One cannot find out when the first smallpox appeared in Lithuania. There is no doubt that is was unavoidable in Lithuania as the smallpox was rampant in neighbouring countries.

In 1796 an English doctor E.Jenner suggested the method of vaccination against smallpox. The discovery of dr.E.Jenner was applied to the prevention of smallpox in Lithuania in a comparatively short period.

In the answer of the request of the czar of Russia Abraham-John Bernard wrote, that he was the first doctor in Lithuanian province who began vaccination in 1801 [1].

In 1820, a service record writes about A.Bernard: «The inspector of the Lithuanian – Vilnius medical administration, a member of medical societies in London, Moscow and Vilnius, John Bernard, 58 years old. He studied in London and Edinburgh. He knows Latin, French, English, Russian and Polish» [2].

In 1790–1797 A.-J.Bernard worked in the Kurland province, in Hasenpoth, now Aizpute, in 1810–1811 he worked in Jelgava [3].

In 1798–1802 A.-J.Bernard worked as a doctor in the district of Šiauliai, later he worked in military hospitals in Vilnius, Kaunas and Kobrin [2]. After some time he worked as inspector of the Medical administration – in 1812–1813 and in 1825–1827 in the Minsk province and from 1819 to 1822 in the Vilnius province. Dr. A.-J.Bernard spent his last years as a private doctor in Moscow [4].

In 1802 in Vilnius A.-J.Bernard published a booklet in Polish «The Report to Respectable Public About the Cow Smallpox». In that 19 page booklet A.-J.Bernard popularizes the vaccination method by E.Jenner. He wrote: «In Mittaw a lot of doctors were occupied in vaccination, but especially praiseworthy are my friends – professor Groscheke and doctor Schiemann, as veritable rescuers of the Society» [5].

That booklet was a convincing argument about the reliability of vaccination and inoffensive measure for prevention of smallpox, based on his own experience and on the experience of doctors from different countries.
DONIESIENIE

WYDANE

DO

SZANOWNIEJ PUBLICZNOŚCI

O SZCZEPNIĘNIU

KROWIEJ OSPY

PRZEZ

A. BERNARDA

Doktora Powiatowego Szawelskiego

Ekonomii JO. Xięcia Jmści

ZUBOWA

i Współtowarzysza Sztuki Lekarskiej

Londyńskiego.

Za Pozwoleniem Censury Wileńskiej

w Drukarni Akademickiej.

Roku 1802.
O WAKCYNIE

CZYLI

TAK NAZWANEY

OSPIE KROWIEY

przez


J. Jm: Mci Sowietnika Nadwornego.

"Tanta rerum consentiens, conspirans, con tinnata cognatio, quem non coget ea com probare."

Cicero de Nat. Deor

w WILNIE,

w Drzeharni Impieratorskiego Uniwersytetu

Roku 1803.
A.-J. Bernard wrote: «I endeavoured to make different experiments on myself, including my three children that had no fallen ill with smallpox before. The older daughter was 4 years old, the younger one was 2, and the youngest son was 7 months old» [6].

The propagation of the vaccination in Lithuania was spread by the professors of the Vilnius university's Faculty of Medicine Joseph Frank (1771–1842) and August Becu (1771–1824), the dean of the Vilnius university of Medical Faculty John Andrew Lobenwein (1758–1820), and the Medical Society in Vilnius, founded in 1805. The researcher of the history of the vaccination in Russia V. Gubert (1890) noted that the scientists of Vilnius were competent specialists of vaccination [7].

In 1807 Dr. E. Jenner was elected a corresponding member of the Vilnius Medical Society [8]. For a long time Dr. E. Jenner was in correspondence with Prof. J. Frank and Prof. A. Becu. Prof. A. Becu studied the vaccination in England.

In 1803, in Vilnius was published a 120 page book by A. Becu in Polish «About Vaccine or the so called Cow Smallpox» in which readers are acquainted with the application of the vaccination. A. Becu indicated, that the first successful prevention in Vilnius was carried out on April 11, 1802, when the vaccine from Petersburg institute of vaccination was obtained. Earlier vaccination with a vaccine from other countries was unsuccessful.

Further author writes that observations and tests carried out by workers or the Vilnius university Faculty of Medicine aren't contradictory to tests in other countries.

We are confident in the efficiency and success of the vaccine, basing not only on the experience of authors from other countries, but also on thousands of our observations. The amount of those tests would be still larger, if many parents conceded to this new invention.

In 1808 in Vilnius on the initiative of professor J. Frank, the Institute of vaccination was founded. The main task of the Institute was to organize vaccination in Lithuania. For a small tax the lymph was sent to doctors and doctor's assistants, and in the Institute the vaccination was free of charge.

In 1824 professor J. Frank retired on a pension and left Vilnius. In 1831, as the State authorities didn't support it, the Institute of vaccination ceased its activities [9]. The lymph was obtained from Russian free economic society, from Königsberg and other towns of Germany, but not always in sufficient amount.

In 1819 in Raseiniai was founded the Raseiniai women charity vaccination society, and 17 women belonged to the society. In 1821 the statutes of this institution were legalized by Governor-general of Lithuanian – Vilnius state A. Rimskij-Korsakov. It was a charitable institution of local citizens with a purpose to propagate smallpox vaccination among village inhabitants teaching techniques of vaccination [10].
Besides medical workers, the vaccination was made by so called «vaccinators» – natives that were instructed and had certificates. In 1827, in Kaunas district, the vaccination was made by 17 official vaccinators: 2 doctors, 2 doctor's apprentices, 7 doctor's assistants, 2 priests, the burgomaster and 3 women [11].

