

Bioveta News

Newsletter of the Bioveta Joint-Stock Company, Special Edition for the 100th Anniversary 2018

100 years

for a healthier world



1918

2018

Introduction to the company Bioveta, a. s.

A world-wide modern pharmaceutical company producing pharmaceuticals for veterinary and human use

Headquarters: Komenského 212/12
683 23 Ivanovice na Hané
Czech Republic

Capital: solely from the Czech Republic

Product portfolio: more than 200 products in 15 product categories

Number of export markets: 100 countries across five continents

Total sales in 2017: more than CZK 1.5 billion

Number of employees: 684

Organisational structure: Section of Production, Development, and Innovation of Veterinary Preparations
Section of Technological and Technical Support
Section of Registration
Section of Quality Assurance and Quality Control
Section of Financial Management
Section of Marketing and Sales
Section of Purchasing of Raw Materials and Materials

Company-owned foreign branches: Poland
Romania
Russia
Slovakia
Ukraine



Foreword

Dear readers of the Bioveta News, together with you, we at Bioveta are commemorating 100 years of the company's existence. It is as old as our republic. This is not a coincidence, as the newly founded independent Czechoslovak Republic needed an institute for the identification of animal diseases because the country's relationships with its neighbours were not so friendly and it could not rely on their help.

With the magazine that you have in front of you, we bring you a very brief look back at the history of the company from the year 1918 until today. We commemorate the first half of Bioveta's existence only on the basis of historical legacies, as the second one is already on the basis of memories of contemporary witnesses.

Hundreds of people, and five generations, joined their fate with Bioveta. Some worked here for a short period of time, while others for 40 years – there are even those who dedicated their entire lives to conducting research as part of Bioveta. Thank you to everyone, even those whom I could not personally meet.

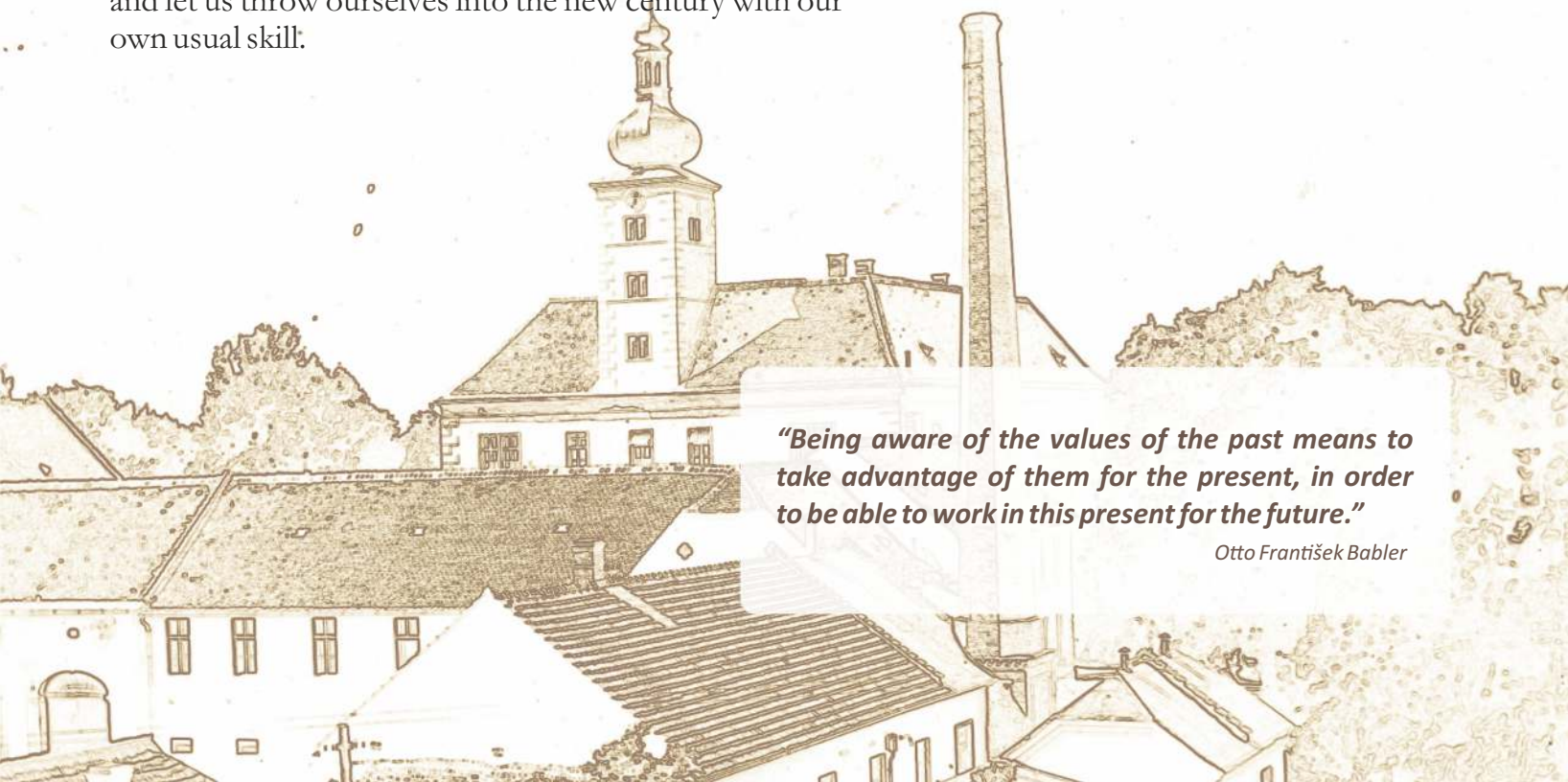
Today, Bioveta is, already at first glance, a modern company with state-of-the-art technologies, but the most essential part is you, its employees, and you, its customers.

100 years is a respectable milestone, so let us commemorate the history on which we started to build a new, competitive company open to the global market, and let us throw ourselves into the new century with our own usual skill.



Libor Bittner

Chairman of the Board,
Managing Director of the company Bioveta, a. s.



"Being aware of the values of the past means to take advantage of them for the present, in order to be able to work in this present for the future."

Otto František Babler



BIRTH

Date of birth: 23. 11. 1918

Location: Prague, Czechoslovak Republic

Mother: Longing for the country's own diagnostics of diseases and veterinary preparations

Father: Fear of dependency on the surrounding countries

After the end of World War I, there were large movements of people and animals from post-war territories into the newly established states of the former Austro-Hungarian Empire. Horses and livestock were redistributed among the army and a larger part was discharged into agriculture. This led to the uncontrolled spread of contagious diseases both in humans and animals. Before World War I, there was no institute for the identification of animal diseases nor an institute for vaccine production in our territory. Vaccines were purchased either from Mödling in Austria or from Budapest in Hungary. Imported vaccines were expensive, and their inspection was costly and very difficult to implement in the post-coup period. The newly established Czechoslovak state, in order to protect its population and the national economy from spreading infections, had to become independent from the reliance on supplies of foreign vaccines, and so a provisional State Institute for the Recognition of Animal Diseases and Production of Vaccines was established on 23 November 1918 by Order of the Ministry of Agriculture no. 39. Its provisional measure consisted of the fact that the Institute itself consisted of two territorially remote parts: a diagnostic part in the Royal Vineyards hospital (Královské Vinohrady) in Prague and a part for the production of vaccines in Hranice in Moravia.

In July 1920, both parts were temporarily moved together into the III. pavilion of the former Cadet School in Hradčany and joined into the Diagnostic and Serotherapeutic Veterinary State Institute. The location of the Institute in the centre of Prague was unsuitable given its existing extent and planned development of the Institute. The Ministry of Public Works, entrusted with the location of state offices, recommended moving the Institute to Ivanovice na Hané. This location in the middle of the state seems to be strategic given the nation-wide jurisdiction of the Institute and given the vicinity to the University of Veterinary and Pharmaceutical Sciences Brno, the establishment of which has already been decided. The Institute was definitively relocated to Ivanovice na Hané on 15 April 1922 without any interruption to its activities.

Řídiřelství panství v Ivanovicích na Hané.

Číslo telefonu 5 přes Vyškov.

Šekové konto číslo 96.592.

V Ivanovicích n. H. dne 18. dubna 1922

V květnu 1919 převzal československý stát panství Ivanovice, na základě mírové smlouvy do svého vlastnictví. Správou panství pověřen byl ministr zemědělství státní lesní správce La islav Kostelník. V roce 1922 byli na velkostatku Ivanovice

zaměstnání následující personál:

Frant. Říčník, zemědělský zahradník.	Frant. Trněný lesní hajný
Frant. Novák hajný lesní správy.	Rud. Vonka lesní hajný
Frant. Pluháček lesní hajný.	Karel vybíral kočí
Hynek Eubeník, kočí	Jos. Krobotová, klíčnice.

