



BIONITY



Technologies
Science
Companies
Trends

**Life sciences in
Ukraine**



Life Sciences industry in Ukraine

The overview of the industry landscape of Life Sciences in Ukraine Technology, science, companies, trends

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Foodtech



Agrotech



Biotech services



Pharma



DiaProph • Med

Engineering



Health care





АСТАРТА-КИЇВ



Eco technologies

FOOD
Bio
PACK

Selection



syngenta



PIONEER

Engineering and IT



BioLabTech



Inhalation
Sciences



Біола

raccoon RECOVERY

ESPER

Better
Me

НАДИЯ

INTO SANA

ДОБРОБУТ

БОРИС

Physiology and anatomy

Chemical synthesis



Kusum Pharm



ІНТЕРДЕЗ



CINTA



Здоров'я
фармацевтична компанія



Микрофарм



Орісін-Фарм

teva



ІнтерХім



ЧУМАК



НАНОГЕОГРАФІЯ І
НАНОТЕХНОЛОГІЯ

Other



Georg
BioSystems

Монфарм
Публічне Акціонерне Товариство



Ukrainian
Genetic
Technologies

Valartin
pharma

Дарниця
Фармацевтична Фірма

Vishpha
pharm factory



BioTestLab

ЮРІЯ-ФАРМ

Vitamins
anno - 1953



otava
НАУКОВО-СЕРВІСНА ФІРМА



ARTERIUM



BIOFARMA



SANOFI



acino



АСТРАФАРМ



DiaProph Med Фармак

AMAXA
WE CARE ABOUT YOUR HEALTH

VuEssence
See What Matters

Bioorganic synthesis, extraction



ЛІКТРАВИ



Тернофарм



ГРУПОТЕСТ



Cell technologies



BIOFARMA



БТУ-ЦЕНТР
БІОТЕХНОЛОГІЯ УКРАЇНИ

ХАРКІВСЬКІ
ДРІЖДЖІ



isida
cans



ilaya

Molecular biotechnology

MY
HE
LIX



О.Д.ПРОЛІСОХ

inpar
Цінуючи дар життя!

Life Science Industry in Ukraine



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Brief overview



Content



This report is divided into two parts and is structured on a deductive basis to unlock the potential for the development of Life Science in Ukraine, starting with economic indicators and socio-political shifts that may affect this process, ending with an analysis of the Life Science market by the situation in this specific industry. The introductory chapters give you an overview of key findings, statistics, infographics, and methodology of the report.

The first section focuses on national trends, government initiatives aimed at developing the life science field. In addition, considerable emphasis in addition to economic indicators is directed to the analysis of the state of Ukrainian science, fundamental and applied discoveries, as well as to the study of companies, their relationship with scientific processes. We will talk about successful projects, compare with the situation in the past and make assumptions about future developments.

- **The current state of the life sciences industry in Ukraine Unit** is aimed at highlighting the development of Life Science in the commercial field. Specific sub-sectors have been analyzed where the development of the direction is critical, namely such as *pharma, healthcare, agrotech, foodtech, biotech services*.
- **The Economic Conditions Unit** will provide the current general economic situation in Ukraine, the issues of ease of doing business, financial stability, investment attractiveness have been solved, and assumptions about the development of the Ukrainian economy have been made based on the forecasts of world experts.



Content



- **The Industry Statistics Unit** aims to tell about the promising areas of Life Science, which according to objective data have a great chance of successful implementation.
 - **Successful Case Studies Unit** contains information on successfully implemented Life Science projects in Ukraine.
 - **The Startup Infrastructure section** provides a concise overview of the modern Ukrainian infrastructure for innovative entrepreneurship in the context of the life sciences industry.
 - **The Science section** contains information about the state of Ukrainian biological science and its relationship with the business.
 - **The Government Initiatives Unit** covers the activities of the government, which can contribute to the development of the industry.
 - **The Conclusions and Prospects section** summarizes the findings on the Life Science market in Ukraine and trends worldwide; possible vectors of development of the industry and prospects in this field were predicted.
The second section contains structured information about companies, hubs, conferences, research institutes, and industry leaders, which is presented in convenient and visual profiles.
-
- ❖ 75 companies
 - ❖ 15 hubs
 - ❖ 45 conferences
 - ❖ 12 investors
 - ❖ 30 scientific institutions
 - ❖ 50 personalities



Key abstracts

- The market and industry of life sciences are only in their early stage in Ukraine, but in some areas there are mature, well-developed enterprises, especially in pharmacology.
- There is a potential in startup infrastructure that can be used to develop the innovative life sciences industry. Investors and startups may use it and are already using IT industry infrastructure.
- Macroeconomic indicators are moderately optimistic but volatile. Continuous monitoring of the macroeconomic and regulatory environment is needed because of the political transformations in the country.
- In some cases, the regulatory environment in Ukraine is more liberal than in the EU. This applies to embryology, regulation of stem cells, individual fields of biomedicine.
- The extremely low level of funding for both basic and applied life sciences is at least partly compensated by the low cost of staff.
- Successful startup cases do exist, but they mostly relate to outsourcing services or certain intermediates in the production process.
- Foreign investors remain sceptical about the development of the biotech industry in Ukraine, even against the backdrop of a global bubble boom. However, they enter the market through bridges that have been made by Ukrainian IT-industry



