INVEST TATARSTAN

Medicine & Pharmaceuticals in Tatarstan: Current State and Future Prospects
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Impressive History

Mikhail Lomonosov (1711-1765)
Created a system of higher education in Russia

Dmitri Mendeleev (1834-1907) - arranged the 63 known elements into a periodic table based on atomic mass and also invented 40° vodka formula.

Ivan Pavlov (1854 - 1929)
The first Russian Nobel Prize laureate in the Theoretical Medicine. He became famous for his research on the regulatory effect of the nerves.

Nikolai Basov (1922 - 2001)
Russian physicist whose pioneering work led to the invention of the laser.

Alexander Popov (1859-1905)
In 1895 he developed the first radio-receiver.
Overview of Russia

- Huge and growing market
- Developed infrastructure
- Excellent macroeconomic situation
- Aging population
- Raising purchasing power of the people
- Legal reform aimed to improve health care industry and encourage local production
- Governmental support
- Custom union with Belarus and Kazakhstan
- Accession to the WTO as a guarantee for transparent environment
Main Opportunities in the Russian Market

- Growing demand for pharmaceuticals produced locally
- Growing expenditures on state programs on federal and state level
- Opportunities for high-cost drugs, particularly in the state-financed programs
- Government support to foster growth of the local pharmaceutical industry
- Growth of local R&D and biotech for innovative drugs
The Key Drivers of the Market

Governmental Support
The Russian Healthcare Development Program 2020 (aka Pharma 2020) substantially amends legal framework of the Russian healthcare market and significantly raises state expenditure on the sector. The legal changes, above all, aim to encourage local production of pharmaceuticals.

Increase of Consumption
In comparison with the Western markets the per capita spending on pharmaceuticals remains five to seven times smaller. This low consumption level is not sustainable and the market is destined to further expansion fueled by increase of both purchasing power and awareness of more healthy lifestyle.

Demographic Situation
Russia’s gradually aging population is another significant growth driver of the healthcare industry. Life expectancy at birth will increase to 75 years in 2020 from the current 69 years.

Medical Insurance
The insurance is expected to have significant impact on the commercial retail segment due to its dramatic increase in the next years.

GDP Per Capita Growth in Russia

GDP per capita (current US$)

Source: World Bank
The Federal Government Expenditure on Healthcare Sector

Sales in Russia - Demand for pharmaceuticals will double in next 10 years

Market growth is expected to be around 15% per year.

US$ billions

<table>
<thead>
<tr>
<th>Sales in 2011</th>
<th>Projected sales in 2020</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>US$ billions</td>
</tr>
</tbody>
</table>

Source: Business Monitor International
Patented versus Generic Products

Generics will play main role in driving up pharmaceutical sales

- Additional spending on patented products (2020)
- Additional spending on generics (2020)
Innovative Pharmaceuticals

The Russian market as a whole is driven rather by generic low cost products (out-of-pocket expenditure). However, about 30% of pharmaceuticals purchase is funded by the state and thus guarantees stable and steady income for innovative medical and biotech products sellers.

- **30% of Drugs are State-funded**
- It encompasses high-cost innovative products (treatment of tuberculosis, HIV, cancer, etc.)
- Stable business climate for high-cost pharmaceuticals development, production and sales
The Russian Government will pour **4.2 billion USD** into Modernization of Healthcare and Biotech Industries.

**Pharma 2020 Investment Program Until 2020**

<table>
<thead>
<tr>
<th>Volume of investment ($ billion)</th>
<th>4.2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical R&amp;D projects</td>
<td>3.2</td>
</tr>
<tr>
<td>Transition to GMP (Good Manufacturing Practice)</td>
<td>0.9</td>
</tr>
<tr>
<td>Staff training and infrastructure development</td>
<td>0.1</td>
</tr>
<tr>
<td>Total</td>
<td>4.2</td>
</tr>
</tbody>
</table>

**5 key goals of the investment**

- Facilitation of production of pharmaceuticals within the country
- Development of R&D facilities
- Production and commercialization of innovative medical products
- Increase of export potential (8 times)
- Training of scientific medical personnel

Legal Framework Reform

The reform of the pharmaceutical industry which was initiated by the Government in 2008 is still actively progressing. The year 2012 saw the adoption of a number of highly important legislative acts as well as amendments and corrective adjustments to existing industry legislation.