V roce 1921 přemístěn byl státní diagnostický ústav z Prahy na panství Ivanovice, kterému byl přikázán komplex zemědělských budov. V téže roce započato s adaptačními pracemi při kterých byla též věž zemědělská, znovu zřízena.

A historical document found in the tower of the Ivanovický Chateau during its reconstruction in 1995. The document describes how the Diagnostic and Serotherapeutic Veterinary State Institute began its relocation from Prague to Ivanovice na Hané in 1921.





FIRST

Gatehouse in 1920

The **FIRST** Czechoslovak Republic is a period in which the Czechoslovak state was formed in 1918, led by the first President T. G. Masaryk, and at the same time, Bioveta is also founded in this year under the then name of the State Institute for the Recognition of Animal Diseases and the Production of Vaccines in Prague.

The **FIRST** task of the then-Institute was managing catastrophic disease conditions in the territory of Czechoslovakia after the end of World War I.

The **FIRST** Managing Director was František Pfaff, DVM (1918–1921), who has great merit in the founding and initial building of Bioveta.

The **FIRST** employees of Bioveta reached a total number of 78 persons: 8 qualified agents, 1 veterinary officer, a military expert from the MND (Ministry of National Defence), 2 office clerks, 2 machinists, 10 laboratory assistants, 1 stableman, 1 farmer, 3 assistant office forces, and 50 persons on a daily salary.

The **FIRST** success of this period was allowing the breeding of domestic animals even in previously contaminated areas of Czechoslovakia. For example, glanders, anthrax, gangrene, rabies, erysiploid, and swine fever were among the subdued animal infections. Thanks to the early control of animal diseases and accurate bacteriological diagnoses, a large number of farm animals were saved, which had a significant share of the total national economy.

Bioveta sustained its **FIRST** great loss in 1924, when Josef Pulkrábek, DVM, died from a laboratory glanders infection; he was the co-founder and Assistant Director of the Institute, a veterinary inspector, and last but not least, an excellent researcher. On 3 May 1925, a plaque with his portrait was ceremonially revealed in a laboratory of the Institute.



František Pfaff, DVM,
first Managing Director 1918–1921



A laboratory from the period of the Institute's constitution



Pavilion for working with the swine fever virus in 1936. One of the most modern objects in Europe at its time.





Wartime years, not only under the weather



*After an attack by a Panzerfaust, Ivanovice na Hané in 1945, on the left
After the bombing of Ivanovice na Hané, on the right*

The Nazi occupation of Czech lands significantly influenced the development of agriculture. A large part of livestock production located in the area of the Sudetenland became part of the Reich. The Protectorate was left with a larger part of quality arable land and an orientation towards plant production. The 'Battle for Grain' became the daily theme of occupation propaganda in the Protectorate of Bohemia and Moravia.

Additionally, there was a 50% decline in livestock production and a 35% decline in livestock status during the war. This was probably due to the introduction of mandatory supplies limited by the weight or number of animals and the early introduction of rationing in the field of food distribution.

Almost 40% of the domestic production of foodstuffs of animal origin was moved to the black market despite very strict sanctions. It functioned until the end of the war with the assistance of veterinarians.

Bohemia and Moravia entered the occupation period struck by a major outbreak of foot-and-mouth disease. This was followed by an epidemic of infectious polio in pigs, which was the reason for the discontinuation of supplies of pigs within the territory of the Reich in 1944. By the end of the war, glanders was widespread due to the uncontrolled transfer of horses. The Protectorate Government solved the dismal situation by establishing a disease treasury (1943), from which the costs for ordered slaughters or animal vaccinations for anthrax, pulmonary infections of cattle, glanders, or rabies were paid.

In the years 1942-43, Heydrich's reform of the organisation of the public authority took place in the Protectorate. Agriculture thus came under the newly established Ministry of Economy managed by Reich authorities. Veterinary affairs were the only ones to be taken over by the Ministry of Interior. Veterinary Institutes thus became part of a system built from and maintained with very limited domestic resources.

The reform included the establishment of veterinary offices at each district office and the introduction of catchment veterinary institutes in a reduced number of seven superior administrative units.

The Government Decree of 26 June 1943 on public veterinary medicine, which regulated veterinary research and diagnostics, manufacturing, trade, and the use of vaccines designed for the treatment of animals concerned the Veterinary Institute in Ivanovice na Hané.

The Institute entered the Protectorate period with a new Managing Director, Karel Hruška, DVM, a world-renowned expert who created a unique method of producing antimicrobial serum against anthrax. It was also thanks to him that the high professional quality of the Veterinary Institute could be maintained in a particularly unfavourable period and with a limited budget, which, despite many constraints, continued to diagnose diseases, diagnose and collect agents of particularly dangerous infections, and test newly developed vaccines.

Not only vaccination, but also the testing of vaccines against swine fever and infectious polio were banned by the Protectorate Government since 1940. Testing thus only took place in a limited form on the basis of exceptions allowed by the State Office. The Institute continued to produce rabies vaccines (Pasteur strain), vaccines and sera against anthrax and blackleg. A major success was the introduction of vaccinations against erysiploid, which replaced the pre-war use of a protective serum. Although the transition of the battlefield



Managing Director Karel Hruška, DVM, collects blood



Bioveta workers in 1939, Managing Director Karel Hruška, DVM, is in the first row on the very right



Ration ticket for meat from 1940, valid in the Protectorate of Bohemia and Moravia

brought considerable material loss to the Institute, there were fortunately no human casualties. The Veterinary State Institute in Ivanovice na Hané thus entered the post-war period with a hundred of permanent employees and fully dependent on state aid. However, in 1945 it was already able to renew the production of the crystal violet vaccine against swine fever based on the experience of Anglo-Saxon countries.

Red and BLUE



On 9 June 1951, the name of the Institute was changed to Bioveta, Veterinary Production State Institute – Bioveta, Ivanovice na Hané, in short, by an Order of the Ministry of Health under the red flag of the constructive enthusiasm of the communist regime. At the same time, the blue-and-white logo depicting the name Bioveta over a laid down ampoule on a blue (or black) field was created. The logo was registered in 1951 as a trademark in the registry of the Czech Republic maintained by the Office of Industrial Property. The logo has also been protected internationally since 1965.

In 1952, Bioveta was transferred from a health resort into a resort of agriculture and nutrition within the framework of unifying veterinary activities. Bioveta was transformed from a state facility into a national enterprise with its own status as a veterinary production institute by a Government Decision effective from 1 January 1953.



Administrative officials in 1955



The building of the first operating room – freeze-drying was located here after the year 1960



Bioveta gatehouse, Ivanovice na Hané from 1971



Bioveta normalised, competitors automated

We understand normalisation as the period from the violent suppression of the 'Prague Spring' in 1968 by the Warsaw Pact armies to the Velvet Revolution at the end of 1989. The need for the 'normalisation of relations' was the official justification for repressive measures at the beginning of this era.

These were mainly purges in the Communist Party, dismissals in employment, the renewal of censorship, the abolition of many political and interest groups (KAN, K231, Junák, Sokol, etc.). This period also manifested itself in Bioveta. A so-called 'Review Committee' was established from the active members of the Communist Party of Czechoslovakia, which dealt mainly with the attitudes of senior executives in the crisis period of 1968–1971. A new Managing Director, Miroslav Šišák, DVM, acceded to the office, and the checks practically did not concern the other executives. The only exception was Otakar Šíma, DVM, who was dismissed as Head of the Centre and transferred to the research centre as a development worker. He left Bioveta to work for the Veterinary Investigation Institute in Zlín shortly afterwards.

Here, he also dealt with bacteriology, and since he was in contact with Bioveta, he was the co-author of the first vaccine against infectious cattle keratoconjunctivitis. After the conducted checks, the political situation in Bioveta calmed down and the next period unwound under the influence of the leading organisation of the Communist Party of Czechoslovakia. In 1979, Miroslav Šišák, DVM, was removed from the office of the Managing Director and temporarily replaced by Production Deputy Květoslav Kozák, DVM. He was then replaced by Radomír Hromádka, DVM. In addition to securing production, university staff also engaged in research activities, that is directly by solving announced research tasks or by initiating their own activity. This often resulted in the submission of improvement proposals and, eventually, the filing of patent applications. The economy was centrally managed, which meant that businesses did not choose their customers and hence neither their suppliers. The practical absence of competition significantly contributed to the stagnation of the development of new products. Centrally set limits for investments and purchases of machinery and equipment, especially from foreign exchanges, constituted brakes for the development of the business. It was even the case that sometimes, it was possible to acquire the required equipment in phases from purchased spare parts. Some devices, which were needed to increase efficiency, especially during final processing, were created on the basis of improvement proposals from their own staff.