Key abstracts

- State support for the industry and innovative entrepreneurship, in general, is rather nominal. However, the country is confidently moving towards improving business conditions.
- The gap between business and academic science remains huge, but it is admitted and recognized as a problem. The first initiatives called to overcome it, have emerged.
- Almost all business activity in the industry is concentrated in the capital. There is a huge imbalance between the centre and the periphery.
- Foreign investors are dominated by EU residents, who are 3 times more likely to invest than US investors.
- Despite the low funding, the effectiveness of Ukrainian biological science is specific and remains very high.
- Pharmacology dominates in the industry structure.
- Although the country is clearly focusing on agricultural business, the share and role of agribusiness in the industry remain quite low.
- Considering the significant advantage of the pharmaceutical industry in the life sciences industry that requires chemical and biological technologies of synthesis, the dominance of these technologies is not surprising.
- Ukraine may have the greatest potential in Eastern Europe to become a regional biotechnology centre. However, whether it will be able to implement it, remains a question with many unknowns.

Life Science Industry in Ukraine



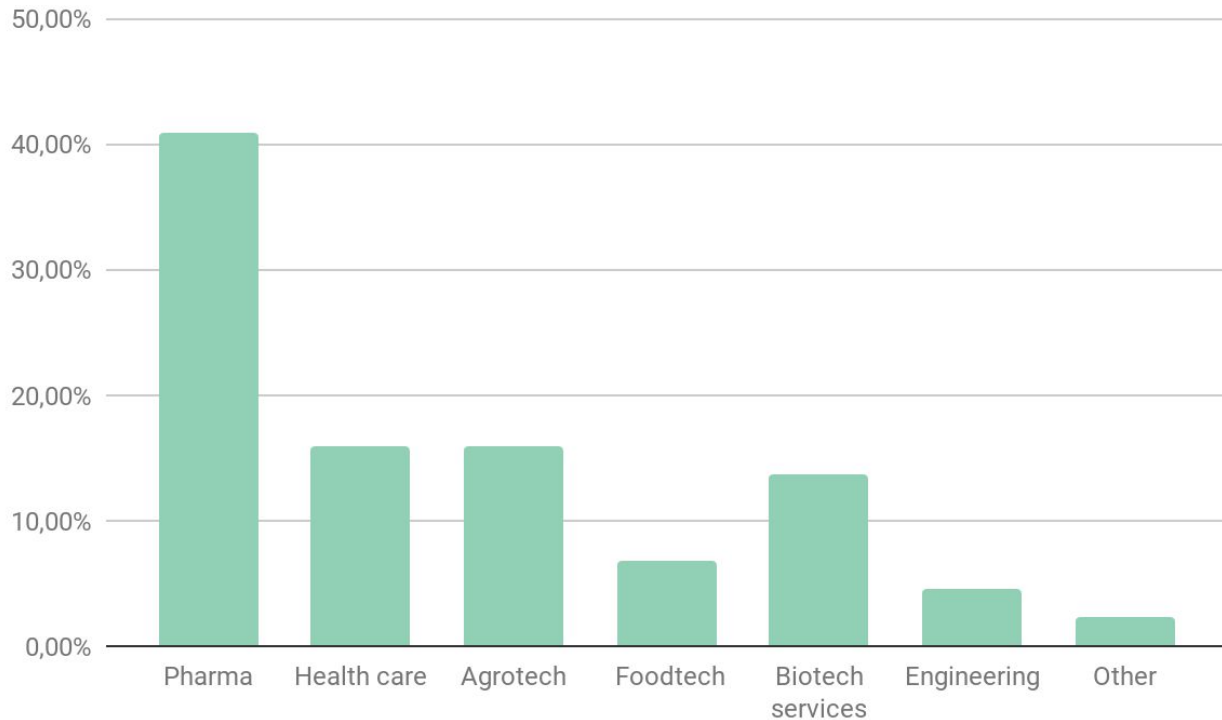
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Key
infographics

