at the global scale. It should be remembered, however, that the commercial success of Postafene (based on meclizine) and Atarax (hydroxyzine) in North America was linked to the license agreement that had been negotiated with Pfizer. Hence, the overall profitability of UCB in the huge American market corresponded to the royalties that were paid under the terms of the contract (roughly 4 % of the American sales in the case of Atarax). Nootropil, which came out of the Braine laboratory in 1972 – shortly before the Atarax license expired in the United States – was never granted approval by the FDA.

This was the situation of the Pharma Sector in 1982 when Georges Jacobs became its General Manager.[47] As he was reviewing the composition of the pharmaceuticals portfolio with the head of the R&D division, Ernst Wülfert, Jacobs was struck by the description of a molecule related to the Atarax – the cetirizine – whose technical specificities were unclear, let alone its therapeutic properties. The next step saw Georges Jacobs forwarding the 15-page cetirizine report drafted by Ernst Wülfert to Robert Feeney, head of the license programs at Pfizer, and therefore a long-time acquaintance of UCB's Pharma Sector. Bob Feeney's reply was rather straightforward: "Georges, this is gold. When can I come with my team?"[48] Molecularly speaking, cetirizine seemed in a fast-track position to become the worthy successor to hydroxyzine.

However, Jacobs immediately told his contact at Pfizer that he did not intend to sign a licensing agreement "as usual". As former head of UCB's Finance Department and now in the Pharma Sector, he was well aware of the previous commercial and financial shortcomings of Atarax in the North American market. In the meantime, Pfizer had become a leading pharmaceutical group. Prone to redefine UCB's strategy for the international commercialization of in-house drugs, Georges Jacobs set three conditions for the pursuit of further negotiations with Pfizer: the guarantee of a 12 % royalty, a free access to Pfizer's application file to the FDA, and the rights for co-marketing for the North American market. Combining royalty fees and co-marketing rights was hard to swallow for the New York City-based drugs group. Co-marketing, which had been tested earlier by UCB with the German firm Cassella AG, meant a dual effort to promote the product to the medical profession with a division of profits based on both firms' respective performance. According to Georges Jacobs, Pfizer's CEO, Jerry Laubach, observed with a grin to his teammate Bob Feeney: "It's high time you retire as this is the worse contract I've ever signed for Pfizer."[49]

Under the scientific guidance of Christine De Vos of the Pharma Sector, the cetirizine molecule came to fruition and soon found a life outside the lab under the brand name Zyrtec. As well as the agreement with Pfizer for North America, a deal was reached with Allen & Hanbury, Ltd., a subsidiary of Glaxo Pharmaceuticals, for the British market. The pre-launching of the drug in Belgium took place in October 1987.[50]

In anticipation of the FDA's approval for Zyrtec's introduction in the North American market, UCB continued its program of building up a pan-European web of pharma subsidiaries. After all, Nootropil remained the Pharma Sector's milking cow. This involved the successive acquisition of Laboratoires Roger in Spain in 1988, Limay Laboratoires in France in 1991 (previously owned by SmithKline

47. Georges Jacobs first arrived at UCB in September 1969 in the Financial Department, then went to the Pharma Sector as finance manager for a couple of years, after which he came back to the Finance Department to head the accounting department. In 1974, he became temporary plant manager of UCB Pevya, Barcelona. After his return from Spain, he was affiliated with the General Secretary for a special auditing job, which led him to take charge of the Chemicals Sector. On June 1, 1978, he was appointed Chief Financial Officer and it was during his tenure that that the current reference shareholder was structured and stabilized. In 1982, he became General Manager of the Pharma Sector, which brought him to the Executive Committee the very next year.
48. Interview with George Jacobs (23 May 2018).
49. Interview with George Jacobs (23 May 2018).
50. Interview with Paul-Etienne Maes (31 May 2018).

Beecham), but also and most importantly Rodleben Pharma in 1992, a subsidiary that would concentrate substantial investments. Located in Rosslau, in the former German Democratic Republic (GDR), Rodleben was part of a larger wave of acquisitions in which UCB took part in central Eastern Europe after the collapse of communism. After buying Rodleben Pharma, the company acquired Nova-Pack in Hungary (Films & Packaging Sector) and Leuna Werke's facilities for methylamine and derivatives (Chemicals Sector's Organic Division).[51] Following this thread of expansion, , the UCB Group established several subsidiaries in Asia such as in Korea and in Thailand in 1994. That same year, UCB Japan established a factory in Japan, which would acquire the pharmaceutical division of Fujirebio in 2000.[52]