Contacts and information from abroad were minimal; sometimes it was only possible to acquire the necessary information from the Eastern Bloc. The ordering of professional literature was not easy. Potential possibilities for study internships were limited to the minimum and practically only to the Comecon countries.

While in Bioveta production was subjected to normalisation practices, production was being automated in the world and the top companies were already acquiring the so-called robots. The first industrial robot Unimate from the Unimation company was put into operation on the production line of General Motors in New Jersey in 1961. The company was subsequently acquired by the Swiss company Stäubli, which continued with the development and sale of industrial robots to various industries. Automation and robotisation versus manufacturing in the period of normalisation caused a slowdown in the competitiveness of our manufacturing companies compared to private Western companies, which is something that Bioveta also faced after the opening of the global market.



Managing Director of Bioveta, Radomír Hromádka, DVM (on the left), and Vratislav Krupka, DVM (centre), receive the red flag in 1987 from the hands of the Managing Director of the State Veterinary Administration in recognition of their work



VELVET management change



In the beginning of 1990, university workers of the Department of Biochemistry founded a Civic Forum in Bioveta.

Similarly to other businesses, the Civic Forum decided that the former Communist leadership should be replaced. After a couple of meetings, the then-Managing Director Vratislav Krupka, DVM, was removed from office and left the company. Consequently, he was replaced by the former (new-old) Managing Director Miroslav Šišák, DVM. Shortly after his arrival, he dismissed Production Deputy Josef Chumela, DVM (he was replaced by Jiří Jirků, DVM), and Economic Deputy Miloslav Smetana, who was replaced by Ing. Libor Bittner. When managing the company, Miroslav Šišák, DVM, made a number of incorrect decisions, which is why he was removed from office by the Managing Director of the State Veterinary Administration Jiří Ládr, DVM, in 1991, and he was replaced by Břetislav Macura, DVM. The Production Deputy Jiří Jirků, DVM, was replaced by Vladimír Vrzal, DVM, CSc.

Břetislav Macura, DVM, became Managing Director, an expert with a logical and realistic judgment, a practitioner with his feet on the ground, but also a strategist in the field of complex interpersonal relations at the time. He realised the uneasy position of Bioveta, where veterinarians were more curiously interested in foreign competitive products than the products of Bioveta. He deserves a thank you for Bioveta's velvet sailing through the waters of revolutionary tension and the directing of the company into the uncompromising private sphere of entrepreneurship.

The drafting of privatisation projects was commenced. The isolated centres were the first ones to be privatised. The OPAVET joint-stock company was established in Opava. The VÝROBA BIOPREPAREDŮ TELČ, s.r.o. (PRODUCTION OF BIOPREPARATIONS TELČ, Ltd.) was established in Telč. The main plant was subsequently privatised in 1995.



*MVDr. Břetislav Macura,
Managing Director in 1991–1998*



Year 1990 – year of free elections

Purposefulness
Research
Innovation
Values
Automation
Teamwork
Interment
Science
Adrenaline
Trade
Improvements
Oppportunity
Negotiation

Privatisation in the Czech Republic was a period which cannot be defined by a single sentence. It was an immense opportunity for the courageous and competent to purchase state property and build prosperous companies on these grounds. It was an opportunity for the dishonest or incompetent to borrow money from a bank, buy state property, not return the money, and embezzle the property. It was an opportunity for intrigues, corruption, as well as mafia practices.

A first-hand experience of privatisation or the memories of Libor Bittner during the complex period of the privatisation of the company:

The privatisation of Bioveta was also a complex process. It was a period characterised by the skill to create a high-quality business plan, a period of personal courage, enthusiasm, and risk. It was a period when I would come to realise the unfair practices of the so-called Vyškov pseudo-entrepreneurs when applying for a bank credit, who wanted to fraudulently buy Bioveta, and I thus faced their fabricated vindictive actions. It was a period when I notified one of the mafia pseudo-bosses that in the framework of entrepreneurship, rules and agreements must be adhered to, and I encountered the practices of the Ukrainian commando first-hand. And that was only because I so naively thought that privatisation is a process wherein the best business plan and the highest price offered wins, the payment of which is duly documented by an undertaking of a renowned bank, and that I naively took it for granted that everyone wants to and must fulfil his or her obligations.

We managed privatisation. We bought Bioveta, although in several steps, firstly a branch in Opava, then a workplace in Telč and the main plant in Ivanovice na Hané. We gave Bioveta a clear direction, innovated the product portfolio, and gradually gained new customers. We repaid the loan along with the interest and gradually invested in new buildings and technologies.

We created a joint-stock company from a limited liability company as four shareholders and it has been like this ever since.

The period of privatisation belonged among the most challenging times. Sceptics made bets that we would go bankrupt. I am not even surprised when I recall that I sometimes used to go and borrow the missing money to be able to pay the employees' wages from my friend and colleague from the first companies in Brno, where I worked as an associate after my studies and I would bring it to Bioveta by car as we did not have the courage to ask for another operating credit. It was a period when my revolver was often stowed in my car. It is interesting that I did not quite allow myself any failure and I still believed that we would build a company worth billions, but what I knew with certainty was that it was a matter of day-to-day donkey work, honesty, and competitiveness.



A trip to the Swiss city of Bern in 1992 for a new blister machine for the Lysvulp vaccine

LYSVULPEN BUSINESS FALLEN FROM HEAVEN



Lysvulpen, a vaccine against rabies for the oral immunisation of foxes, is a business that has literally fallen from heaven for Bioveta, which helped it start up the economy after the socialist management of the company. Lysvulpen has been produced since 1992 and up to this day, the incredible amount of more than 323 million doses has been sold. Bioveta thus has a great share in the elimination of rabies in wild animals not only in the Czech Republic, but also in Poland, Slovakia, Hungary, Ukraine, Russia, Lithuania, Latvia, Romania, Slovenia, Bulgaria, Montenegro, and many others. The community-wide significance of eliminating rabies in the treated areas is immeasurable, including the protection of human health from this deadly disease transmissible to humans. The aerial oral vaccination of foxes against rabies has been introduced in the Czech Republic since 1989 and its principle consists of administering a vaccine contained in an aluminium-plastic blister hatched inside a bait made of a feeding mixture. During the consumption of the bait, the blister with the vaccine virus is bit through, and it is then transferred onto the surface of the mucous membranes of the oral cavity and tonsils where it stimulates the immune system and leads to immunity formation. The immunity in immunised foxes occurs approximately 21 days after the bait with the vaccination virus is swallowed and lasts for a minimum period of one year. The vaccine is distributed twice a year, in spring and in autumn, in the amount of 15 to 30 baits per km² depending on the epidemiological situation and the density of the fox population. Previously, baits were predominantly laid down manually by hunters and forest workers. This way of laying down baits has now been replaced by a more efficient aerial distribution using a GPS navigation system to determine flight direction and flight paths.

Oral vaccination was implemented in the Czech Republic in 1989 and terminated in 2009. Thanks to oral vaccination in the territory of the Czech Republic, rabies in foxes has been eradicated. The last case was reported in 2002 in the district of Trutnov. Rabies was not diagnosed in the following two years in the territory of the Czech Republic, thereby meeting the criteria for granting the rabies-free status in the state. In June 2004, the World Animal Health Organisation recognised the Czech Republic as a country free of rabies: a 'RABIES-FREE COUNTRY'.

Cases of rabies documented in the territory of the Czech Republic in the years 1989–2003

YEAR	DOGS	CATS	FOXES	OTHER	TOTAL
1989	10	45	1 369	77	1 501
1990	9	34	1 046	68	1 157
1991	8	30	1 044	72	1 154
1992	7	14	526	23	570
1993	2	19	359	42	422
1994	6	5	191	19	221
1995	2	5	157	14	178
1996	-	3	223	11	237
1997	-	6	224	8	238
1998	1	3	77	4	85
1999	1	3	192	18	214
2000	2	3	142	18	165
2001	0	2	29	4	35
2002	0	0	3	0	3
2003	0	0	0	0	0
Total	48	172	5 582	378	6 180
% of positive cases	0,8	2,8	90,3	6,1	100





Laboratories of the Diagnostic and Serotherapeutic State Institute in Ivanovice na Hané and the filling of sera into phials

From a therapeutic serum to a RECOMBINANT VACCINE

It is not only societal changes that occur over time, but also changes in the use of animal preparation types and changes in the technology of their production and use.