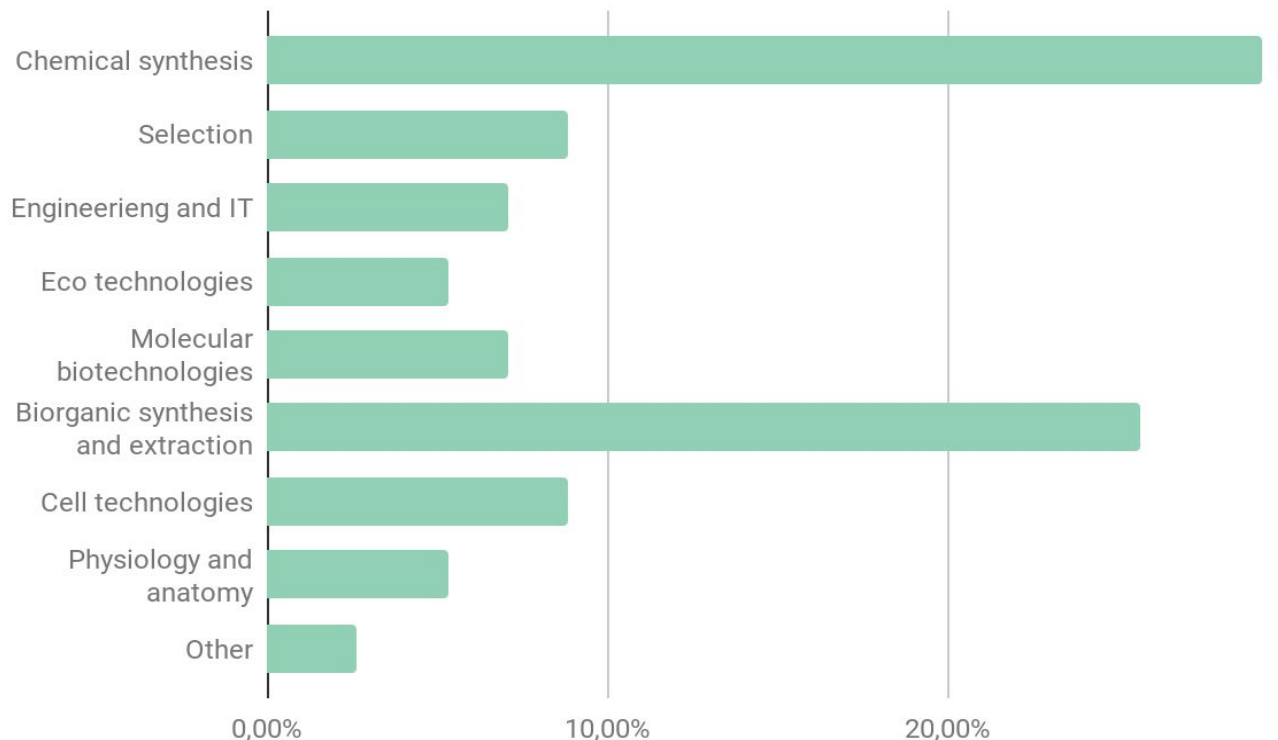
Distribution of segments in the industry

