

# Siegfried

A Holistic Understanding of Healing and Prevention

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Well Positioned in a Dynamic Growth Market

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Efficiency: the Key to Success

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## Globally Positioned Focused Profitable



Page 2 – 3, Progress Report:

“The fact that the Siegfried Group is showing robust and rapid growth based on several acquisitions is due, to a large degree, to the enthusiasm and loyalty shown by our workforce.”

— Dr. Andreas Casutt Chairman of the Board of Directors

Page 13, Interview “Evolve” Strategy:

“Siegfried will remain attractive for our shareholders because we are creating value with sound results and do not shy away from making big acquisitions as they come up.” — Dr. Rudolf Hanko Chief Executive Officer



Net Sales

750.5

million Swiss francs  
The change compared to 2016 was +4.6%.

EBITDA

114.0

million Swiss francs  
The change compared to 2016 was +17.8%.

Net Profit

39.7

million Swiss francs  
The change compared to 2016 was +42.4%.

“We will do everything in our power to ensure that the company remains on its successful course.”



Dr. Andreas Casutt  
Chairman of the Board of Directors



Dr. Rudolf Hanko  
Chief Executive Officer

## Dear Shareholders

For the 2017 financial year, the Siegfried Group again reported a very sound result. Sales amounted to 750.5 million Swiss francs, corresponding to a growth of 4.6%. Following years of significant acquisitions, Siegfried achieved robust organic growth. Earnings before interest, taxes and amortization (EBITDA) grew significantly by 17.8% to 114.0 million francs, corresponding to an EBITDA margin of 15.2%. The margin is within the targeted range of 15–20%. Siegfried achieved net profit of 39.7 million francs, which is clearly above that reported the previous year (27.9 million francs), representing a growth of 42.4%.

Based on the gratifying annual result, the Board of Directors will recommend to the Annual General Meeting a higher distribution to shareholders of 2.40 francs per share from the capital contribution reserves (previous year: 2 francs).

Siegfried reports operating cash flow for 2017 after change in net current assets of CHF 84.4 million (2016: CHF 57.1 million). This corresponds to a significant increase of 47.8%. Investments in tangible and intangible fixed assets were lower than for the previous year and amounted to CHF 52.8 million (2016: CHF 68.4 million). Following heavy investments in previous years, investment activity in 2017 has returned to normal.

In the past three years, with three acquisitions, the Siegfried Group achieved the critical size required in the pharmaceutical supplier industry. At the same time, the company completed its entrance into sterile filling and significantly increased the competitiveness of its production network thanks to the new production plant in Nantong (China). Siegfried's production network today comprises nine sites, of which six are active in the area of drug substance and three in drug product. By means of the “Evolve” strategy, the Siegfried

Group is sharpening its strategic orientation and giving it a concrete form in order to launch the next chapter in the company's development.

Given the ongoing consolidation in the CDMO market, the supplier market to the worldwide pharmaceutical industry, critical size will remain a major topic. Consequently, in addition to continuous organic growth, Siegfried is actively evaluating potential acquisitions to meet the demands of customers. Such acquisitions may concern the production of either drug substances or drug products. However, Siegfried in particular aims to further strengthen its business with drug products, especially in the field of complex solid dosage forms. Our goal is to be able to offer our customers both compe-

“Given the ongoing consolidation in the CDMO market, the supplier market to the worldwide pharmaceutical industry, critical size will remain a major topic.”

tencies – chemical and pharmaceutical – from a single source. In addition, the “Evolve” strategy strengthens the continued technological expansion of the nine sites worldwide. A significant milestone has been achieved in the year under review by means of developing and expanding capabilities in sterile filling of biologically produced drug substances and the corresponding investments in Irvine and Hameln. The close cooperation with Symphogen, a Danish biotechnology company, represents an initial success in this market segment.

Siegfried predominantly produces and sells active pharmaceutical ingredients (APIs) and the correspond-

ing intermediates in the area of drug substances. A quarter of sales is achieved with demanding finished products (drug products). In the year under review, both areas contributed equally toward growth.

Sales in the field of exclusive synthesis were reported slightly above the previous year's level. The close cooperation between customer and outsourcing partner, essential in this business, was further intensified. Correspondingly, today Siegfried is involved directly in the development of numerous new customer projects. Among others, this includes a significant supplier contract spread across several years with the US pharmaceutical company Keryx.