Table. Notified cases of smallpox and death from smallpox in Kaunas province in 1890–1913

<table>
<thead>
<tr>
<th>Years</th>
<th>Notified cases of smallpox</th>
<th>Death from smallpox</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>1890</td>
<td>121</td>
<td>24</td>
</tr>
<tr>
<td>1891</td>
<td>519</td>
<td>119</td>
</tr>
<tr>
<td>1892</td>
<td>1538</td>
<td>425</td>
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<tr>
<td>1893</td>
<td>2862</td>
<td>674</td>
</tr>
<tr>
<td>1894</td>
<td>1654</td>
<td>209</td>
</tr>
<tr>
<td>1895</td>
<td>662</td>
<td>135</td>
</tr>
<tr>
<td>1896</td>
<td>36</td>
<td>16</td>
</tr>
<tr>
<td>1897</td>
<td>155</td>
<td>71</td>
</tr>
<tr>
<td>1898</td>
<td>303</td>
<td>99</td>
</tr>
<tr>
<td>1899</td>
<td>181</td>
<td>47</td>
</tr>
<tr>
<td>1900</td>
<td>863</td>
<td>278</td>
</tr>
<tr>
<td>1901</td>
<td>1057</td>
<td>282</td>
</tr>
<tr>
<td>1902</td>
<td>744</td>
<td>532</td>
</tr>
<tr>
<td>1903</td>
<td>417</td>
<td>120</td>
</tr>
<tr>
<td>1904</td>
<td>375</td>
<td>255</td>
</tr>
<tr>
<td>1905</td>
<td>157</td>
<td>85</td>
</tr>
<tr>
<td>1906</td>
<td>224</td>
<td>68</td>
</tr>
<tr>
<td>1907</td>
<td>522</td>
<td>155</td>
</tr>
<tr>
<td>1908</td>
<td>1189</td>
<td>349</td>
</tr>
<tr>
<td>1909</td>
<td>556</td>
<td>152</td>
</tr>
<tr>
<td>1910</td>
<td>475</td>
<td>221</td>
</tr>
<tr>
<td>1911</td>
<td>399</td>
<td>161</td>
</tr>
<tr>
<td>1912</td>
<td>174</td>
<td>104</td>
</tr>
<tr>
<td>1913</td>
<td>138</td>
<td>55</td>
</tr>
</tbody>
</table>

Sometimes the vaccination and revaccination were made by unqualified persons and that was a cause of many complications. Often so called
«vaccinators» prepared unqualified material. So there were conditions for spreading of infectious diseases and different complications as erysipelas, suppurations and sometimes death [12].

In the proper way the vaccination was organized only in 1886, when doctor P. Bagensky founded a vaccination calf-shed in Vilnius, at the Savitchus hospital and the provision with vaccine was improved in the Vilnius province, and since 1891 the Kaunas province was supplied with that vaccine.

Because of deficiency of experience the vaccine was received of inferior quality for about three years.

Doctor P. Bagensky perfected himself in St. Petersburg and Vienna. Only when the process of vaccine production met the requirements of asepsis, owing to doctor Bergmann, the vaccine of high quality was received [13].

In czarist Russia there was no law of obligatory vaccination. This is why smallpox existed in Lithuania in the end of the XIX century and beginning of XX century, sometimes of epidemic character (Table).

In 1912–1913 doctor P. Avižonis investigated the spreading of trachoma in the Kaunas province, Gruzdžiai and Lygumai districts. At the same time he gathered information about the vaccination and spread of smallpox.

His data suggested, that in the district of Gruzdžiai from 9489 inhabitants 7768 (81,84%) were vaccinated and 1723 (18,16%) were unvaccinated. 1476 (15,55%) examined inhabitants were ill with smallpox. 770 (9,92% of all vaccinated) of them had been unvaccinated before (40,86% of all unvaccinated).

In the district of Lygumai from 5550 examined inhabitants 4237 (76,34%) were vaccinated and 1313 (23,66%) remained unvaccinated. 1248 (22,49%) of all examined inhabitants were ill with smallpox. 11,33% of them had been vaccinated before and 768 (58,42% of all vaccinated) had been unvaccinated before [14].

In Independent Lithuania (1918–1940) the Institute of Hygiene (founded in Kaunas) was concerned with the vaccination, and the vaccine was produced in it. After mass vaccination, smallpox was liquidated. The last smallpox epidemics was registered in 1936 [15].

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2. The Central State Archive of History on St. Petersburg. – The Stock 1299, Inventory 11, Dossier 608.
In the 18th century, in the Russian Empire, the problem of smallpox was seriously addressed by scientists and doctors. One of the most prominent doctors was Dr. V.F. Marangov, who in the 1770s began experimenting with the use of variolation to prevent smallpox. His work was highly controversial, but eventually, it led to the widespread use of vaccination against smallpox.

In the middle of the 19th century, in the Russian Empire, there was a significant outbreak of smallpox. The situation was exacerbated by the fact that the majority of the population was unvaccinated. As a result, the death toll was very high. It was estimated that over 10% of the population died from smallpox.

In the 1870s, the Russian government began to take action against smallpox. They established a system of vaccination and immunization, and by the end of the century, the vaccination rate had increased significantly. The smallpox epidemic was brought under control, and by the early 20th century, the vaccine had become almost universally accepted.

In the 20th century, smallpox continued to be a major health problem, particularly in developing countries. However, thanks to international efforts, the smallpox virus was declared eradicated in 1980. This was a significant achievement, and it was the result of a global effort to vaccinate billions of people and control the spread of the disease.