<table>
<thead>
<tr>
<th>Goals (2020)</th>
<th>Preferences to local production over imports</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase quality and availability of healthcare</td>
<td>More transparent, fair and efficient market</td>
</tr>
<tr>
<td>Stop the decline of population</td>
<td>Significant increase in government spending</td>
</tr>
<tr>
<td>Increase life expectancy at birth to 75 years</td>
<td></td>
</tr>
<tr>
<td>Decrease infant mortality by 20% and maternal mortality by 15%</td>
<td></td>
</tr>
<tr>
<td>Decrease tabacco consumption by 25% and the consumption of alcohol by 9 litres per capita/year</td>
<td></td>
</tr>
</tbody>
</table>

Source: Ernst & Young: Survey of the pharmaceutical industry in Russia, 2012; Frost & Sullivan, Changes in the Russian Pharmaceutical Market Following Introduction of 2020 Governmental Reforms.
Compulsory Medical Insurance
Significant Growth in Volume in Russia

The proportion of compulsory medical insurance as a share of GDP will move up from 3.56% to 5.5%


Source: Federal Service for Financial Markets
# Volume of State Healthcare Expenditure and Its Growth in Russia

<table>
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<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Expenditures (billion rubbles)</td>
<td>1,933</td>
<td>2,230</td>
<td>2,773</td>
<td>2,993</td>
<td>4,238</td>
<td>4,505</td>
<td>4,789</td>
<td>5,090</td>
<td>5,411</td>
<td>5,752</td>
</tr>
<tr>
<td>Increase %</td>
<td>-</td>
<td>15</td>
<td>24</td>
<td>8</td>
<td>42</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Proportion of GDP</td>
<td>3.56</td>
<td>3.80</td>
<td>4.28</td>
<td>4.13</td>
<td>5.50</td>
<td>5.50</td>
<td>5.50</td>
<td>5.50</td>
<td>5.50</td>
<td>5.50</td>
</tr>
</tbody>
</table>

Source: The Ministry of Finance of the Russian Federation
The Russian Government Supports Local Productions Over Imports

The overriding goal of the Pharma 2020 is to secure that at least 50% of the pharmaceuticals (value terms) circulated in the Russian market are of domestic origin.

Amended legal framework encourages to localize production in Russia

The executives, industry experts and analysts believe:

- State policy will encourage foreign manufacturers to establish production in Russia
- State policy will encourage the acquisition of Russian companies by foreign manufacturers
- State support will favor growth in Russian manufacturer's share of the market
- Despite state support, Russian manufacturer's share of the market will decrease
- Other

Source: Ernst & Young: Survey of the pharmaceutical industry in Russia, 2012
Clinical Trials

A bill drafted by the Federal Anti-Monopoly Service in March 2012 suggests the abolition of the requirement for local clinical trials. Such a change implies:

• reduction of the time taken to introduce a medicinal product to the market
• decrease in expenditure on development of a medical product
• lowering the eventual cost of the product
• reducing red tape and hassle free introduction of new products

Source: Ernst & Young: Survey of the pharmaceutical industry in Russia, 2012
Procurement of Goods for Public Needs


- **Price preferences**: In an auction, if a supplier submitting the lowest bid offers to supply products that are not of Russian or Belarusian origin, the final contract price paid to the supplier will be reduced by 15%. Similarly, in a tender, if the winner offers products of Russian or Belarusian origin, the final contract price paid to the winner will be increased by 15%.

- **Selection preferences**: Where the same terms and conditions are offered by two or more suppliers in a state tender, the government will be required to award the contract to the supplier that offered products of Russian or Belarusian origin.

Russia is joining the world economy

- WTO membership ensures greater market access for Russian exports and guarantees stable, rule-based trade relations
- Russia is currently negotiating a free trade agreement with the European Union
- Currently has bilateral free trade agreements with Armenia, Georgia, Kyrgyzstan, and Ukraine
- Duty-free access to > 226 million consumers (Custom Union with Belarus and Kazakhstan)
## Recent Investment Made by Pharmaceutical and Biotech Multinationals in Russia

<table>
<thead>
<tr>
<th>Company</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AstraZeneca, Teva, Novo Nordisk, Servier, Nycomed</td>
<td>Investment in the construction of a production facility.</td>
</tr>
<tr>
<td>GalaxoSmithKline</td>
<td>Local company Binnopharm will produce its innovative pharmaceuticals.</td>
</tr>
<tr>
<td>Orion, Stada, Sanofi-Aventis, Gedeon Richer</td>
<td>Full acquisition or acquisition of a controlling stake of a local company.</td>
</tr>
<tr>
<td>Johnson &amp; Johnson</td>
<td>Enlargement of its production plant in Russia.</td>
</tr>
<tr>
<td>Genzyme</td>
<td>Joint research project with ChemRar.</td>
</tr>
<tr>
<td>Pfizer</td>
<td>An agreement with Russian biopharmaceutical company Petrovax to manufacture innovative vaccines.</td>
</tr>
<tr>
<td>Novartis</td>
<td>Developed partnership focused on local manufacturing and R&amp;D.</td>
</tr>
</tbody>
</table>

Market Summary

Market Conditions

- Government Support
- Growing Personal Income

Outcome

- Increase of Pharmaceutical Spending
- Developed Healthcare Industry Infrastructure and Qualified Labor Force