A hundred years ago, Bioveta, a.s., with the then-name of the 'Diagnostic and Serotherapeutic Veterinary State Institute', focused only on the diagnosis and production of hyper-immune sera for animals. This was produced from blood collected from a large number of immunised production horses. These hyper-immune sera were used, for example, against erysiploid in pigs, poultry cholera, anthrax, and other infections. This serum had an immediate but short-term effect.

As time passed, as it became easier to identify the agents of various bacterial diseases and manage their propagation in different cultivation media, as the production of vaccines from these agents was carried out. Bacterial vaccines were mainly inactivated with the residue of cultivation media, causing short-term immunity and often adverse reactions. However, it progressed the use of hyper-immune sera, as preventive immunisation was already involved.

Advanced machines, devices, procedures, and technologies were the beginning of the veterinary virological era. Having mastered the cultivation of viruses in mainly artificial media and their propagation into the required volume, it was just a step forward to the production of viral vaccines. These were produced as inactivated or live attenuated vaccines.

An independent field consisted of the introduction of the production of anti-mycotic vaccines. By multiplying on malt extract agar, according to the agents of the disease, several types of vaccines were developed that successfully protected domestic animals and livestock against diseases which can also be transmitted to humans.



A laboratory from the period of the Institute's constitution



*Blood collection from an immunised pig from the tail using underpressure (1936)
V. Zofievský, DVM, in a coat*



Centrifugation of pig blood in an ALFA Laval flow centrifuge (1936)

The development of molecular biology and genetic engineering in recent years has led to the further expansion of veterinary vaccinology. In particular, this is the case for the preparation of genetically modified micro-organisms for the production of live apathogenic vaccines, where the pathogenicity is removed on the basis of an artificial intervention with the genome of the bacteria while maintaining immunogenicity. Deleted strains are prepared for the production of vaccines, following the use of which, post-vaccination antibodies induced by the immunisation of animals from post-infection antibodies induced by infection can be distinguished. Gene engineering has also enabled the production of recombinant vaccines wherein the production express system, most commonly the *Escherichia coli* bacteria, produces the desired protein for the production of a specific veterinary vaccine on the basis of an artificial intervention in its genome.

The current peak of craft and gene engineering skills are chimeric vaccines. In this case, the production strain of *E. coli*, based on a change in genetic information, simultaneously produces several different, genetically distinct proteins. With joy, honour, and pride, we can say that this breakthrough has already been achieved in our company. This is the case for the development of a Lyme disease vaccine for dogs prepared from recombinant chimeric



DNA helix



Ing. Juraj Kučerák, Ph.D., evaluates the protein purification success rate using the SYNGENE G:BOX machine in individual fractions

proteins against the most pathogenic strains of *Borrelia burgdorferi sensu stricto*, *B. garinii*, and *B. afzelii*. And it is also the way to create human vaccines against this disease.

We do not know what the future of veterinary vaccination development will bring us. Scientific advances, modern technologies, and human knowledge are rapidly accelerating and acquiring extraordinary dimensions. Modern trends currently lead to the investigation of the genetic resistance of domestic animals and livestock to all infectious diseases. So, it may well be that in the future, veterinary vaccinology will become just a single chapter of history in a large book of veterinary medicine.



Probe of the FPLC machine



Visual inspection of cell growth



Fractional collector of the FPLC machine



PRODUCTS

the alpha and omega of all matter

In the beginnings of the Bioveta company, sales consisted exclusively of diagnostic preparations designed to recognise animal diseases and hyper-immune sera for urgent therapy. At present, Bioveta has more than 200 products in its portfolio across 15 product categories. The most important group of products are vaccines, which account for 68.5% of total sales. The second best-selling group is antiparasitics, and the third is hormones.

Until 1995, Bioveta specialised in livestock products. Only after privatisation did the portfolio expand with products for the segment of hobby animals. At present, sales of products for hobby animals account for almost 50% of sales.



Some of our products have become standards in their categories, and their commercial names are synonymous with successful treatment on a number of markets. Such a product is, for example, the Oestrophan hormone preparation, which is Bioveta's second best-selling product.

Products can be divided according to character and use into the following independent groups:

- Anaesthetics
- Antianemics
- Antibiotics
- Antiparasitics
- Antiseptics
- Dermatologics
- Disinfections
- Diagnostics
- Hormones
- Human products
- Intramammary products
- Nutritional products
- Sera
- Vaccines
- Vitamins

TOP PRODUCTS ACCORDING TO SALES VOLUME IN THE YEAR 2017

BIOCAN DHPPI+LR inj.

Vaccine against canine distemper, infectious hepatitis, infectious laryngotracheitis, parvovirus, parainfluenza, leptospirosis and rabies

BIOCAN NOVEL DHPPI/L4

Combination vaccine for the active immunisation of healthy puppies and dogs against diseases caused by a virus of canine distemper, canine parvovirus, canine adenovirus type 1 and 2, the dog parainfluenza virus, Leptospira interrogans bacteria, Icterohaemorrhagiae serum group, Icterohaemorrhagiae serovar, Leptospira interrogans bacteria, Canicola serum group, Canicola serovar, Leptospira interrogans bacteria, Australis serum group, Bratislava serovar, Leptospira kirschneri bacteria, Grippotyphosa serum group, and Grippotyphosa serovar

BIOCAN NOVEL DHPPI/L4R

Combination vaccine for the active immunisation of healthy puppies and dogs against diseases caused by a virus of canine distemper, canine parvovirus, canine adenovirus type 1 and 2, canine parainfluenza virus, Leptospira interrogans bacteria, Icterohaemorrhagiae serum group, Icterohaemorrhagiae serovar, Leptospira interrogans bacteria, Canicola serum group, Canicola serovar, Leptospira Bratislava bacteria, Leptospira kirschneri bacteria, Grippotyphosa serum group, Grippotyphosa serovar, and the rabies virus

BIOCAN R inj.

Inactivated vaccine against rabies

BioEquin H

A vaccine for the active immunisation of horses to reduce the incidence of respiratory infections and clinical symptoms caused by the equine herpesvirus (EHV-1) and to reduce the incidence of abortions of pregnant mares caused by equine herpesvirus infections (EHV-1)

BIOBOS RESPI 4 inj.

Vaccine against the respiratory infections of cattle

BIOSUIS APP 2, 9, 11 inj.

Injection emulsion for the active immunisation of pigs to mitigate the effects of Actinobacillus pleuropneumoniae infections – the agent of porcine pleuropneumonia

CANIVERM tbl.

An antiparasitic agent against round and flat worms

LYSVULPEN

Vaccine against rabies for the oral immunisation of wild red foxes and raccoon dogs

OESTROPHAN 0,25 mg/ml

Hormonal product with a luteolytic effect

We also think about the future; our R&D department is currently working on 43 new or innovated products. Bioveta presents several new products onto the market every year.

In 2007, Bioveta made good use of its several decades of experience in the development and production of biological preparations and ceased to be solely a manufacturer of veterinary medicines. Preparations on the basis of bacterial and Candida lysates for use in humans are marketed. Currently, the line of human products contains 8 preparations that are used in gynecology, urology, or immune system support.



Product innovation plays a very essential role. Even if some products have a long life-cycle, it is necessary to continuously innovate and improve their properties. An example of successful innovation is the rabies vaccine for dogs. Having been produced for decades, the suspension vaccine obtained from the cerebrospinal tissues of sheep was replaced in the 1990s by a Lyscelin vaccine, cultured on tissue cultures. Its successor is the Biocan R vaccine, which is still a bestselling product today. This icon is currently being replaced by the latest Biocan Novel R vaccine, a vaccine with 2 international units in one millilitre and a three-year immunity period.