News eventually broke out in December 1995 that Zyrtec had successfully passed the last round of FDA's validation process granting authorization for three different pathologies – almost an unprecedented feat. The drug was commercialized in the United States and Canada in February 1996, two years after a new US subsidiary – UCB Pharma – was set up with the successive acquisitions of two drugs companies: Whitby Pharmaceuticals and Northampton Medical Incorporation, both based in Atlanta, Georgia. Sales of Zyrtec in North America undertaken jointly by UCB Pharma and Pfizer would skyrocket rapidly, reaching in less than two years 19% of market shares in the antihistamine drug sector.[53] UCB finally: it had its own blockbuster (the official figure of $1 billion in sales was eventually reached in 1999). Thanks to the co-marketing clause, Zyrtec had literally become a goldmine.

Toward the "great cleansing"

In spite of this achievement, or more precisely because of it, the post-Zyrtec era haunted the Pharma team. The patent of UCB's antihistamine star would no longer be protected after 2007. Promising preliminary results came from enhancing the research and the know-how from the piracetam molecule, which had been used for Nootropil. Ernst Wülfert and Jean Gobert, who were in charge of the Braine research team, had noticed the potential effects of a "-cetam" derivative to counter seizures. These investigations were the outcome of pure blue-sky research, later complemented by clinical tests. A new laboratory was installed in Bulle, Switzerland in 1996 and Braine-l'Alleud UCB-Bio-Products was extended the same year. The application for the new antiepileptic drug – branded under the name Keppra – was submitted to the FDA in January 1999. The agreement came the very next year, a stunningly fast result. More importantly, UCB had done it alone. This was the first-ever introduction of a 100% UCB-marketed drug on the American market. Interestingly, when Keppra was launched in 2000, UCB Pharma also saw a revival of Nootropil in Japan where Zyrtec was breaking all records. Galvanized by its performance, UCB acquired the pharma division of Fujirebio (Tokyo); this included the Saitama plant and a new drug in the company's portfolio – Stogar (lafutidine molecule) – which cured gastric ulcers. With the intention of encouraging basic research, UCB acquired the Boston-based research laboratory Cytomed, a new-generation technological platform. It became a research hub for respiratory diseases, while the research center for neurology was in Braine.

However, researchers looked grim behind the scenes. The pipeline was dry as the Pharma team seemed to falter on finding a worthy successor to Zyrtec and Keppra, whence patent was about to expire in 2007 and 2008, respectively. A promising lead resulted in a new antihistamine molecule – Xyzal (levocetirizine), which was granted a patent for several European countries only. Further, research was attempted to find a joint cure for allergies and asthma but the toxicologi-

51. AUCBS, box 129, Due Diligence Process Schwarz Pharmaceuticals. Appendix 2: Information pursuant to section 2(2) of the WpÜG Offer Regulation, 2004, 125-129.
52. AUCBS, box 121, Summary of the formation of the UCB international group, undated, 38.
53. AUCBS, box 42, Minutes of the Board of Directors, 20 October 1994.

cal tests proved inconclusive. What was the next step? Securing a partnership in the rising biotech sector? Or pursuing in-house R&D? Considering the time-span between the discovery in the lab and the marketing of the new drug – almost fifteen years, pressure was increasing on the Pharma Sector. And concerns were uttered, inside and outside UCB's premises, on the effectiveness of the company's strategy into the new millennium.[54]

At the turn of the century, UCB gave the image of a thriving company, which coincided with the opening of its headquarters in Anderlecht, a stone's throw from ULB' Erasmus medical campus. But beneath the surface, some observers questioned "hybridity", its unclear strategy, and its uncertain profitability after Zyrtec. This culminated in early 2003 when UCB acquired Solutia Resins, Monsanto's former chemicals division, for 510 million US$.[55] The purchase was widely commented on in the specialist press, but also within the company's walls. Why would UCB buy a company whose price was equivalent to its whole Chemicals Sector? Unsurprisingly, the Board's discussions echoed the concerns raised in the media. UCB was at a crossroads in terms of strategy but also in terms of managerial capabilities.