In 2017, our business with portfolio products, which are delivered to various customers, performed well. Sales of drug substances used in addiction treatment, especially, have shown vigorous growth.

In the year under review, the business with finished products – which at Siegfried includes sterile filling, tablets and capsules – continued to grow. Capacity growth serving to fill biologically produced active pharmaceutical ingredients (APIs) has been vigorous. Today, this capacity is available at two sites, in Irvine and Hameln. Siegfried will in the coming years significantly strengthen its capacity to produce solid dosage forms, especially in the US market, where the company's presence today is low.

Siegfried's production network comprising nine sites on three continents represents the basis for continued organic growth. Siegfried therefore again made targeted investments in existing and new facilities. In the past two financial years, we gave priority to working intensively on streamlining our internal coordination. Our aim is to make available to our customers the technological and regulatory strengths of our individual sites connected with the highest possible level of flexibility. In this regard, close attention was paid to our site in Nantong (China), which is gaining importance in the market owing to its cost-effective structures. The site has been completely approved by the Chinese authorities and has started production. Siegfried anticipates that Nantong will be audited by

the US-American regulatory authorities in the course of the current year.

In Hameln, Siegfried invested, and continues to do so, in equipment serving the biological filling of APIs which, as mentioned above, is attracting wide customer interest. Furthermore, we significantly improved the infrastructure for employees. In Zofingen, additional facilities were released in the new production building. Moreover, we installed additional peripheral equipment, which improve the performance parameters of the new building. The new logistics building is scheduled for completion in the 3<sup>rd</sup> quarter of 2018. The sec-

ond stage of the new administration building was ready for occupation at the beginning of December 2017. As a result, office space can now be let to third party tenants – mainly companies represented in Pharmapark Siegfried. At the St. Vulbas site, which is located close to Lyon in France, additional investment tranches were authorized in the second half in view of a large customer contract.

Given the vigorous growth of the Siegfried Group in the past three years, management paid particular attention to implementing a coherent corporate culture comprising all sites. In this connection, a state-of-the-art Intranet was developed and introduced to meet today's requirements. In fall 2017, the Executive Committee called together some 60 senior managers from all sites for a further Leadership Convention. Strengths and weaknesses were identified in working groups and measures defined that are now being implemented step by step. It is not only a matter of dealing with weaknesses, but also of maintaining and emphasizing the strengths represented by Siegfried's management on the basis of nearly 150 years of corporate history.

As a partner of the worldwide pharmaceutical industry, Siegfried places high priority on sustainability in all areas. Consequently, sustainability represents one of the company's central corporate values. For the first time in its reporting, the Siegfried Group entirely meets the standards of the Global Reporting Initiative (GRI). This does not only enhance the company's reputation, but also draws together the manifold measures and makes them available internally and externally. A materiality analysis was implemented in a working group, which defined the nine most important issues including product safety, environmental protection, fair working conditions including health and occupational safety, legal conformity, political representation of interests and the local population at the various sites. Both the Executive Committee (ExeCom) and the Board of Directors regularly deal with issues concerning sustainability, especially the considerate handling of natural resources and corporate social responsibility. The sustainability report, which is also available online, shows a high level of awareness for such interrelationships and an advanced range of instruments.

With regard to human resources, the Siegfried Group in the year under review strengthened operating

**“At constant exchange rates, sales are expected to grow at a mid-single-digit percentage rate in the current financial year. The operating margin (EBITDA) is also expected to continue to improve significantly.”**

management at various levels, both at the sites and at corporate headquarters, especially in the areas of IT, development and finance. In May 2017 our new Chief Financial Officer, Dr. Reto Suter, assumed his current position.

As a service provider we have to address new challenges in a highly competitive market every day. The fact that the Siegfried Group is showing robust and rapid growth based on several acquisitions is due, to a large degree, to the enthusiasm and loyalty shown by our workforce. We would like to take this opportunity to thank our Executive Committee and all employees for the exceptional efforts made at all sites.