Fixed stars in our product portfolio

40 + years	20 + years	10 + years	< 10 years
TRICHOBEN GAFERVIT injekční roztok PLASTIN PESTORIN SERGON 500 IU/ml ERYPESTEN	Biocan LYSVULPEN IVATYL TAR 20% KOLIBIN RC Neo TRICHOEQUEN	Biofel OTIBIOVIN Caniverm® OESTROPHAN 0,25 mg/ml Rometar 20 mg/ml	Biocan® NOVEL BioEquin BioBos BIOSUIS APP 2,9,11 HYALURONAN BIOVETA 10 mg/ml injekční roztok



TRADING knows no borders

The products of the Bioveta company are known almost all over the world. Currently, 100 countries across five continents work with Bioveta

Almost 85% of the total production of Bioveta is designated for export. The main exporting countries include Denmark, Germany, Poland, Hungary, Romania, Ukraine, Russia, Turkey, Japan, Vietnam, United Arab Emirates, Saudi Arabia, and the USA. Bioveta is striving to get as close as possible to its customers and has therefore established its own sales agencies in some countries. At present, Bioveta has sales agencies in Slovakia, Poland, Ukraine, Russia, and Romania. Foreign branches provide sales promotion, and goods are delivered to distributors of veterinary medicines in the given country.

Various modes of transport, from road to air, are used for export and numerous export permits and customs documents are handled.

Our sales representatives speak Czech, English, Slovak, Polish, Russian, Romanian, Ukrainian, Turkish, Hungarian, and Bulgarian, and are able to sell everything from a single phial to a huge shipment of several trucks of our products.

Professional product queries are solved by a team of professionally trained product managers.



Ing. Libor Bittner, CSc., during a business meeting at the VetME trade fair in Dubai in 2015



Vladimír Jordán, DVM, and Ing. Marek Vystavěl at the VetME trade fair in Dubai in 2013



Ing. Marek Vystavěl (on the right) and Ing. Anil Kumar (centre) during a business meeting at the VIV China trade fair in 2009



The Bioveta company sells its preparations not only on the Czech market, but they are also exported to 100 countries in Europe, Asia, Africa, America, and Australia, which guarantees the company its business and financial stability.



Representatives of the Bioveta company with the Ambassador of the Czech Republic in Georgia (from left: Pavel Raška, DVM, Michaela Trněná, DVM, Ing. Jan Bittner, Ing. Tomáš Pernický, Paata Kudukbashvili – LTD Megavet sales representative) in 2014



Bioveta was the official partner of the largest veterinary trade fair VETMEDICA in the Polish city of Lodz in April 2018

From a million one to a BILLION ONE

Dynamic changes are only possible thanks to dynamic revenue changes. In 1996, when the modern history of the company began to be written, the company's revenues reached CZK 175 million. Of this, the vast majority of revenues were made in the Czech Republic in the livestock products segment. Extending the product portfolio to hobby animals, fox vaccination, and especially focusing on export activities, led to a step-up in revenue growth. As early as 2007, revenues from export sales exceeded sales in the Czech Republic.

Revenues for the sale of products, services, and goods in the years 1995–2017 in thous. CZK



The number of countries which register and purchase Bioveta's products is steadily growing. Countries which purchase Bioveta's products firstly include the countries of Central and Eastern Europe and Southeast Asia. The next wave of export growth came after the year 2004, when Bioveta received the EU GMP certificate. The vaccine against the rabies of foxes – Lysvulpen also significantly contributed to the growth of sales.

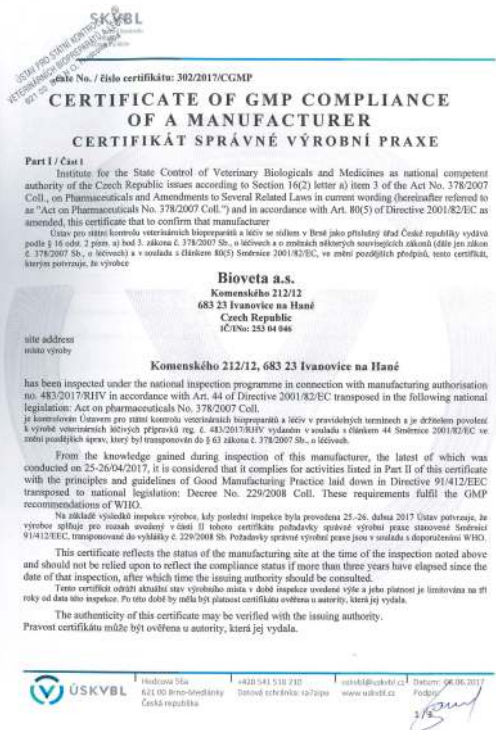
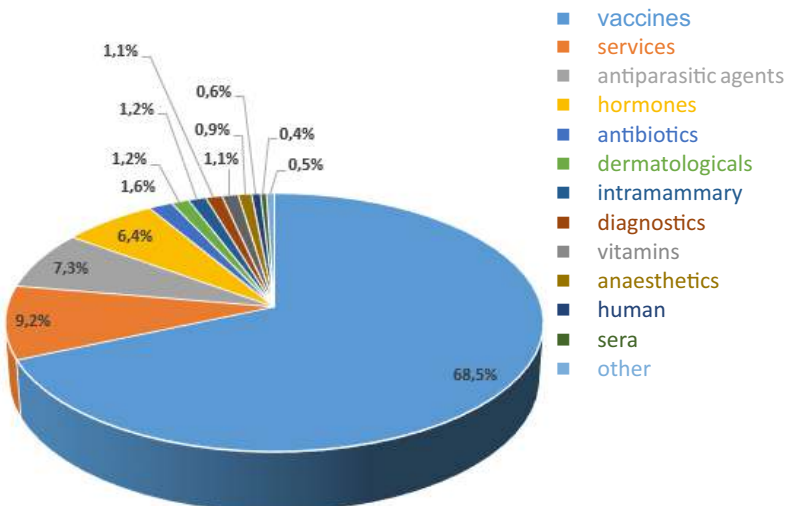
In 2012, our company realised its first export of the Biocan DHPPi vaccine to the USA. We are becoming one of the first companies to export vaccines for dogs produced in Europe directly to the United States.

As early as 2014, Bioveta reached a milestone in the form of CZK 1 billion earned from its products and services. In the next two years, it exceeded the border of CZK 1.5 billion.

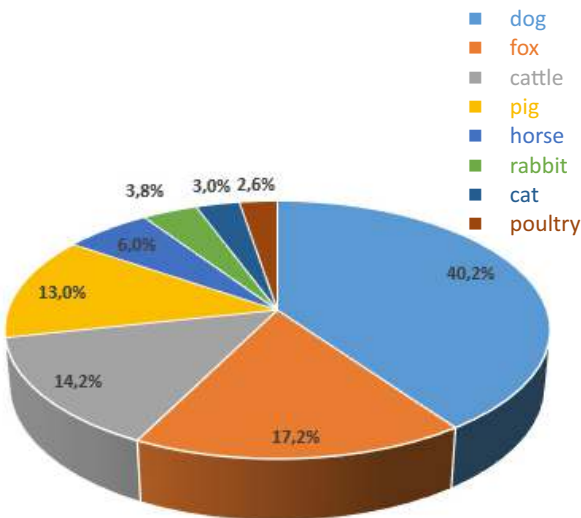
Average revenue growth over the past 10 years is 12.3%. The fastest growing segment is still the export of products, which accounts for 85% of total sales. Our company's products can be purchased in 100 countries around the world from New Zealand, Japan, Russia, and Western European states to the USA or Peru. Our biggest buyers include Ukraine, Poland, Denmark, Germany, as well as Vietnam.

The most sold product groups include vaccines, which account for almost 70% of all sales. The worldwide success of the Biocan line of vaccines for dogs makes it the most successful line of vaccines in Bioveta's assortment. This sales bestseller was complemented in 2014 by the introduction of a new line of Biocan Novel vaccines for dogs. The second best-selling group is antiparasitic preparations for hobby animals. The third group in line is the hormone preparations dominated by the Oestrophan preparation, which has become synonymous with successful hormone therapy in many countries as an important part of the protocol for rut synchronisation. In terms of sales, dogs are the most important target group, followed by fox, cattle, and pigs.

Sales of veterinary products in 2017



Vaccine sales in 2017 according to target animal species



Ing. Lřbor Bittner during a visit to the storage site of our Ukrainian partner in 2017



Head of the expedition centre of Bioveta, Mrs Danuře Malřkov, during the sorting of goods

Bioveta

In the CONTRASTS OF THE TIME

The standard cultivation of viruses and bacteria for the production of antigens for the preparation of veterinary vaccines is carried out by stationary cultivation. Viruses are prepared by their propagation on tissue cultures in special ROUX bottles. Bacteria are mostly cultivated in liquid media in different volume glass bottles.

This technology has its own justification for the need for smaller bacterial and viral antigen amounts or during the cultivation of specimens or hatchings. For large-scale production, however, this cultivation method is often inadequate. The production of biological preparations in Bioveta, a.s., requires large quantities of antigens prepared in a short period of time, with low economic demands and yet of sufficient quality.