The relative number of fields in the industry, in percentage

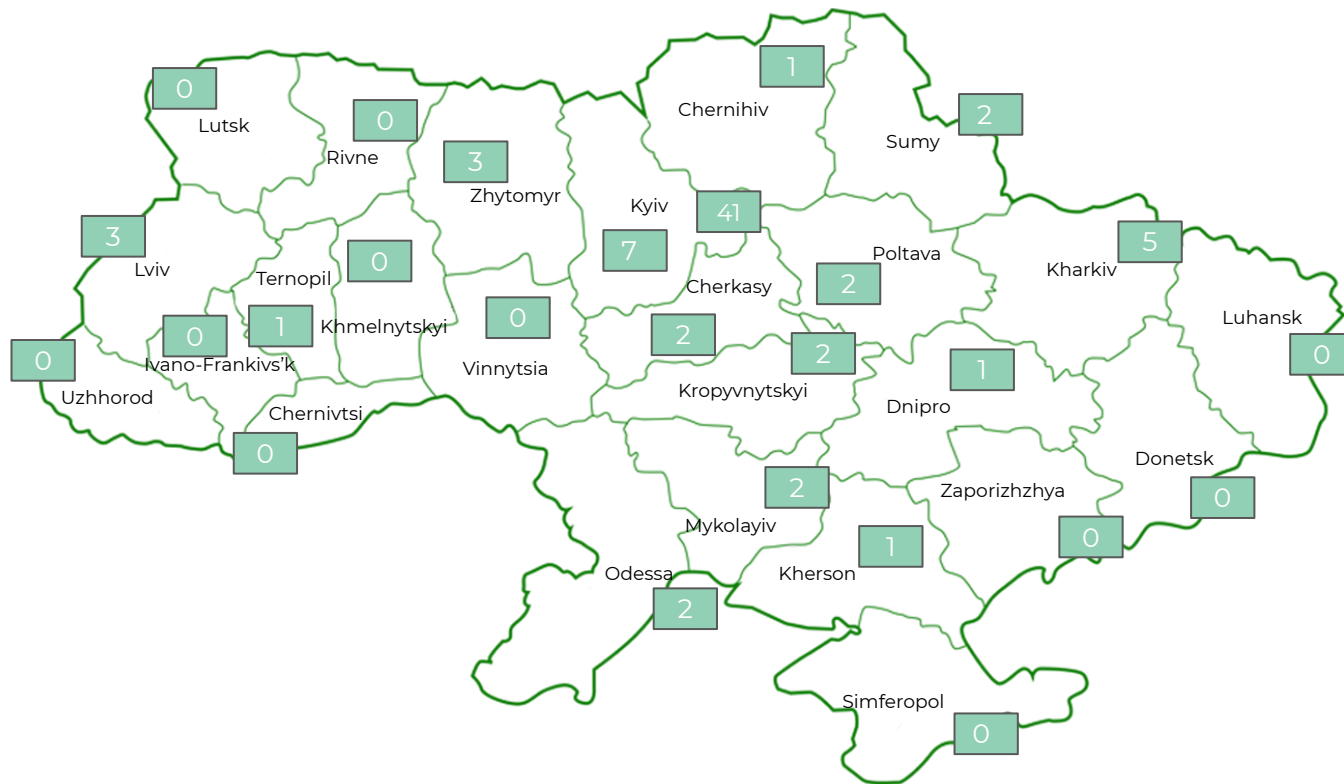


Distribution of technologies in the industry

The relative number of technologies in the industry, in percentage



Geographical distribution of companies



15 hubs related to Life Sciences

1991

Open Data Incubator

1991 Open data incubator

AGRO HUB

Collective Impact

AgroHub



Biotech&Pharma
Cluster.Lviv

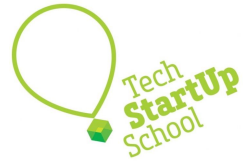


DIY lab



eastlabs

EastLabs



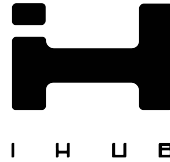
Tech StartUp
School - Lviv



Global Cleantech
Innovation Programme
for SMEs in Ukraine



Greencubator



iHUB



INDAX



Kharkov Technologies
Small Business
Development Center



RadarTech



Kharkov Innovation
Platform



US-Ukraine Foundation
Biotech Initiative

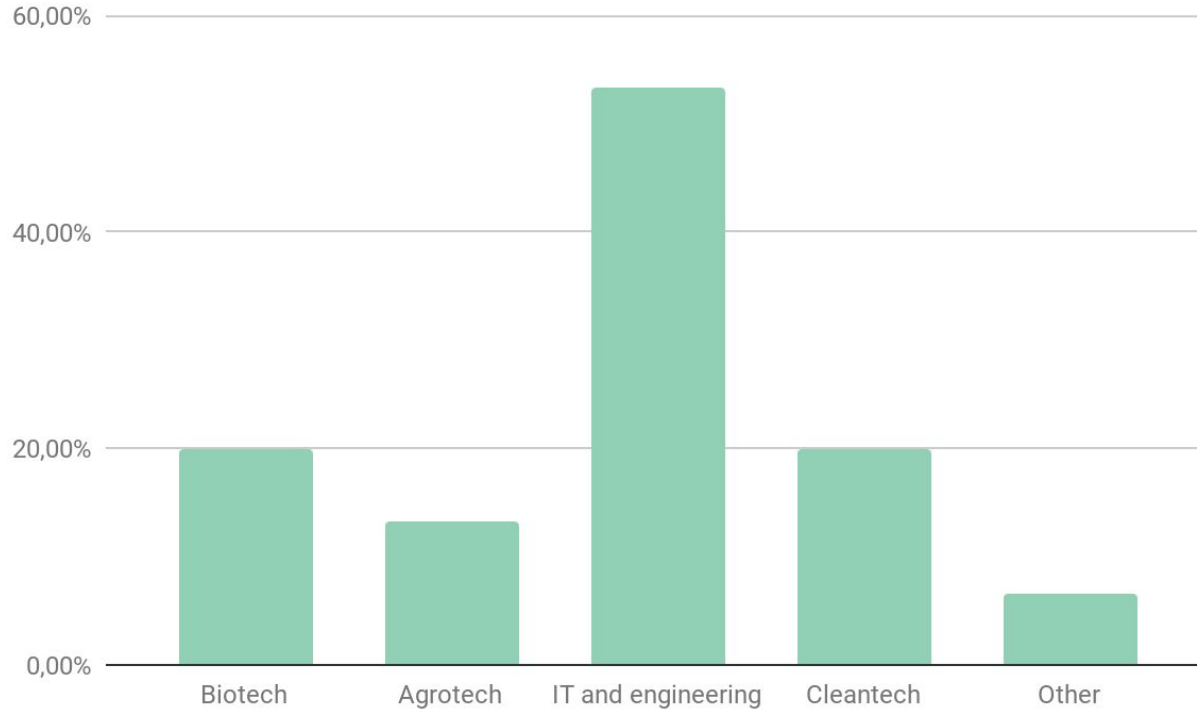


Up to FUTURE
Public association
Technology transfer office

Up to Future

Distribution of hub's programs

The relative number of hub programs by specialization, in percentage



Top 10 Life Science Conferences



9-th International Youth Science
Forum Litteris et Artibus
Biotechnology, Ecology & Sustainable
Development



Scientific and practical conference with
international participation "Topical issues
of clinical and industrial transfusion"



9th International Conference
"Bioresources and Viruses"



7th Congress of the
Radiobiological Society of Ukraine
with international participation



Scientific-practical conference
with international participation
"Modern possibilities of radiation
visualization"

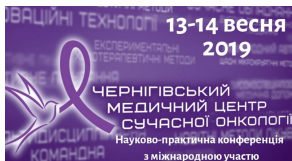


УКРАЇНСЬКИЙ ЦЕНТР
ХІРУРГІЧНОГО ЛІКУВАННЯ
ГРИЖ ЖИВОТА

Scientific-practical conference with international
participation Modern technologies in alloplastic
and laparoscopic abdominal surgery