The Siegfried Group's shareholder base remains very stable (please also refer to the Corporate Governance Report). As reported in the media, important investors have joined Siegfried and significantly increased their shareholding. RAG-Stiftung Beteiligungsgesellschaft mbH, based in Essen (Germany), in October

## Key Figures 2017

	2017	2016	Change CHF (LC)
<b>Net sales</b> (million CHF)	<b>750.5</b>	717.7	+4.6% (+3.8%)
<b>Gross profit</b> (million CHF)	<b>138.8</b>	109.2	27.1%
Gross profit margin (%)	18.5%	15.2%	
<b>EBITDA</b> (million CHF)	<b>114.0</b>	96.7	17.8%
EBITDA margin (%)	15.2%	13.5%	
<b>EBIT (operating result)</b> (million CHF)	<b>64.6</b>	46.7	38.2%
EBIT margin (%)	8.6%	6.5%	
<b>Net profit</b> (million CHF)	<b>39.7</b>	27.9	42.4%
Net profit-margin (%)	5.3%	3.9%	
Non-diluted earnings per share (CHF)	10.01	7.18	39.4%
Diluted earnings per share (CHF)	9.71	7.04	37.9%
<b>Cash flow from operating activities</b> (million CHF)	<b>84.4</b>	57.1	47.8%
<b>Free cash flow</b> (million CHF)	<b>32.1</b>	-11.1	390.0%
Investment in property, plant and equipment and intangible assets (million CHF)	52.8	68.4	-22.8%
	<b>December 31, 2017</b>	December 31, 2016	Change
<b>Equity</b> (million CHF)	<b>673.4</b>	660.7	1.9%
<b>Total assets</b> (million CHF)	<b>1 068.6</b>	1 021.4	4.6%
Equity ratio	63.0%	64.7%	
Employees (number of FTEs)	2 260	2 315	-2.4%

The complete financial report can be found starting from p.53  
or can be downloaded at [report.siegfried.ch](http://report.siegfried.ch)

2017 exercised its conversion right to a privately issued Siegfried Holding AG convertible bond amounting to CHF 60 million required to partly finance the acquisition of significant segments of BASF's pharmaceutical supply business in 2015. Consequently, RAG-Stiftung now holds more than 5% of Siegfried Holding AG's

It was during this phase that Siegfried's stock was listed on the Swiss Stock Exchange. Siegfried's in-house pharmaceutical research was abandoned in the 1980s. The company was subsequently positioned as a supplier to the worldwide pharmaceutical industry, an area in which Siegfried has remained active until today. Without a doubt, Bernard A. Siegfried was a major leader in the long history of the company, and his impressive lifetime achievement will not be forgotten.

Siegfried anticipates sales to continue growing. At constant exchange rates, sales are expected to grow at a mid-single-digit percentage rate in the current financial year. The operating margin (EBITDA) is also expected to continue to improve significantly. The company confirms its expectations: sales of CHF 900 million and EBITDA margin of about 20% in the medium term. We aim to further increase the dividend payout.

In closing, we would like to express our gratefulness to you, dear shareholders, for your support and your loyalty to Siegfried. We will do everything in our power to ensure that the company remains on its successful course.



Dr. Andreas Casutt  
Chairman of the  
Board of Directors



Dr. Rudolf Hanco  
Chief Executive Officer

## Facts &amp; Figures 2017

Net sales

# 750.5 mio.

Net sales in 2017 reached 750.5 million Swiss francs.

Change in sales compared to the previous year

# Sales grew by 4.6%.

EBITDA

# EBITDA amounts to 114 million Swiss francs.

Change in EBITDA compared to the previous year

# 17.8%

The change compared to the previous year was +17.8%.

EBIT

# 64.6 mio.

The operating result (EBIT) amounts to 64.6 million Swiss francs.

Change in EBIT compared to the previous year

# EBIT grew by 38.2%.

Net profit

# Net profit amounts to 39.7 million Swiss francs.

Change in net profit compared to the previous year

# 42.4%

The change compared to the previous year was +42.4%.

Locations

- 1 Zofingen
- 2 Pennsville
- 3 Hal Far
- 4 Irvine
- 5 Nantong
- 6 Hameln
- 7 Minden
- 8 Evionnaz
- 9 St. Vulbas

# 2331

Employees at 9 sites in 6 countries around the world.