Washroom for laboratory glass from the period of Bioveta's constitution

Such production, when used in stationary cultivation, thus involves the use of a large number of cultivation containers and their daily control and manipulation several times over the production cycle. Problems also arise with their inactivation, washing, and sterilisation for further production. The use of disposable cultivation containers in turn increases the economic demands of the process. Moreover, it is also essential to maintain emergency supplies of cultivation containers and their storage requirements in a suitable environment.



Preparation of material for sterilisation

The whole production process of static cultivation consists of successive phases that take place in different laboratories, which means the spatial fragmentation of production among individual laboratories.

This 'open' production process is highly susceptible to the contamination of the intermediate product, with a higher risk of product cross-contamination. Static cultivation takes place in classic glass or plastic containers, and all operations such as the spreading of the culture medium or the inoculation of the medium by an inoculum takes place manually in the area with the aseptic protection of the intermediate product (a laminar field, biohazard box), and subsequent collection into storage containers is also carried out manually. The inactivation of the accrued cultures and their handling and transport are again ensured manually. The concentration process takes place in a semi-closed system. Cultivation bottles are cultivated in large-scale thermo-cells, which are very energy-intensive (air cleanliness and precise temperature regulation). The static process of cultivation is therefore energy-intensive, environmentally unfriendly, and does not exclude the possibility of the contamination of the product.

The frequent manual manipulation of cultivation containers, both during their preparation and during the cultivation itself, is very demanding for the consumption of human labour and is burdened by the human error rate, and hence the possible scrapping of the whole production. In the case of working with highly infectious biological agents, there is also a relatively considerable health risk for the work staff.

The above disadvantages and risks are virtually eliminated by the preparation of antigens – viruses and bacteria in bioreactors. This method allows for the controlled cultivation, tracking, and recording of the entire process. Various types of bioreactors – fermenters are used for the biotechnological production of viruses and bacteria, and the cultivation process is also different.



*Inspection of the increase in the *Trichophyton verrucosum* culture for the production of the vaccine against trichophytosis (1980s)*

During a new technological process, production strains are cultivated in specially prepared bioreactors in large volumes in suspension. The mixing of the cultivation medium takes place in a formulation boiler or directly in the bioreactor. The sterilisation of the medium is carried out thermally and by sterile in situ filtration. Thereafter, the medium in the bioreactor is inoculated with a production strain directly by an automated aseptic device allowing the sterile joints to be carried out in a non-sterile environment or by inoculation by siphoning off the culture from a smaller volume cascade bioreactor. After the cultivation phase under a standardised process of maintaining the temperature, pH, and dissolved oxygen concentration, in an automated fermenter, subsequently gently inactivated thermally or chemically with an excellent homogeneous distribution of heat or an inactivating agent to the cells directly in the bioreactor and its periphery, i.e. all as a closed process with far lower risks and demands for staffing. Consequently, the concentration process is carried out in a fully closed bioreactor – ultrafilter without the possibility for the contamination of the intermediate product. This technology is less energy-intensive and eliminates the possibility of infecting staff with often very serious diseases.

Given that these are commercial biotechnological processes, information on cultivation in bioreactors is only partial, and each user verifies the technological procedures him/herself for the given type and size of the bioreactor, and for the cultivation of the specific microorganism.



The SOLARIS SBI400 Bioreactor secures an efficient viral antigen cultivation process. The bioreactor has a working volume of 300 litres and produces a maximum of 600 litres of antigen containing glycoprotein (after inactivation) of 40-80 IU / ml per month

Therefore, verifying and designing the cultivation process for the cultivation of common, well-growing bacteria requires some time and optimisation and the validation of the whole process. The optimisation of the cultivation process for difficult-growing microorganisms is even more difficult and time-consuming. Each user then protects these verified processes as their confidential know-how.



One of the first cultivation tanks for the cultivation of bacteria



The first high-capacity freeze-drying machine from Czech production LZ 45

Biovera, a. s., based in Ivanovice na Hané has also gradually introduced and is implementing the biotechnological production of microorganism production strains in order to produce and sell the bio-preparations of its own portfolio. It also had to undergo a difficult period of verification, trials, testing, and the validation of the cultivation practices of the individual production strains in the bioreactors as well as other factors unconditionally necessary for the commercial management of the fermentation cultivation of microorganisms for the production of veterinary bio-preparations.

Bioveta, a. s., thanks to its professionally educated team of workers, has independently managed to creatively produce new biotechnological procedures for the preparation of various microorganisms for the production of veterinary bio-preparations.

As one of only a few companies in the world, it has mastered and manages to commercially cultivate the rabies vaccine virus for the production of the rabies vaccine in domestic animals and the vaccine for the oral immunisation of foxes against rabies.

The management of the commercial biotechnological cultivation of leptospir and borrelia strains for the production of vaccines against these diseases is also an undisputed worldwide success. For the production of vaccines against leptospirosis in dogs, cattle, and pigs, antigens are already being prepared using this modern biotechnological procedure.

The new biotechnological production in industrial bioreactors can not only produce enough antigen mass to produce vaccines, but is undoubtedly a cheaper variant of the preparation of vaccine antigens than conventional stationary production in bottles. This will thus allow Bioveta, a.s., to reduce production costs for vaccine production and maintain them at a level comparable to international competition.



The modern lyophilisation device LYOMEGA 200 will amaze with its capacity of 110,000 pieces of phials with a volume of 3 ml and automation of the lyophilisation process, including the automatic system of setting up phials

Fragments of events



The opening of a new animal room for the barrier breeding of SPF dogs

On 20 May 2008, a new animal room for the barrier breeding of SPF animals and the conduct of clinical trials was officially opened. By means of its layout and technical parameters, the animal room is designed to carry out biological studies for R&D purposes in the regime of good laboratory practice according to OECD methodologies and the breeding of laboratory animals. The opening ceremony took place in the presence of representatives from Pfizer Animal Health, the State Veterinary Administration of the Czech Republic, the Institute for State Control of Veterinary Biologicals and Medicines Brno, the Chamber of Veterinarians of the Czech Republic, and other companies, representatives of the media, and the management of Bioveta, a. s.

Entrepreneur of the Year

The Director of the Bioveta, a.s., company, Libor Bittner, was chosen as the Entrepreneur of the Year for the South Moravian region in 2013 and qualified for the finals among the five best entrepreneurs in all of the Czech Republic.



Launching of the Biocan NOVEL premium vaccines

The Biocan NOVEL premium line of vaccines for dogs was marketed in 2014 and currently, it is successfully registered in a number of countries of the EU and the world. On the occasion of the launch of Biocan NOVEL vaccines into the world of veterinary medicine, a unique Biocan NOVEL party took place in March 2015 at the Holiday Inn Brno hotel, during which the release of vaccines took place in the presence of Bioveta's Managing Director, Ing. Libor Bittner, CSc., and the President of the Chamber of Veterinarians Karel Daniel, DVM. The evening was moderated by Adéla Gondíková with a musical performance by Dasha, a singer accompanied by the Pajky Pajk Quintet band.



MILANO 2015

The Bioveta, a. s., company was the official partner of the world EXPO exhibition, which took place in the Italian city of Milan, the main motto of which focused on 'Food for the planet, energy for life'. Bioveta presented itself at the exhibition with an animal sculptural group in a larger-than-life size, whose creator was Lukáš Rittstein, an academic sculptor. Nowadays, the sculptural group is located on the premises of Bioveta in Ivanovice na Hané and tastefully completes the modern and progressive image of the company.



Construction of the new biotechnological Bioveta Tech Hall

The new biotechnological Bioveta Tech Hall was commissioned in January 2014 and led to an efficiency improvement and substantial innovation in the production of bacterial and viral vaccines in both fluid and lyophilised form. On the ground floor of the building, the final bulks of vaccines from formulation boilers are filled up by a system of closed pipelines on filling machines into phials and then loaded into two lyophilisers. Each lyophiliser has a lyophilisation chamber size of about 110,000 phials. On the first floor, the production of the antigen of the Vnukovo rabies virus is carried out in bioreactors.



Visit from the Deputy Prime Minister for Science, Research and Innovation

In May 2016, Bioveta was visited by Pavel Bělobrádek, DVM, Ph.D., MPA, the then-Deputy Prime Minister for Science, Research and Innovation, who discussed the promotion of applied research and the increase of private funds in science and research with the company management. Pavel Bělobrádek said, inter alia: "Companies like Bioveta are proof that we are able to transfer the results of research and development to commercial practice, that we have our national champions who are successful in the world as well."