Opportunities

- Localization of Production and R&D facilities
- Profitable Sales
Tatarstan

One of the most economically developed regions of the Russian Federation

Strategic location in the heart of Russia’s consumer basin (seven of Russia’s 11 largest cities, or more than 50% of the country’s population, lies within 1000 kilometers)

Investor-friendly and red tape free investment environment
Tatarstan – 8 priority sectors for investment

Tatarstan has set out on a plan to diversify and modernize the economy, identifying eight priority industries for attracting investment:

- Chemical & petrochemical
- Machinery & automotive parts production
- Construction & building materials production
- Agriculture & food processing
- Medicine & pharmaceuticals
- IT & telecommunications
- Halal industry
- Service industry & tourism
Pharmaceutical Market in Tatarstan

The pharma market has been experiencing significant growth in the last years, in particular pharmacy retail sector.

### Main market indicators

<table>
<thead>
<tr>
<th>Indicator</th>
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<tbody>
<tr>
<td>Growth of market in terms of value in 2012</td>
</tr>
<tr>
<td>The size of the market</td>
</tr>
<tr>
<td>Retail sector growth</td>
</tr>
<tr>
<td>Consumption of pharmaceuticals in Tatarstan compared to Russian average</td>
</tr>
</tbody>
</table>

The decrease in sales of pharmaceutical units suggests decline in the demand for old drugs and the growing popularity of innovative products.
Tatarstan – a reservoir of highly-skilled employees

Human capital plays crucial role in economic prosperity of Tatarstan

- 2,050,876 economically active population
- 1.2% unemployment rate
- ~230,000 students (3rd largest population in Russia)
- 28 institutions of higher education
- 23,240 RUB (734 USD) average monthly salary

<table>
<thead>
<tr>
<th>Doctors and nurses per 10,000 people</th>
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<tbody>
<tr>
<td>Doctors</td>
</tr>
<tr>
<td>Nurses</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>People employed in healthcare industry</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Healthcare staff</td>
<td>48,394</td>
</tr>
<tr>
<td>Doctors</td>
<td>12,522</td>
</tr>
<tr>
<td>Nurses</td>
<td>35,872</td>
</tr>
<tr>
<td>Graduates in healthcare majors/year</td>
<td>600 – 1,100</td>
</tr>
</tbody>
</table>
Public-private Partnership Case Study

Kazan Center of High Medical Technologies and Johnson & Johnson

- an educational project designed to set up high standards in postgraduate medical training in effective use and implementation of medical technologies

- the medical personnel receives training on how to capitalize on accurate usage of medical technologies to improve the efficiency of health care

- the first instutution of its kind in the Russian Federation

- the center closely cooperates with one of the leading multinational pharmaceutical companies Johnson & Johnson and thus is an excellent success story of public-private partnership in Tatarstan

- more than 500 participants from 28 regions of the Russian Federation have been trained in the center

http://www.kazanmedcenter.com/
http://www.jnj.com/
Tatchempharmpreparaty Company

- one of the largest manufacturers of pharmaceuticals and surgical suture materials in the Russian Federation and the only producer of surgical gut (catgut)
- provides licensed and contract manufacturing of pharmaceutical products for our foreign partners
- provides full support in arranging contract research, conducting both pre-clinical and clinical trials, registration of medicines in the Russian Federation and CIS countries as well as distribution
- their manufacturing facilities comply with international GMP (good manufacturing practice) standards
- http://www.tatchempharm.ru/
KIR Company

Area of Activity

- complex automation and implementation of innovative technologies in healthcare (software)

Offices

- Moscow, Prague, Kiev, Nizhniy Novgorod, Kazan, Yekaterinburg and Orenburg

Mission

- to create a solid foundation for development and prosperity by means of implementation of innovative technologies

http://kirkazan.ru/
AVA Kazan

- a clinic and fertility center which belongs to international network of clinics ABA (in Russia first clinic opened in St. Petersburg)
- one of the leading worldwide centers for egg donation and embryo donation
- cooperates with the Finnish network of clinics „Mihilyaynen“
- highly-skilled and international medical staff
- clinics: AVA-Tampere and AVA-Turku in Finland, AVA-Lisbon in Portugal, AVA-Riga in Latvia, in Russia - St. Petersburg and Kazan

http://www.avakazan.ru/
http://www.avapeter.com/en/about/
Kazan Medical Instruments Plant

The largest manufacturer of medical instruments both in Russia and in Europe.

Their products are well known in Russia, the CIS countries, the USA, Germany, Israel, Greece, Egypt, Australia, Sweden, Japan and other countries.