## Consolidated Balance Sheet

In 1000 CHF (as of December 31)	Notes*	2017	2016
<b>Assets</b>			
<b>Non-current assets</b>			
Property, plant and equipment	2	500 209	488 234
Intangible assets	3	9 425	9 048
Investments in associated companies and joint ventures	4	475	473
Financial and other non-current assets	5	3 513	3 524
Employer contribution reserves	17	9 222	9 151
Deferred tax assets	6	32 246	42 803
<b>Total non-current assets</b>		<b>555 090</b>	<b>553 233</b>
<b>Current assets</b>			
Inventories	7	248 294	243 669
Trade receivables	8	189 160	155 771
Other current assets		35 403	29 029
Accrued income and prepaid expenses		6 034	7 115
Current income taxes		192	433
Derivative financial instruments	9	296	471
Cash and cash equivalents		34 137	31 636
<b>Total current assets</b>		<b>513 516</b>	<b>468 124</b>
<b>Total assets</b>		<b>1 068 606</b>	<b>1 021 357</b>
<b>Liabilities and equity</b>			
<b>Equity</b>			
Share capital		8 422	8 333
Treasury shares		-21 601	-51 787
Capital reserves		74 193	75 699
Hybrid capital		255 985	315 985
Retained earnings		356 385	312 506
<b>Total equity</b>		<b>673 384</b>	<b>660 736</b>
<b>Non-current liabilities</b>			
Non-current financial liabilities	12	100 000	91 107
Non-current provisions	13	16 951	25 105
Deferred tax liabilities	6	6 948	4 638
Other non-current liabilities	14	1 392	1 869
Non-current pension liabilities	17	122 201	114 268
<b>Total non-current liabilities</b>		<b>247 492</b>	<b>236 987</b>
<b>Current liabilities</b>			
Trade payables		71 316	55 336
Other current liabilities	16	19 221	18 017
Accrued expenses and deferred income	15	44 874	37 638
Derivative financial instruments	9	97	385
Current pension liabilities	17	406	136
Current provisions	13	6 917	9 669
Current income tax liabilities		4 899	2 453
<b>Total current liabilities</b>		<b>147 730</b>	<b>123 634</b>
<b>Total liabilities</b>		<b>395 222</b>	<b>360 621</b>
<b>Total liabilities and equity</b>		<b>1 068 606</b>	<b>1 021 357</b>

\* The Notes on pages 56–63 are an integral part of the Group Financial Statements.

## Consolidated Income Statement

In 1000 CHF (for the years ended December 31)	Notes*	2017	2016
Net sales	26	750 468	717 729
Cost of goods sold		-611 658	-608 509
<b>Gross profit</b>		<b>138 810</b>	<b>109 220</b>
Marketing and sales costs		-16 228	-16 028
Research and development costs		-25 631	-21 193
Administration and general overhead costs		-38 631	-31 488
Other operating income	19	6 264	6 239
Income of associated companies		-8	-36
<b>Operating result</b>		<b>64 576</b>	<b>46 714</b>
Financial income	20	35	25
Financial expenses	20	-8 208	-12 593
Exchange rate differences	20	-96	587
<b>Profit before income taxes</b>		<b>56 307</b>	<b>34 733</b>
Income taxes	6	-16 575	-6 827
<b>Net profit</b>		<b>39 732</b>	<b>27 906</b>
Non-diluted earnings per share (CHF)	21	10.01	7.18
Diluted earnings per share (CHF)	21	9.71	7.04

\* The Notes on pages 56–63 are an integral part of the Group Financial Statements.

## Growth and Widening of Margins



Dr. Reto Suter  
Chief Financial Officer

In the financial year 2017, Siegfried increased revenue to CHF 750.5 million (prior year CHF 717.7 million, +4.6%). The EBITDA (CHF 114.0 million), the EBIT (CHF 64.6 million) and the net profit (CHF 39.7 million) were also significantly higher than in the prior year. This sustained growth is reflected in a margin expansion at all levels: the EBITDA margin was 15.2% (prior year: 13.5%). The EBIT margin (8.6%, prior year 6.5%) and the net profit margin (5.3%, prior year 3.9%) have also improved.

### Strong disproportionate growth in EBITDA

The gross profit rose by 27.1% to CHF 138.8 million. The gross profit margin increased by 3.3% to 18.5%. EBITDA of CHF 114.0 million resulted after deduction of marketing and distribution costs, research and development costs, administration costs and general expenses, representing a clearly disproportionate increase of 17.8%. In this regard it has to be acknowledged that previously certain central costs were entered as manufacturing costs, while this year they were recognized as administration costs.