Pharmaceutical Research and Development Centre

With this building, we managed to bring into accord the modern architecture of the new hall with a reconstructed historical building as part of one functional whole.



Pharmaceutical Research and Development Centre of the Bioveta company

Commencement of the operation of recreational cottages after reconstruction

Bioveta has completely reconstructed and, in the year 2016, commissioned recreational cottages in Malá Morávka and in Jedovnice for its employees. Both recreational cottages provide visitors with a haven for rest and relaxation, but also contribute to a friendly and relaxing atmosphere during demanding business meetings. The surroundings of the cottages offer a wide range of sports activities, both in summer and in winter.



Our business partners from Latvia visited the recreational cottage in Malá Morávka



Recreational cottage in Jedovnice

Labelling and packaging of preparations in the new Bioveta Packaging Hall

The Adjustment Department moved into the new Bioveta Packaging Hall worth more than CZK 65 million in 2017. The new hall is designated for the finalisation of veterinary preparations before their release into the expedition warehouse. The modern centre significantly simplified the planning and the coordination of all adjustment activities.



Bioveta as Company of the Year 2018 in Poland

The Bioveta, a.s., company received the COMPANY OF THE YEAR 2018 award granted by the Central Agency of National Certification from Warsaw in Poland on 14 May 2018. The granting of the title is a confirmation of the credibility of the company and the high quality of the offered products. The organisers of the event also stated along with the award that the aim of the programme of the 'Company of the Year' is to support businesses which significantly contribute to the development of Polish entrepreneurship and are a model of reliability.



Commissioning of the Bioveta Novelty Hall

In 2017, the construction of the new biotechnological Bioveta Novelty Hall worth CZK 320 million was completed. This multi-purpose hall is now the largest production hall in Bioveta and was commissioned into full operation in the first quarter of 2017. With the new hall, there has been a significant increase in the production capacity of viral vaccines (poultry, cattle, pigs) and the modernisation of growth media and media production. The utility washing facility is also centralised here. Products manufactured in eggs have undergone the largest modernisation of production. These products include not only vaccines for poultry, but also the BioEquin F, BioEquin FT, and BioEquin FH vaccines, which contain vaccine strains of equine influenza. The automation of cultivation media preparation and their filling by closed systems are among the major innovations. These important innovations will allow us to cover and improve the ever-increasing demand for our products in our country and around the world.



Bioveta, General Partner of the Veterinary Representation Ball in Žofín

Bioveta, a.s., was the General Partner of the Veterinary Representative Ball held by the Chamber of Veterinarians of the Czech Republic in the premises of the Neo-Renaissance Žofín Palace in Prague on Saturday, 13 January 2018. After the ceremonial opening of the ball, the



organiser, Michal Vitek, DVM, invited the Managing Director of Bioveta, a.s., Ing. Libor Bittner, CSc., to the podium, who, during a short interview, told the guests present that Bioveta will celebrate 100 years since its founding this year and he outlined the events that the company is preparing throughout the year for its clients, veterinarians, as well as employees in the framework of these celebrations.

Gala Night of 100 years of the Republic

The Managing Director of the company, Libor Bittner, received an invitation to the 100th Anniversary Gala of the Republic organised by FORBES magazine. The prestigious event took place on 23 May 2018 at the PETROF Gallery in Hradec Králové. Representatives from traditional Czech companies shared their experience of how to build and maintain a successful brand over decades, how to make it popular for several generations, and how to prepare it for the future.



Finalising the construction of the Bioveta Serum Hall

We are currently finalising and commissioning a new hall for the production of sera worth CZK 33 million. Production in the new hall will be divided into three production units, a unit for coarse blood processing, a unit for insulating processes, and our own production unit for product formulation that corresponds to class 'C' of cleanliness. Trial operation is scheduled for summer 2018 and the launch of normal production will be based on the outcome of the audit of the Institute for State Control of Veterinary Biologicals and Medicines, which will be conducted in September 2018.



Bioveta in the year 2018

From the point of view of the company's Managing Director, Ing. Libor Bittner, CSc.

The year 2018 is once again a year of full engagement in the field of our well-known business activity, but it still differs from the others by the fact that we are commemorating the 100th anniversary of the founding of the company.

As a gift, Bioveta will receive the Rabadrop vaccine as part of its portfolio – a new generation of a highly safe vaccine against rabies in foxes, containing a strain that has emerged under certain physical conditions as a clone of the Sad Bern strain. Upon release from our warehouse, the innovated bait will no longer have to be distributed in a frozen state, which is another significant shift in maintaining competitiveness in trade with the oral rabies vaccine.

Another gift to this year's portfolio will be the new vaccine against rabbit plague with the RHDV 2 strain, which is currently demanded by veterinarians and rabbit breeders, and Bioveta has always been the market leader in this given area.

This year is also significant in terms of investment. The new sera hall, two new production units with laboratory clean premises, SPF chicken breeding, new boiler room, new large-capacity bioreactor unit, new facilities for development managers, the reconstruction of raw materials warehouses and others are being prepared for the following year such as a new production unit for the production of hormone preparations, a new QA and QC pavilion, our in-house radiation sterilising unit, a pharmaceuticals pavilion, animal rooms, and much more.



*The best way to predict
the future is
to invent it!*

Alan Kay

We are aiming to achieve a minimum of 18 new major business deals in 2018, once again to exceed CZK 1.5 billion in turnover, and we have prepared interesting events for partners in almost 75 countries around the world to support the sale of our products and incentive bonuses when exceeding the planned annual purchases in the form of discounts of up to 18 per cent. For our employees, we will organise an Open Air Festival on 20 September 2018, where they can listen to the hits of Michal David and No Name along with their family members, we will officially illuminate the monument on the BNH roof for the 100th anniversary, and we will have fun together. Banquets at the Holiday Inn will follow for our business partners, and we will place a silhouette of a futurist walking into the next century on the roof of the building along the Ivanovická main street. This year, we will produce the first larger batch of recombinant chimeric borreliosis vaccines, after the expected successful protein purification and vaccine formulation, both for veterinary and human use in preclinical and clinical trials.

After the successful preclinical tests, the Candivac original vaccine against Candida diseases in women will enter clinical trials, and may subsequently become the first bacterial oral immunomodulator for humans in our product portfolio.

This year, we are planning to finalise our trade negotiations with our Chinese partner and start transferring our Biocan vaccines for dogs to the world's fastest growing economy and boost our trading position there.

„You, my customers, You, my employees, You are the most valuable that I have.”

SAID THE HUNDRED-YEAR-OLD BIOVETA

Dear customers,

I very much appreciate the affection that you show me by buying my products, because I have invested billions of Czech crowns into my modern operations and technologies in the last 25 years to make me competitive, since you and your clients deserve the highest possible quality. It is an asset and honour to be able to manufacture products for other major pharmaceutical companies and for you, veterinarians in one hundred countries of the world.

It was not always the case, but the desire to have everything from abroad is long gone, and there are brands such as Bioveta which have survived the centennial history of our Republic and, additionally, have created a promising future for themselves. Everyone, and not only Czech patriots, will be pleased after arriving from abroad by being taken to the hotel in a Skoda, seeing a PETROF pianist playing at the hotel, quenching their thirst with a beer from Pilsen or Smíchov, and seeing my blue-and-white Bioveta logo on the labels through the display windows of a pet shop.

But that would not be possible without you, my customers, my partners. Thank you, and I promise that I will put your needs and satisfaction with my products before all else.

Without you, my employees, Biovetians,

I would not live, I would not rejoice over how many products I have managed to produce, I would not be happy to have developed a new preparation, but on the other hand, I would also sometimes not lament over a broken phial or a crookedly stuck label.

On the other side, I also try to do everything for you so that you are satisfied as much as possible. For example, I built a beautiful new dining room for you, where I try to cook from fresh regional foodstuffs. I invite you to parties, to the theatre, I give you vouchers to pharmacies or fitness centres in order for you to be healthy, satisfied, and happy. Some of you spend your vacation at my reconstructed Bioveta cottages. I build new modern plants to improve the working environment, hygiene, and work safety. I care for order and ample greenery and its maintenance. I buy a more powerful device to reduce the number of night shifts and gradually eliminate the demanding manual work. I care for your education in the field of Good Manufacturing Practice, language skills, and others. I thank you all, especially those who have spent their entire professional life at Bioveta, but also to those who have just finished school and are planning on joining us to make the world healthier.