Some managers and family shareholders were not naturally inclined to focus exclusively on pharmaceuticals. The field was profitable but risky, research-intensive, and unpredictable. Specialty chemicals on the other hand, could benefit from UCB's uncontested expertise and global leadership. Moreover, some of the long-lasting Board members had not forgotten that products diversification had made UCB.[56] Not so long ago, chemicals or even Cellophane were providing the company the much-needed funds to invest in new drugs. Several options were explored. There were talks at the highest level of a possible deal with Solvay at a moment when the latter was thinking of divesting its pharmaceutical activities and concentrating on specialty chemicals (which it finally did in September 2009).[57]

Finally, the big shift took place in 2004 with the consecutive divestment of activities in the Films and Chemicals Sectors, followed by the divestiture of the Surface Specialties a year later. These sales, emphatically called the "great cleansing" within the group, represented a watershed in the 76-year history of UCB. While some observers called it the company's "great cleansing", it was above all the expression of a new and full commitment towards the pharma industry.[58] Taking the company's size and scientific heritage into account, UCB's ambition was to become a specialty biopharma company focused on severe diseases in its expertise therapeutic areas, namely neurology and immunology.

IV. Epilogue : the end of products diversification

Almost overnight, UCB was transformed into a full-fledge biopharma company through two large-scale successive acquisitions. First, the British biotech Celltech was acquired in 2004 through a friendly takeover bid (2.4 billion EUR). Four years later, UCB put its finance at high risk with the purchase of the German family business Schwarz Pharma (4.4 billion EUR). While Celltech, had an interesting early stage pipeline with several molecules of great potentialities, Schwarz Pharma had a high-potential antiepileptic molecule (Vimpat) and an innovative Parkinson's disease patch treatment (Neupro) in the last phase of clinical trials.[59]

54. Interview with Alain Douxchamps (26 June 2018).
55. AUCBS, box 19, UCB, *Annual report,* 2004 ; interview with Ben Van Assche (20 April 2018) and Karel Boone (22 June 2018).
56. Interview with Daniel Janssen (31 May 2018) ; interview with Frans Lemaire (26 April 2018).
57. Interview with George Jacobs (23 May 2018).
58. Interview with Didier Malherbe (31 May 2018).
59. AUCBS, box 129, Due Diligence Process Schwarz Pharmaceuticals. Appendix 2 : Information pursuant to section 2(2) of the WpÜG Offer Regulation, 2004, 125-129.

To some extent, one could say that UCB had become less and less a hybrid company, until it ceased completely to be such a company. The strategy of gradual divestments in areas that were no longer identified as being part of the company's core business was as much a matter of survival as a matter of opportunity. For reasons pertaining to the ongoing consolidation of the global chemical and pharmaceutical industry, many small and medium-sized businesses in which the founder's family still held substantial portions of capital were doomed to be absorbed into larger conglomerates. UCB had already warded off previous waves of mergers and acquisitions. But the Board deemed it necessary to keep predators at bay by focusing on a handful of promising product lines, pharmaceuticals being one of them. Even if it meant breaking away from parts of the company's past to ensure its endurance.[60]

With the benefit of hindsight, UCB has undoubtedly gained its foothold in the biopharmaceutical industry by building early on a network of commercial subsidiaries in the pharma sector, first at the European level and then more globally, which were able to reduce its commercial dependence on bigger players such as Pfizer. The learning base it has acquired in international trade had also an indirect positive outcome as it contributed to strengthen its R&D activities, stabilize its in-house pipe-line, and build up its value chain. In this regard, the company's geographic diversification proved more performing than the products diversification which characterized UCB's first 76 years of history. However, this statement should immediately be qualified inasmuch as the company has always relied on the internal balance of its departments to finance its "greediest" production lines. The Pharma Division benefited from this internal distribution, as it absorbed a significant portion of the company's overall R&D budgets. Today, UCB must not forget that its research capabilities owe a great deal to the profits made by the 'old' coke oven by-product gas recovery activities until the early 1960s, as well as to the Cellophane films and packaging until the early 1990s. The knowledge-based economy stands on the shoulders of the material culture of the first industrial revolution.

Kenneth Bertrams is professor at the Université libre de Bruxelles (ULB) where he teaches global economic history and the social history of science and technology. He is the holder of the Kurgan-van Hentenryk Chair in Business History, the first academic chair dedicated to business history in Belgium. In this field, he has published a history of the Solvay Company (1863-2013) with Nicolas Coupain and Ernst Homburg (Cambridge UP, 2013). With Julien del Marmol, Sander Geerts, and Eline Poelmans, he has published the first archive-based history of the multinational brewer AB-InBev (Oxford UP, 2020). His other research interests include cultural and scientific diplomacy and the international circulation of philanthropy. kenneth.bertrams@ulb.be

60. Paloma Fernández Pérez & Andrea Colli, "The emergence of family business studies : a historical approach to pioneering centers, scholars, and ideas", in Paloma Fernández Pérez & Andrea Colli (eds.), *The Endurance of Family Businesses : A Global Overview,* Cambridge, 2014, 18-22.