### Lower finance expenses, income taxes marked by external effects

The financial result of CHF -8.3 million turns out better than in the prior year (CHF -12.0 million). This is a consequence of lower financing costs of CHF 8.2 million (prior year CHF 12.6 million). Income tax is significantly marked by external effects, above all a major tax rate reduction in the USA, which on the other hand has a negative impact on results. Despite this non-recurring tax effect, the net profit is higher at CHF 39.7 million, an increase of 42.4% compared with the prior year. The undiluted earnings per share (EPS) amount to CHF 10.01, the diluted earnings per share to CHF 9.71 (prior year EPS CHF 7.18, diluted EPS CHF 7.04).

### Significant increase in the operating cash flow and the free cash flow

In 2017, Siegfried generated an operating cash flow after changes in net working capital of CHF 84.4 million (prior year CHF 57.1 million). This represents a major increase of 47.8%. At the end of the year, Siegfried had more than CHF 34.1 million in cash and cash equivalents. The loans outstanding amounted to gross CHF 100.0 million. The net debt at the end of 2017 was CHF 65.9 million. At the end of the year the ratio of net debt to the EBITDA was 0.6, the equity ratio was 63.0%. Siegfried therefore has available the necessary debt capacity to finance further growth measures.

For the complete financial commentary 2017, please refer to page 53

# The Year 2017 in Review

## Siegfried is one of the top companies in the global CDMO market.

Share price CHF

230  
220  
220  
215  
210  
205  
200  
195  
190  
185  
180  
175  
170  
165  
160  
155  
150

### 717.7 CHF million

#### Announcing 2016 financial results

Sales jump: the Siegfried Group reported record-breaking sales of 717.7 million Swiss francs, or +49.3%.

Jan – March



#### Strategic cooperation with Symphogen

In May, Siegfried and the Danish biotechnology company Symphogen, a leader in cancer therapy, signed a strategic partnership concerning aseptic filling of biologics.



#### Go-live global Intranet

End June 2017, Siegfried launched its new global Intranet as an important instrument serving internal networking and group-wide communication. It is considered a significant element of communication supporting Siegfried's new corporate culture.



#### Changes in the Executive Committee

Dr. Reto Suter was appointed Chief Financial Officer of the Siegfried Group with effect from 1 May 2017. Likewise with effect from May 1, 2017, the Board of Directors has entrusted Dr. Wolfgang Wienand with the management of the Siegfried Group's global research and development activities.



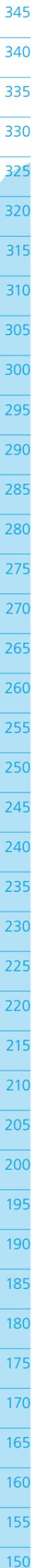
#### 60 Years Evionnaz

On 10 June 2017, the Evionnaz site celebrated its 60<sup>th</sup> anniversary.

April – June

# 750.5 CHF million

Share price CHF  
350



**Net sales,**  
as of 31 December 2017

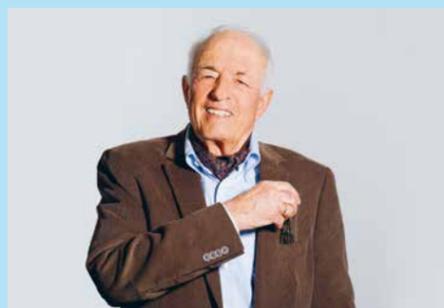
**RAG-Stiftung converts bond**

RAG-Stiftung of Germany converted its Siegfried Holding AG hybrid convertible bond issued in 2015 to the amount of 60 million francs and now holds a 9.8% equity share in the company.



**Keryx Biopharma**

End of December 2017, Siegfried signed a significant supplier agreement of several years with the US pharmaceutical company Keryx.



**Bernard A. Siegfried**

Siegfried's long-standing executive head, who was appointed Siegfried Holding AG's honorary Chairman in 2003, passed away on 27 October 2017 at the age of 83 years following a long and serious illness.

# 349.1 CHF million

**Half-year results**

Siegfried with higher earnings and increased margin: at stable sales, earnings before interest, taxes, depreciation and amortization (EBITDA) grew by 20.9% to 52.9 million francs.