Sales Representative, Aleš Kroupa, on the journey to our customers



*New high-capacity parking
for the employees of Bioveta*



*Tasty dining in a modern canteen
for the employees of Bioveta*



We are always here for you, our loyal customers, not only at the VETfair trade fair



Bioveta Block of flats

Visions and wishes into the future of Bioveta



Ing. Libor Bittner, Csc.
*Managing Director,
Chairman of the Board*

How do you see Bioveta in a hundred years?

If the shareholders and the management of the company pull together in order to develop Bioveta in the most possible way, all the prerequisites for its great future are there. The number of people in the world is growing, and so is the number of animals, people are getting richer and they can invest more in animal preparations, there are new infections that require the protection of animals.

If, moreover, Bioveta can develop or complete the development of a preparation that will not have any competition at the given time and becomes the subject of customer desires, not just market-driven

products such as a comprehensive vaccine against cattle mastitis, a human borreliosis vaccine, vaccine against the Candida disease in women, etc., it will be the pride of our successors and a fixed star on the world market.



Jiří Nezval, DVM
*Director of the Production, Development
and Innovation of Veterinary
Preparations Section,
Member of the Board*

What would you wish Bioveta as it begins its next one hundred years?

Stable development – human, product and technological.

How do you see Bioveta in a hundred years?

As a highly specialised enterprise dedicated to the promotion of health in animals and humans.

If you could put one magic ingredient in all of Bioveta's products, what would it be and what effects would it have?

Wisdom, with effects according to the needs of everyone.



Ing. Petr Vinklár
*Director of the Financial
Management Section*

What would you wish Bioveta as it begins its next one hundred years?

I would like to wish Bioveta many more successes, continued sales growth, and many satisfied customers, breeders, and veterinarians all over the world. The aim and purpose of the work at Bioveta is to protect the health and lives of animals. **For such a significant anniversary, I wish Bioveta to be able to fulfil this mission for the longest time possible.**

How do you see Bioveta in a hundred years?

In a hundred years, I see Bioveta as a strong, traditional, and established company that supplies sought-after pharmaceuticals to a wide range of

breeders. It will continue to strengthen its own R&D. It is likely to be increasingly expanding its activities in the field of human medicine.



Ing. Marek Vystavěl
*Director of the Marketing
and Sales Section*

What would you wish Bioveta as it begins its next one hundred years?

I would like to wish Bioveta what one wishes a loved one. **Longevity, health, success, prosperity.**

How do you see Bioveta in a hundred years?

I continue to see the future of Bioveta in vaccines, biotechnology, and drug development, even for minority animal species.

I believe that Bioveta will, for example, be a significant producer of fish vaccines.

New technologies will also be involved in the treatment of animals. Cell phone applications, the satellite tracking of animal herds, or the Internet of things – this will all be part of animal care.



Ing. Jan Bittner
*Director of the Purchasing of Raw
Materials and Materials Section*

What would you wish Bioveta as it begins its next one hundred years?

Above all, a quiet time without wars, and what is especially relevant today, without bureaucratic, cybernetic, and energetic ones as well.

How do you see Bioveta in a hundred years?

I could form a lot of images and abstractions here to describe how I see Bioveta... on the contrary, I firmly hope that the next generations, with a modern outlook, technologies, and knowledge, will pull together and will lead Bioveta as a successfully functioning and healthy company to its 200-year milestone and will be at least as proud of it as we are today.



Vladimír Jordán, DVM
Member of the Board

What would you wish Bioveta as it begins its next one hundred years?

I wish Bioveta the further expansion of sales opportunities. **Furthermore, I would also wish for the stabilisation of highly skilled workers as a prerequisite for the further development of new products.**

What are you most proud of at Bioveta?

I am proud of the fact that we have managed to survive the crisis period after the collapse of the markets of the former Comecon and the change of the State Veterinary Service to a private service. Another important step was the privatisation of the company and dealing with high amounts of debt. Moreover, the gradual building of new production facilities, the acquisition of new technologies, and the creation of teams of professional staff in all sections of the company.



Ing. Pavel Zmrzlý

Director of the Quality Assurance and Quality Control Section

What would you wish Bioveta as it begins its next one hundred years?

If I wish Bioveta at least the same development it has seen over the past one hundred years, it will be a nice wish, but also a challenging goal. However, Bioveta has overcome many difficult obstacles, so I can afford to add to my wish. I wish Bioveta to make its name synonymous with animal-related products. I wish that every veterinarian and customer would know that there is no need to study professional articles and magazines in order to choose the right preparation, but that it is enough to have the blue logo with an ampoule symbol on the flask, tube, box, or sachet.

How do you see Bioveta in a hundred years?

Bioveta will be the world's number one on the animal pharmaceuticals market in a hundred years. Its branches in the capitals of each country will be spread virtually all over the world. In addition to animal medicines, Bioveta will be one of the largest manufacturers of pharmaceuticals for humans. Bioveta will commemorate the 90th anniversary of the launch of the vaccine against borreliosis onto the world market for human medicines in 2118. The year 2118 will also be a breakthrough year given the fact that Bioveta will open a new production unit for the assembly of robotic operators used in pharmaceutical manufacturing.



Mgr. Martin Orság

Director of the Technological and Technical Support Section

What would you wish Bioveta as it begins its next one hundred years?

I wish Bioveta mainly stability and prosperity, so that it could further develop, i.e. build new premises, innovate production. Furthermore, I wish it to have satisfied employees and visionaries.

How do you see Bioveta in a hundred years?

Production technology will already commence as fully synthetic from an atom or molecule with concurrent testing using calculations of at least neural network accesses.



Tomáš Ganger

Regional Manager for Poland

What would you wish Bioveta as it begins its next one hundred years?

The success of any company is based only on skill, diligence, and the determination of the people who work in it. Thus, I wish Bioveta to have employees appropriately motivated to deliver the best results, to solve problems in depth, and not to stay on the surface – not to state the problems, but to bring solutions, to have Bioveta as my own company, for which it is a joy to work for. I also wish Bioveta to have far-sighted management that has visions and a business objective, for which it can enthuse the entire collective and can adjust the direction with

sufficient time in advance, so that the goal is reached. Last but not least, I wish Bioveta to be one single coherent collective, where everyone is aware that their work has a crucial impact on the good results of the work of other colleagues.

How do you see Bioveta in a hundred years?

I see Bioveta as a medium-size company, which produces vaccines and drugs on the basis of nanotechnology and adjusted to the individual biochemistry of the patients, that is products with high added value. At that time, the company will have highly developed acquisition, sorting, sharing, and use of information that will be necessary for professional service delivery to customers, people who work in Bioveta in a hundred years will have to pull together, be one team, and even in 100 years, it will use common sense and the latest knowledge of R&D, because the competition will not be smaller but larger than it is today.



RNDr. Jakub Linhart, Ph.D.

Director of the Registration Section

What would you wish Bioveta as it begins its next one hundred years?

At least another one hundred healthy and successful years, as full of growth as the last 22 years.

How do you see Bioveta in a hundred years?

As one of the TOP 10 world innovators and producers of veterinary immuno-preparations.



Mgr. Jana Šnytová

Regional Manager for Romania

What would you wish Bioveta as it begins its next one hundred years?

I wish Bioveta stability (so that the next generation could also celebrate its round anniversary), development that will go forward, because it allows us to improve and strengthen our work values, and I must not forget to wish it a lot of vitality and energy.

How do you see Bioveta in a hundred years?

I see Bioveta as a global company with Czech roots, which has built its position on foreign markets, it is independent, and provides a high-quality background for its customers as well as employees.



Mgr. Michal Janča, Ph.D.

Head of the Development and Innovation of Pharmaceutical Preparations Section

What would you wish Bioveta as it begins its next one hundred years?

To maintain its independence, overall growth, its own research programme, to pursue the takeover of the markets of Western European countries and across the ocean. Further expansion of the product portfolio and exponential growth in revenues.

How do you see Bioveta in a hundred years?

A modern company with the automatic functioning of all operations, expanded production capacities, and machine equipment for new, modern pharmaceutical forms. Production will be expanded into the human sphere.



Kristýna Prokopová

Regional Manager for the Russian Federation

What would you wish Bioveta as it begins its next one hundred years?

Into the next one hundred years, I wish Bioveta to maintain its independence and to stand under its brand at the top of sales in all the countries where it exports its production.

How do you see Bioveta in a hundred years?

I see it clearly. Bioveta will be number 1 on the market in Russia. In a hundred years, I will already be retired, but I will make sure that it is like this. :-)

We were here then...
... we are still here today



1918



2018