

MEDICINOS ISTORIJA IR RAIDA

Master of Pharmacy Wilhelm Grining and his pharmaceutical laboratory

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Summary. *Very little is known about the history of pharmaceutical industry in Latvia, especially about the history of small pharmaceutical enterprises in Riga at the turn of 19-20th centuries.*

The laboratory of Wilhelm Grining, Master of Pharmacy, (established in 1899) became well known because of its product Liquor Ferri albuminati Grining. The liquor was used for treatment of anemia and became very popular in the whole Russian empire. The owner of the laboratory Wilhelm Grining was a very erudite man and also a good businessman. He was a son of a pharmacist and has been acquainted with apothecary's practice and specificity of the work of the owner of a pharmacy since his childhood. Wilhelm Grining was particularly interested in proteins and started to carry out scientific research both in the fields of chemistry and pharmacy. He participated with his reports in the congresses of Russian Pharmacy Society and published his works in the journal of Russian Pharmacy. Besides all this W. Grining is believed to be the author of the concoction of curative herbs "Trejos devynerios".

Biography of W. Grining, as well as the products produced by his pharmaceutical laboratory, was explored using materials from the archive of Latvian State history and 19th century's German literature of pharmaceutical history.

In the context of contemporary pharmaceutical companies it seems a bit odd that only a century ago in the Baltic's there were pharmaceutical industries that had a comparatively small range of medicaments in the stock. Usually there worked only a few employees who did the same job as nowadays in the big pharmaceutical industrial plants. In 1899 the laboratory of W. Grining was founded in Riga. The history of the laboratory as well as the history of other small enterprises, the biographies of the founders and manufactured preparations has been neglected in the study of the history of pharmaceuticals. The materials from the Latvian State History Archive and the books of pharmaceuticals history, published in 19th century, were used in this article. As the Grining family of pharmacists has been closely related with Palanga, the history of Palanga's pharmacies is of no less importance.

In 19th century Palanga was in Kurzeme proconsul's jurisdiction and was the border point between Russian Empire and Prussian kingdom (1). In 1826 Johan Ludwig Feld (Johann Ludwig Feldt; 1797–1870) the son of the merchant from Durbe, received the privilege

to open the pharmacy in Palanga (2). Johan Ludwig Feld had studied pharmacy at the University of Terbata and with short interruptions from 1817-1826 had been a chemist in Durbe and Grobiņa pharmacies (2). Feld was the owner of Palanga's pharmacy till 1845. On March 28, 1831 the pharmacy burned down and after the second fire in 1844 Feld sold it to Wilhelm Johan Grining (Wilhelm Johann Grüning; 1817–1897) (2).

Wilhelm Johan Grining was born in the family of coppersmiths from Liepāja, received the pharmaceutical education at the University of Terbata from 1842–1843 (1, 3). During his ownership Palanga's pharmacy changed its place of location from the old city to a district of the modern town (2). In 1885 Wilhelm Grining left Palanga pharmacy to his son Wilhelm Grining (Wilhelm Grüning; 1856–1939) and moved to Riga (2).

Wilhelm Grining, junior, received his first education in Liepāja gymnasium (1, 2). After graduating the gymnasium in 1872 he started working at his father's pharmacy. In 1875 he passed the examination of the chemist's assistant at the University of Terbata (1, 4).

In 1879–1881 Wilhelm Grining studied at the University, in 1880 he passed the exam of chemist and in 1881 received his Master's degree in Pharmaceutics with dissertation "Beiträge zur Chemie der Nymphaeaceen" (5).

Afterwards he worked as a chemist for two years at Vladimir Ferrein's pharmacy in Moscow (1). In those times it was considered to be the biggest pharmacy in the world (1). While working in Moscow, Wilhelm Grining published his works about chemistry in the Russian pharmaceutics magazine – "Von der Herstellung der reinen Bromwasserstoffsäure in kleinen Quantitäten" (1883), "Über die Prüfung des Chininum bromatum" (1883) (5).

After the return to his motherland in 1885 he became the owner of his father's pharmacy (1). He continued to work on his scientific research in Palanga – "Schwankungen im Salzgehalte der Ostsee an der Küste von Polangen" (report in the Terbata Nature Scientists Society), "Herstellung des Kautschukpflasters" (report in the congress of Russia Pharmacists Society) (5). That was Palanga pharmacy where he created his famous preparation *Liquor Ferri albuminati Grining*. In 1887 there was an article published in the Russian Pharmacy magazine regarding this invention (1). Two years later Wilhelm Grining reported about that in the congress of Russian Pharmacy Society in St. Petersburg (1).

Wilhelm Grining was very well familiar with proteins and iron preparations, he reported also in the Riga Nature Scientists Society (founded in 1845) and in the Riga Pharmacists' Society (founded in 1803) (4). He was a member of Kurzeme Pharmacists' Society (6), the Member of honor of Riga Pharmacists' Society and Society of Pharmacy Students of Terbata (1).