**10 Years Malta**

At the end of December 2017, Siegfried's Malta site celebrated its 10<sup>th</sup> anniversary.

July – Sept

Oct – Dec

# First-class in Quality, Efficiency and Flexibility

In the production of active pharmaceutical ingredients (APIs), intermediates and finished dosage forms, Siegfried counts on a global network of nine sites in six countries on three continents.

Please find detailed contact information for all sites on page 73.

## 1 Zofingen

Parent company: Our Swiss site in Zofingen is Siegfried's hub. The brand-new production building was designed in accordance with the state-of-the-art vertical-flow principle and supplies our global customers with proverbial Swiss quality. Siegfried is a well-respected employer in Zofingen, trains apprentices in various areas, cooperates with several universities and advanced technical colleges and, therefore, carries responsibility for future generations.



1873



543



○△□⊗

## 2 Pennsville

Specialist for spray drying: The site is located in the US state of New Jersey and produces mainly active pharmaceutical ingredients for the US market, such as controlled substances meeting particular requirements set out by the regulatory authorities. Thanks to its spray drying capacity, Pennsville also supplies our customers worldwide. Siegfried's PSD4 pharmaceutical spray dryer is one of the largest in the world and operates in accordance with cGMP regulations.



2005



159



○△⊗

## 3 Hal Far

Center for solid dosage forms: Hal Far in Malta is our site for the production of solid dosage forms, such as tablets and capsules for the global market. The site includes a separate production area for highly effective substances. The offer ranges from bulk product to blistered and packaged finished dosage forms.



2007



128



□

## 4 Irvine

Aseptic filling and packaging specialist: In Irvine, California, near Los Angeles, we fill and pack drug substances (small and large molecules) in syringes, vials and glass cartridges and dripper bottles (with cap closures and tips). From this site we serve not only American but also international customers and support customers at the early stages of clinical development.



2012



112



☆

## 5 Nantong

Our foothold in Asia: Erected in 2013 and put into operation in 2016, the site is our cGMP production site in China supplying all western countries as well as China. The offer comprises research & development, pilot plant, clinical tests and commercial production of active pharmaceutical ingredients. Nantong's cost-effective production environment improves our competitiveness in the global market.



2013



204



○△

## 6 Hameln

Driver of future technologies: Our plant in Hameln specializes in sterile filling of vials, ampoules and pre-filled syringes. Moreover, Hameln's business activity now includes aseptic filling of biologics. The Hameln site corresponds to an investment in an attractive market with potential for growth. Technology transfers represent a part of the offer. Furthermore, Hameln provides contract development for finished dosage forms and regulatory services for injectable and topical applications.



2014



441



☆

## 7 Minden

Partner for high throughputs: In Minden, Siegfried commands a high know-how in the production of various active pharmaceutical ingredients. World-scale and modern multi-purpose plants for high throughputs allow for flexible production structures. Minden specializes in controlled substances and is active in exclusive synthesis. All processes comply with cGMP guidelines.



2015



336



○△⊗

## 8 Evionnaz

Intermediates and active pharmaceutical ingredients: The site in Evionnaz (Switzerland) is our production site for chemical development and production offering our customers intermediates and active pharmaceutical ingredients from only a few grams to several tons. Evionnaz is active mainly in exclusive synthesis of patent-protected active pharmaceutical ingredients and intermediates.



2015



298



○△

## 9 St. Vulbas

State-of-the-art plant for active pharmaceutical ingredients: The Siegfried site located in St. Vulbas in France produces a wide range of cryogenic and phosgenic reactions and produces various active pharmaceutical ingredients in a modern production facility. The site cooperates closely with the plant in Evionnaz.



2015



110



○△

Caption



Employees



With Siegfried since



Competencies

○ Active pharmaceutical ingredients (APIs)

△ Intermediates

⊗ Controlled substances

□ Oral dosage forms

☆ Sterile filling

# A Holistic Understanding of Healing and Prevention

Siegfried, a worldwide leading CDMO, produces active pharmaceutical ingredients (APIs), intermediates and finished products from a single source. Our core competence is process development and the integration of complementary chemical and pharmaceutical capabilities in a single business model.