Conference "Topical problems of
veterinary biotechnology and
infectious pathology of animals"



Scientific and practical conference on
the introduction of European
technologies in the treatment of
cancer patients. Chernihiv model



LabComplexEx



Pharma Tech Expo

45 conferences related to Life Sciences

3rd International Congress on Advances in Bioscience and Biotechnology	10.07.19 — 14.07.19	Kyiv
7th National Congress with international participation "Radiology in Ukraine"	27.03.19 — 29.03.19	Irpın
9th International Conference "Bioresources and Viruses"	09.09.19 — 11.09.19	Kyiv
9-th International Youth Science Forum «Litteris et Artibus»: Biotechnology, Ecology & Sustainable Development	21.11.19 — 23.11.19	Lviv
Biotech Convention "Biotech Con"	17.05.19 - 18.05.19	Kyiv
The second scientific-practical conference for cosmetologists and specialists in aesthetic medicine "Vesna Beauty Conference"	13.04.19 — 13.04.19	Kyiv
II Ukrainian scientific-practical Internet-conference: «Strategies for innovative development of natural disciplines: experience, problems and prospects»	21.03.19 — 21.03.19	Kropyvnytskyi
III Online conference of young scientists "Genetics and selection of agricultural plants - from molecule to variety"	28.08.19 — 28.08.19	online
Beneficial Bacteria PR0 / PRE BIOTIC Conference	20.02.19 — 21.02.19	Kyiv
Conference on topical issues of epidemiological surveillance	25.03.19 — 29.03.19	Kyiv
Conference "7th Congress of the Radiobiological Society of Ukraine with International Participation"	01.10.19 — 04.10.19	Kyiv
Conference "Actual problems of veterinary biotechnology and infectious pathology of animals"	27.06.19 — 27.06.19	Kyiv
Міжнародна конференція молодих учених «Актуальні проблеми ботаніки та екології»	06.09.19 — 09.09.19	Kharkiv
International Scientific and Practical Conference "Urban Permaculture"	26.01.19 — 27.01.19	Kyiv
International scientific-practical conference "Science news: research, scientific discoveries, high technologies" - ΛΟΓΟΣ	31.03.19 — 31.03.19	Kharkiv