Enormous production capacity enables the company to deliver high-quality products at a competitive price.

http://www.kmiztrade.ru/en/about
Kazan State Medical University

- KSMU is one of the most famous and most respected centers of medical education and science in Russia. The teaching staff and graduates of the University have made a significant contribution to global and domestic medicine.
- is very attractive for foreign students - every tenth student comes from abroad, every fourth student is from the other region of Russia
- is a recognized leader in the country in developing and implementing new educational methods
- represents the leading scientific schools of Russia with true capability to effectively implement the results of research into practice
- http://www.kazansmu.com/

- 5500 students
- 8 Faculties
- 64 Departments
- 1500 staff members
Success Story of Foreign Company - FAVEA

- FAVEA is a leading European pharmaceutical engineering company based in the Czech Republic.
- The company specializes in design and construction of: pharmaceutical and biotechnological plants, Medical and healthcare centers, Medical device plants.
- Favea is most active in Russia (including Tatarstan) and the CIS countries, where successfully implemented more than 40 turnkey projects for the major pharmaceutical manufacturers.
- Favea has been implementing GMP solutions in the Russian market for nearly 20 years
- Favea provides design and construction solutions for Tatar company TACHEMPHARMPREPARATY:

http://eng.favea.org/
FAVEA’s Awards

The President of the Republic of Tatarstan Rustam Minnikhanov has honored FAVEA with the national award – for the mutually beneficial cooperation with Tatarstan enterprises and strengthening social and cultural relations between Tatarstan and the Czech Republic.

FAVEA was honored with award for the best business project.

FAVEA project "Construction of the medicines innovation research and development center,“ was awarded in the category of „Best Innovation Infrastructure“. 
The Institute of Fundamental Medicine and Biology of Kazan Federal University

- one of the leading educational institution in Russia in the fields of medicine and biology
- more than 1400 students, many of them foreigners
- internship program cooperation with the best research centers in 20 countries (Germany, France, Turkey, Austria, Japan, Poland, China, etc.)
- KFU is the best University in Volga region and belongs to 18 best universities in Russia according to the QS World University Ranking.
Republican Clinical Hospital

- The autonomous public health care institution Republican Clinical Hospital of the Republic of Tatarstan is the largest diversified medical institution of the Republic of Tatarstan.

- Annually more than 30 thousand patients receive institutional care; over 18 thousand surgeries are executed; more than 250 thousand visits are registered.

http://en.rkbbrt.ru/history/
Kazan Scientific Research Institute of Epidemiology and Microbiology

- four research laboratories
- diagnostic clinic with focus on infectious and allergic diseases
- development of rational schemes of immunotherapy
- testing of pharmaceuticals
- provides expertise and scientific support to the doctors on current issues in allergy and immunology
Kazan Smart City

A greenfield development project, Kazan Smart City is the first example of holistic urban planning according to smart city principles in all of Russia.

Kazan Smart City is a groundbreaking urban development project designed to spur the growth of investment into high technology, medicine, education, and tourism. The project is being developed using the latest advancements in urban planning and engineering.

Kazan Smart City in Numbers

Gross Development Value: 10 bln. USD
Total area: 650 ha
Population: 59,000
Jobs created: 39,000
Tourist visits per year: 337,000
Gross Floor Area: 7mln. M²

Residential: 2.7mln m²
Retail: 0.8mln m²
Office: 1.2mln m²
Hotel: 0.2mln m² (5 units, 1 320 rooms)
Enterprise: 1.3mln m²
Institution: 819th m²

More information at: http://kazansmartcity.com/
## Fiscal Preferences for Medical Manufacturing in Kazan Smart City Special Economic Zone

<table>
<thead>
<tr>
<th>Taxes</th>
<th>General rate</th>
<th>Rate for Kazan Smart City Residents</th>
<th>Rate for Technology precinct</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value Added Tax</td>
<td>18%</td>
<td>18%</td>
<td>18%</td>
</tr>
<tr>
<td>Corporate Tax</td>
<td>20%</td>
<td>15.5%</td>
<td>2 – 15.5%</td>
</tr>
<tr>
<td>Personal Income Tax</td>
<td>13%</td>
<td>13%</td>
<td>13%</td>
</tr>
<tr>
<td>Social Insurance Contribution</td>
<td>30%</td>
<td>30%</td>
<td>14 – 28%</td>
</tr>
<tr>
<td>Land Tax</td>
<td>1.5%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Property Tax</td>
<td>2.2%</td>
<td>0.01%</td>
<td>0%</td>
</tr>
<tr>
<td>Transport Tax</td>
<td>Depends on engine power</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

The Russian Federation has signed an agreement with more than 70 countries to avoid double taxation.
Golden Opportunity

Produce in Tatarstan

Sell in Entire Russia

Grasp the Huge Windfall

invest.tatarstan.ru
Why aren’t you investing in the Republic of Tatarstan?

Contact us

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Email: export@tatar.ru