As a globally active manufacturer of high-quality APIs and finished dosage forms, we contribute toward a better life for people. Siegfried has delivered quality products for almost 150 years. Thanks to our unique competence as a fully integrated supplier, many years of process and compliance know-how, and our presence in Europe, Asia and North America, we offer our customers the highest level of quality, efficiency and flexibility.

## Active pharmaceutical ingredients (APIs): the key to healing

It is essential that an active pharmaceutical ingredient is transported to exactly the right location in the body. In its treatment, the medication must influence the point of application in such a way that the symptoms recede or can be relieved. Siegfried's chemical expertise consists of process development and production of such APIs and/or their intermediates. Our global production network in this segment comprises sites in North America, Europe and Asia. Our customers therefore benefit from measurable synergies and flexible solutions oriented toward their concrete needs.

## Medication delivers the API to the body

A medication in a certain dosage serves to heal, alleviate or prevent an illness. Since time immemorial, certain plants, extracts of plants and substances of animal origin have served as medications, which today have been superseded mainly by synthetic compounds and biologics. Siegfried offers a wide range of services in the development and production of complex oral and sterile finished dosage forms. For Siegfried, the segment of sterile and aseptic filling, including that of biologically produced substances is especially attractive. Siegfried produces finished dosage forms for its worldwide customers in Europe and North America.

## What is a CDMO?

A CDMO (Contract Development and Manufacturing Organization) is a company that offers both process development (contract development) and manufacturing services. Comprehensive services range from early-stage Research & Development services such as synthesis, scale-up, formulation development, stability studies and method development all the way through to manufacturing services, ranging from preclinical R&D material for clinical trial purposes and commercial production (Phases I–IV).



## Products

## APIs and Intermediates

**Active pharmaceutical ingredients (APIs)** are used in the production of a medication. APIs are the key ingredient of an end product that is ready for administration with a direct effect concerning treatment.

**Intermediates** are created in the course of a multi-stage chemical reaction. They are not final products but the result of the previous step and the initial product for the following reaction step.

Thanks to investments in capacity and modern technologies, our worldwide network for the production of APIs has grown strongly in the past years and has become clearly more efficient.

Sites: Zofingen, Pennsville, Nantong, Minden, Evionnaz, St. Vulbas

## Controlled Substances

**Controlled substances** are chemicals, whose production, ownership and use are strictly regulated by international conventions and national legislation. The aim is to make allowance for scientific or medical applications while at the same time to prevent misuse and illegal trade.

Our portfolio offer essentially consists of opiate derivatives used in strong pain killers, mainly for cancer therapy, and APIs, such as methadone and nicotine, used in addiction therapy. Siegfried is global market leader in these two product categories.

The Pennsville plant specializes in the production of controlled substances, and it has been issued not only a license for production but, in addition, a rare license permitting importation of the necessary initial materials into the United States. The plant produces about 50% of the controlled substances sold by the Siegfried Group. The other half of the products in this business segment is produced in Zofingen and, since 2016, in Minden. Owing to the integration of the site, Siegfried expanded its already strong market position in this field and is a global leader in products such as pseudoephedrine and ephedrine.

Sites: Zofingen, Pennsville, Minden

# Drug Substances Drug Products

## Products

## Solid Oral Dosage Forms

In galenics – the science of the preparation of medicinal products – active pharmaceutical ingredients (APIs) are applied in a suitable dosage and delivered precisely to where they are required in the body. The API is mixed with certain auxiliary materials and then processed to a liquid, solid or semisolid dosage form. In the field of **solid oral dosage forms**, tablets and capsules prevail.

Siegfried offers a specific range of pharmaceutical development and production of solid dosage forms for the global market. Siegfried's plant in Hal Far (Malta) produces capsules and tablets. The offer ranges from cGMP-compliant scaling-up and pro-

duction of clinical trial material to mass production and packaging of finished products.

The Zofingen plant operates a modern facility for the development of highly effective finished dosage forms – a market that has grown strongly for a number of years. This allows us to develop both corresponding APIs and finished dosage forms under the same roof. These medications increase not only efficiency but also reduce undesired side effects for patients.

Sites: Zofingen, Hal Far

## Liquid Dosage Forms

**Sterile and aseptic filling** are the main activities of Siegfried in the area of liquid dosage forms. They are among the most demanding processes in galenic production and impose high demands on rooms, air quality, staff, raw materials and surfaces.