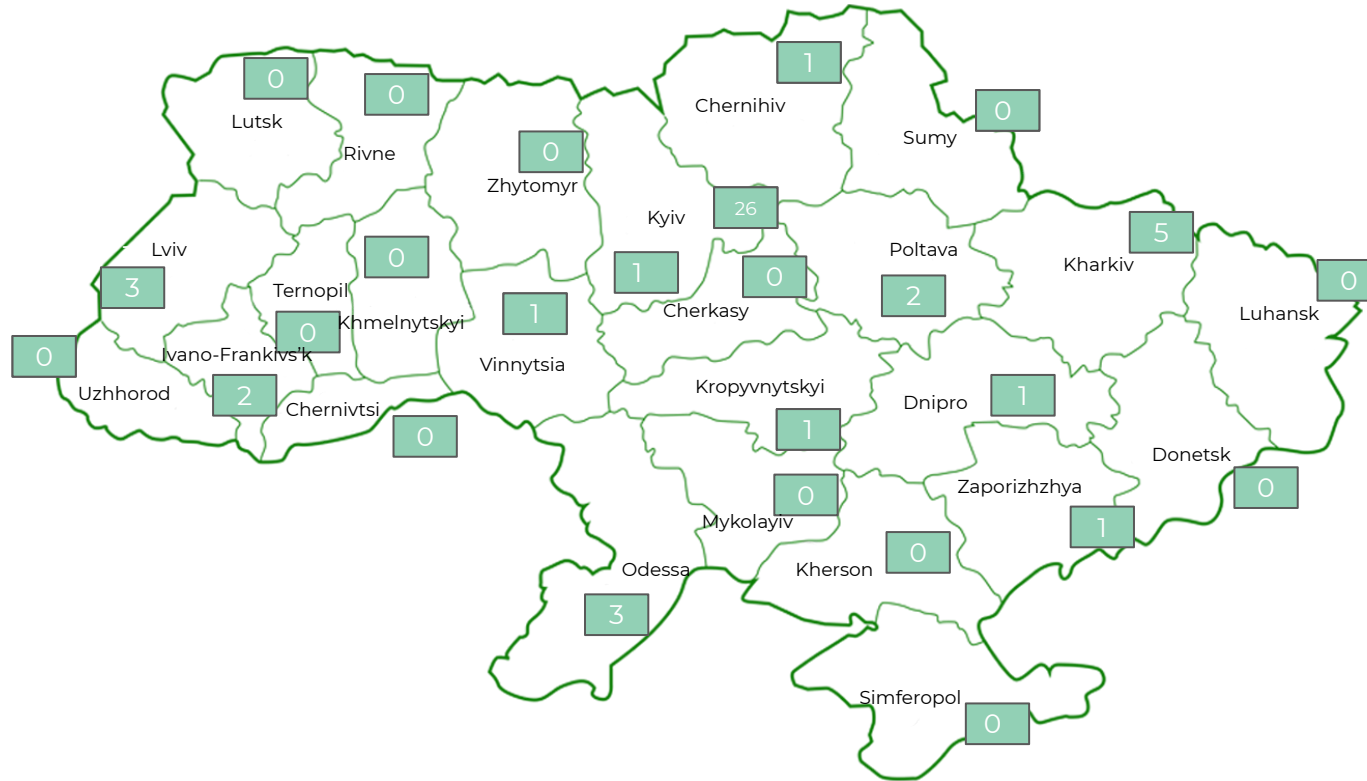
45 conferences related to Life Sciences

International scientific-practical conference "Priority ways of science development"	16.06.19 — 16.06.19	Kyiv
Scientific and Practical Conference "Topical Issues of Public Health and Environmental Security of Ukraine" (15th Marzeev readings)	17.10.19 — 18.10.19	Kyiv
Scientific-practical conference "Diabetes mellitus - Eye complications. Glaucoma. An Interdisciplinary Approach »	18.04.19 — 19.04.19	Kyiv
Scientific and practical conference with international participation "Topical issues of maxillofacial surgery of childhood"	13.12.19 — 14.12.19	Kyiv
Scientific-practical conference with international participation "Modern technologies in alloplastic and laparoscopic abdominal surgery"	14.11.19 — 15.11.19	Kyiv
Scientific and Practical Conference with International Participation "Multidisciplinary Approach in Emergency and Rehabilitation Medicine"	30.03.19 — 31.05.19	Kyiv
Scientific and practical conference with international participation "Topical issues of clinical and industrial transfusion"	12.09.19 — 13.09.19	Kharkiv
Scientific-practical conference with international participation "Topical issues of treatment of orthopaedic pathology and consequences of injuries of the musculoskeletal system"	19.09.19 — 20.09.19	Dnipro
Scientific-Practical conference with international participation "Topical issues of traumatology and osteosynthesis"	18.04.19 — 19.04.19	Vinnytsia
Scientific-Practical Conference with international participation "Modern possibilities of radiation visualization"	19.09.19 — 20.09.19	Odesa
Scientific-Practical conference on the topic: "Implementation of European technologies in the treatment of cancer patients. Chernihiv model"	13.09.19 — 14.09.19	Chernihiv
2019 Ukrainian Mammal Mapping Conference	28.03.19 — 29.03.19	Kyiv
XV International Scientific Conference of Students and Post-Graduate Students "Youth and the Progress of Biology"	09.04.19 — 11.04.19	Lviv
Fourth Ukrainian Scientific-Practical Conference "Topical Issues of Joint Pathology Treatment and Endoprosthesis"	12.09.19 — 14.09.19	Prymorsk
IV International Scientific-Practical Conference "Theory and Practice of Modern Science"	15.05.19 — 16.05.19	Kyiv

45 conferences related to Life Sciences

IV International Scientific- Practical Conference "Perspectives of Development of Modern Science"	20.07.19 — 21.07.19	Kyiv
IV Scientific-Practical conference "Topical issues of phlebology: venous thromboembolism and its consequences"	04.07.19 — 06.07.19	Yaremche
LabComplexEx	25.09.19 - 27.09.19	Kyiv
Ophthalmic Hub 2019 Scientific-Practical conference with international participation	15.03.19 — 16.03.19	Kyiv
Pharma Tech Expo	17.09.19 - 19.09.19	Kyiv
Pharmacoeconomics in Ukraine: state and development prospects	24.05.19 — 24.05.19	Kharkiv
Vernadsky Challenge	17.04.19 — 18.04.19	Kyiv
VI congress of the Ukrainian Society of Cell Biology with international representation	18.06.19 — 21.06.19	Yaremche
VI International Congress on Hemostasis, Anesthesiology and Intensive Care Black Sea Pearl 2019	21.05.19 — 23.05.19	Odesa
VII AHET Congress (Scientific Society of Anatomists, Histologists, Embryologists, Topographers of Ukraine)	02.10.19 — 04.10.19	Odesa
VII Scientific-Practical Conference with international participation "Minimally invasive surgery and urology of pediatric age 2019"	19.09.19 — 20.09.19	Kyiv
VIII International Congress of Oncologists of Ukraine UOS-2019	11.04.19 — 13.04.19	Kyiv
X Jubilee International Medical Forum	17.04.19 — 19.04.19	Kyiv
XIII Ukrainian Conference of Young Scientists of the Institute of Molecular Biology and Genetics of NAS of Ukraine	22.05.19 — 25.05.19	Kyiv
XV International Conference and Exhibition "Poultry Farming 2019"	16.09.19 — 20.09.19	Truskavets