Siegfried operates state-of-the-art production facilities in Hameln (Germany) and Irvine (USA), where Siegfried has the capacity to satisfy customer demand for injectables.

Our sites in Hameln and Irvine focus on ampoules, vials and recently also on prefilled syringes. Irvine additionally specializes in the production of sophisticated pharmaceutical products such as ophthalmics and devices for the

controlled release of active pharmaceutical ingredients. The plant in Irvine also produces emulsions, ointments and gels. Siegfried constantly expands the technological base of this high-tech site by installing additional production facilities.

In the field of sterile filling, the Hameln facility offers a wide range of additional services along the pharmaceutical value chain: from product development to laboratory services; from preclinical and clinical studies to a comprehensive approval service including monitoring of existing approvals; and the supply of APIs as well as final products and their release.

Sites: Irvine, Hameln

## Services

## Exclusive Synthesis (Single Client)

Siegfried features expertise in the manufacturing of custom active pharmaceutical ingredients (API) and intermediates. Our services in the field of exclusive synthesis comprise:

- **Process and chemical development:** We develop genuinely scalable, cost-effective and robust pharmaceutical manufacturing processes, appropriate to our customers' products' market needs.
- **Analytical development:** For effective and robust processes Siegfried applies requisite analytical parameters and controls.
- **Pilot manufacturing and scale up:** Siegfried's core strength is taking a chemical process from development and scaling it up into a cost-effective and robust manufacturing process.
- **Commercial manufacturing:** We provide reliable and consistent commercial supply combined with good quality product and performance. We do this by providing our customer's versatile cGMP manufacturing capability and robust manufacturing processes suitable for specific market needs.

## Portfolio Offering (Multi Client)

We offer a wide portfolio of APIs and Controlled Substances focusing on anesthetics, pain/addiction treatment applications, central nervous and respiratory diseases as well as caffeine for human health and nutrition. The offer essentially consists of opiate derivatives used in strong pain killers, mainly for cancer therapy, and APIs, such as methadone and nicotine, used in addiction therapy. Siegfried is

global market leader in these two product categories. Our leading expertise in the supply of controlled substances and our outstanding quality and regulatory track record make Siegfried the ideal partner for active pharmaceutical ingredient needs.

## Sites

Zofingen  
Pennsville  
Nantong  
Minden  
Evionnaz  
St. Vulbas



## Services

## Contract Development and Manufacturing

Siegfried features broad base knowledge and experience for complex oral and sterile dosage forms for customer specific development, production and packaging. Our services comprise:

- **Pharmaceutical development:** We offer our customers a broad range of pharmaceutical development services, be it in the area of complex oral dosage forms or of standard and complex injectable and ophthalmic formulations.
- **Analytical development:** Our specialists from the drug product analytical development team work closely with their pharmaceutical development counterparts to ensure our customer's product is fully supported at every phase in the development process.
- **Scale up and clinical trial material production:** Siegfried's core expertise lies in scaling up a formulation in development into a cost-effective and robust manufacturing process as well as in supporting the customer's clinical trial material needs.
- **Process and analytical transfer:** From an early development phase, Siegfried plans and designs processes that ensure a successful scale up and transfer to commercial production. Siegfried supports complete process transfer of a product, either to Siegfried's Malta site or to the client's own location.
- **Commercial manufacturing and packaging:** Both our Malta and Zofingen plants have a multitude of state-of-the-art technologies and equipment at their disposal to manufacture various complex solid oral dosage forms. At its sites in Hameln and Irvine, Siegfried offers specialized contract aseptic manufacturing for both the pharmaceutical and biotechnology industries, thereby supporting the entire value chain for aseptic services from simple to complex formulation.

## Licensing

For our customers wishing to expand their product pipeline, we have selected oral solid and sterile products commercially available. Also, Siegfried assembles complete registration dossiers and offers a Common Technical Document (CTD) for all products.

## Sites

Zofingen  
Hal Far  
Irvine  
Hameln



# "2018 is going to be a year of growth for us."

Dr. Rudolf Hako  
Chief Executive Officer

Siegfried share price development  
31 December 2012 – 31 December 2017



Share Price 2012

114.3  
CHF

Siegfried share  
as of 31 December 2012

Share Price 2017

324.0  
CHF

Siegfried share  
as of 31 December 2017

Increase

183.5  
%

Change  
Period 2012–2017