Geographical distribution of conferences



12 investors related to Life Sciences

Ukraine



EU



USA



Investments related to Life Sciences industry

AVenture Capital

Bookimed

Chernovetskyi Investment Group



Dragon Capital



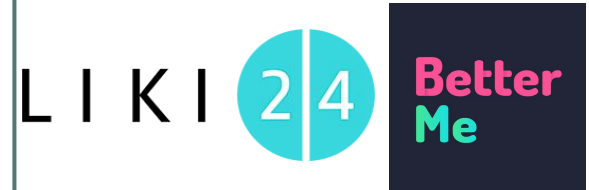
FMO



DuPont Pioneer

*Seed production plant in
the v. Stas, research
station in the v. Lyubartsi*

Genesis Investments



Investments related to Life Sciences industry

Horizon Capital



Bayer AG

Factory for the production of
agricultural seeds in Zhytomyr
region

TAS Group



UFuture



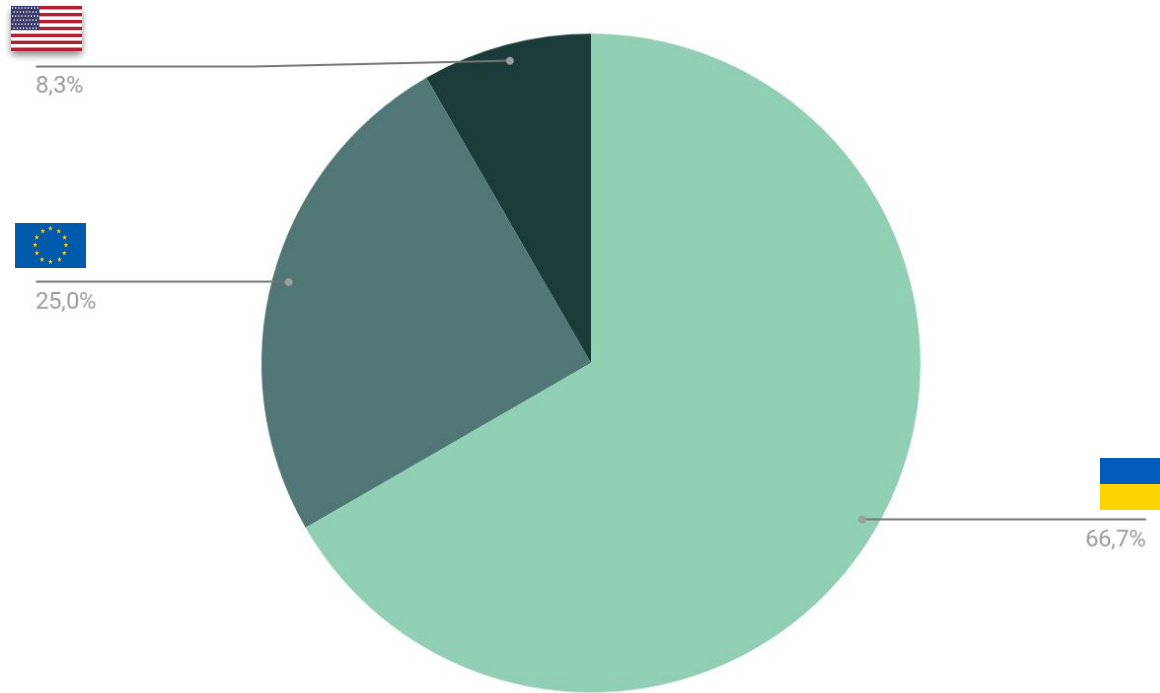
Syngenta

Scientific-breeding *center*
in Dnipropetrovsk region

TA Venture



Geographical distribution of investors



20 scientific institutes related to Life Sciences

NASU



NAMSU



NAASU



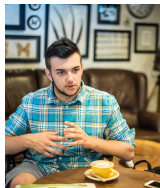
Інститут зернових культур НААН України

25 leaders related to Life Sciences industry

Startupers



Byduk Dmytro



Frechka Valentyn



Gazda Dmytro



Komarenko Victor



Loseva Dariya

Bloggers and sciences popularizers



Boldyriev Oleksiy



Koliada Alexandr



Maslova Olga



Ozerna Daria



Piven Oksana



Senenko Anton



Skorokhod Olexandr



Yesylevskyy Semen

Top managers and entrepreneurs



Dydenko Svitlana



Humeniuk Mykola



Khmelnytskyi Vasyl



Kolodyuk Andriy



Valikhnovsky Rostyslav



Efymenko Kostyantyn



Zhebrovska Filia

Public figures and statesmen



Krupskaya Olga



Naida Igor



Petrenko Oleg



Reznichenko Alexei



Suprun Ulana

25 scientists related to Life Sciences industry



Belan Pavlo,
Neuroscience



Blume Yaroslav
Genomics



Bondarenko Igor
Oncology



Demchenko Oleksandr,
Biophysics



Didukh Yakiv,
Geobotany



Dosenko Victor,
Pathophysiology



Dragan Anatoliy,
Molecular biotechnology



Dzyadevych Sergei,
Biosensorics



Elska Ganna,
Biosensorics



Hovorun Dmytro,
Molecular biophysics



Filonenko Valeriy,
Molecular biotechnology



Kashuba Vladimir,
Molecular oncogenetics



Kostikov Igor,
Physiology



Krishtal Oleh,
Neuroscience



Lushchak Volodymyr,
Biochemistry



Minchenko Oleksandr,
Molecular biology



Mosyakin Sergei,
Evolutionary botany



Ostash Bohdan,
Genetics



Sivolob Andrei,
Molecular biology



Soldatkin Alexei,
Biosensorics



Sibirny Andriy
Biotechnology



Zagorodniuk Igor,
Evolutionary zoology



Zav'yalov Vladimir,
Molecular immunology



Zholos Aleksander
Biophysics



Shuba Yaroslav,
Biophysics

Life Science Industry in Ukraine



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Methodology



Methodology

The purpose of the report was to reflect the extent and prospects of the knowledge-intensive Life Science industry at all levels of R&D in Ukraine, from the emergence of ideas created by leading scientists, engineers and entrepreneurs, scientific researches to industrial, large-scale market introduction. Therefore, we have analyzed and conducted statistical surveys of the following categories: companies, research institutes, hubs, investors, conferences. Besides, 50 people were selected to positively influence the development of the Life Science industry as well as conferences around this area.

The main criteria for the selection of companies were the presence of technology-intensive technologies, introduced into industrial practice, as well as the availability of their scientific developments, investments in modern technologies and socially significant actions aimed at the development of innovations in Life Science. However, the financial performance of the company and activity in the information space became equally important. We have identified and divided companies into markets in which these entities operate, resulting in the dominant markets being the pharmaceutical, healthcare, agro, food and industrial biotechnology industries.

We have paid considerable attention to the distribution of companies by the technologies they use in the production of goods and services. We have distinguished the following technologies: chemical synthesis, selection, environmental engineering, information technology and engineering, molecular biotechnology and biosynthesis, along with the purification of natural raw materials, cell technologies, physiology and anatomy.



Methodology



Companies were selected according to the following criteria:

- *activities in the field of Life Science;*
- *the presence of the R&D component in the business process;*
- *size;*
- *media presence;*
- *investment prospects.*

In the analysis, we paid attention to the analysis of research institutes, study of their activity fields, achievements and participation in the scientific and educational movement. Twenty institutes were selected, belonging to different institutions: the NAS, NAMS and NAAS, all of them are studying different fields of life sciences.

The research institutes were selected by the following criteria:

- *scientific researches in the field of Life Science;*
- *participation in relevant scientific conferences;*
- *number and quality of publications;*
- *number of patents;*
- *impact factor;*
- *availability of world-class researches and researchers.*



Methodology



It was important to characterize a cadence of high-tech projects, organizations and accelerators that contribute to increasing the number of successful startups. We have selected 15 hubs that *unify and contribute to the development of Life Science field projects* through specialized acceleration programs. The report also included hubs that were not determined to our area of interest but had graduates - successful startups in the Life Science field. Besides, we have distributed hubs, depending on specialization in the areas of *biotechnology, agro-technology, IT and engineering, "green" technologies*.

Hubs were selected according to the following criteria:

- *investment in Life Science startups;*
- *availability of successful startups in the portfolio;*
- *specialized training programs;*
- *the size of the range of services for startups;*
- *integration into the global startup infrastructure.*

In terms of investors, we have selected 12 who have invested in startups and companies working in Life Science field. It should be noted that both Ukrainian and foreign investors were included in the rating, provided that they made investments in Life Science in Ukraine.

Investors were selected according to the following criteria:

- *investing in startups and companies working in Life Science field;*
- *having a portfolio of successful startups.*



Methodology



25 most influential Ukrainian scientists in the field of life sciences have been established. They were selected according to the following *criteria*:

- *Hirsch index on Scopus and Web of Science databases and other scientometric indicators;*
- *their publications are available in leading scientific publications;*
- *participation in world-class scientific researches.*

Also, a separate category includes thought leaders who spread news and analytics on the development of the sciences about life in Ukraine, promote its development, promote biotech entrepreneurship informatively and ideologically.

They were selected according to the following *criteria*:

- *conducting information activities related to the sciences investigating life in Ukraine;*
- *presence of a large audience;*
- *position aimed at supporting the development of the sciences investigating life in Ukraine.*

The sources of structured and unstructured information for the report were the databases of business information finding platform **Crunchbase and Statista**, the **State Statistics Service of Ukraine**, data of international rating agencies, **IMF and World Bank**, reports of analytical agencies. Separate data were obtained from representatives of relevant companies, startups and investment funds. Statistical analysis, aggregation and categorization of information, ranking, development of benchmarks were used in the analysis of information.



About Bionity

Bionity is a Ukrainian analytical and entrepreneurial hub in the field of biotechnology and Life Sciences.

Bionity aims to comprehensively promote the development of innovative biotechnology entrepreneurship in Eastern Europe. The company provides economical and technological consulting for companies and startups and helps to implement new technologies and enter new markets.



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The material is prepared only for general purposes.

The material cannot be considered as investment, financial, technological or business advice.

Consulting services are provided individually.

Bionity spends the utmost attention to the accuracy and reliability of the information presented, but cannot promise it.

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