The popularity of Grining's iron tincture rose very quickly, therefore he left the pharmacy in Friedrich Benke (Friedrich Boenke; 1853–?) administration and moved to Riga (2). From 1911 Friedrich Benke worked in Grining's pharmaceutical manufacture laboratory at filling the iron preparations (2). In 1911 Grining sold Palanga's pharmacy to Vilhelm Bertin (Wilhelm Berting; 1855–?) and put all his efforts into Riga's laboratory (2).

The pharmaceutical laboratory was established in Riga in 1899. It was located in Ganību dambis 21a and occupied a separate brick building (7). Initially the laboratory produced only iron preparations, however, later it started to manufacture other medicaments as well, like essences, vaccines and chemicals (1). The only things that Grining's laboratory did not produce were cosmetics and hygienic goods (7).

Liquor Ferri albuminati Grining or "Feralbin"

reached high popularity in the whole Russian Empire; the doctors usually prescribed Grining's preparation for curing the anemia (1). In 1913 in Russian hygienic exhibition in St. Petersburg Grining's iron preparation was awarded the Golden Medal (1). *Liquor Ferri albuminati Grining* was made of egg whites and solution of FeCl_3 (8). The Grining's preparation was made of blood serum albumin that according to the author's mind was more suitable than egg white (8). Wilhelm Grining considered that the gastric muriatic acid did not affect the blood serum albumin, but the egg white eliminated it (8). "Feralbin" was liver-colored, almost clear liquid with slight alkaline reaction and the scent of cinnamon (7). This preparation was recommended for anemia, for children and pregnant women in the case of different bleedings (1).

In 1936 *Liquor Ferri albuminati Grining* was composed of the following ingredients (7):

- Iron – 0.35%
- Albumen – 3.18%
- Spirit – 14%
- Cinnamon oil – 0.02%
- Water – 82%

Following the foreign example Wilhelm Grining produced his iron preparation in combination with arsenic (1). *Liquor Ferri albuminati cum arseno* or "Arsenferalbin" consisted of 0.0075% arsenic, one teaspoon contained 0.4 mg *acidum arsenicosum*. The same content was in foreign preparations "Ferratose", "Ferratin" produced by Böhlinger, "Ferratol Richter" and others (7).

After the World War I the manufacture of Grining had a slight decline due to the lost Russian market (1). In 1922 there were only two co-workers in the laboratory except Wilhelm Grining (7). The laboratory consisted of 12 rooms, 10 of which were used for the laboratory needs and the rest two served for the packing of the ready-made production (7). Wilhelm Grining remained the owner of the laboratory till his death in 1939; however, in 1923 the laboratory's administration was in the hands of the Master of Pharmacy Paul Bernhard (7).

Grining's laboratory used comparatively many plants. In 1938 the following preparations were produced: *Extr. Aloes*, *Extr. Belladonn. spiss. titr.*, *Extr. Belladonn. sicc. cum rad. Liquirit. 1:1 titr.*, *Extr. Cascarae sagrad. sicc.*, *Extr. Chinae spir. sicc. titr.*, *Extr. Chinae aq. spiss. titr.*, *Extr. Colae sicc.*, *Extr. Ferri pomati*, *Extr. Gentianae spiss.*, *Extr. Hydrast. Canad. sicc. titr.*, *Extr. Hyoscyami spiss. titr.*, *Extr. Hyoscyami sicc. cum rad. Liquirit. 1:1*, *Extr. Liquirit. spiss. plane solubile ex radice*, *Extr. Opii titr.*, *Extr. Rhei sicc.*, *Extr. Rhei comp.*, *Extr. Strychni spirit. titr.*,

Extr. Valerian. spiss., Extr. Aurant. cort. fl., Extr. Cascarae sagrad. fl., Extr. Chinae fl. titr., Extr. Chinae fl. Nanning, Extr. Colae fl., Extr. Condurango fl., Extr. Hydrast. Canad. fl. titr., Extr. Rhamni Frangulae fl., Extr. Serpylli fl., Extr. Thymi fl., Extr. Valerian. fl., Extr. Viburni prunifol. fl., Tct. Belladonn. titr., Tct. Chinae comp. titr., Tct. Digitalis titr., Tct. ferri comp., Tct. Opii titr., Tct. Opii crocat. titr., Tct. Stramonii titr., Tct. Stophanti titr., Tct. Strychni titr. (7)

Additionally the liquids were produced: *Liq. Alumin. acet., Liq. Ferri oxychlorati, Liq. Plumbi subacet., Liq. arsenical. Fowl.* (9)

Grining's pharmaceutical laboratory produced also cathartic "Rigarol", containing 25% paraffin oil, 1% agar-agar, 1% phenolphthalein, 20% glycerin and 53% water; "Hämato-gen Gruning", yeast preparations "Ext-

ractum Faecis", "Faex medicinalis", "Faex medicinalis pro pilulis" (7). In laboratory's assortment were liver preparations "Hepar siccum" – vacuum dried, powdered livers, liver extract "Extr. Hepatis Gruning" (7) and such usual things as malt extract, baking powder, insecticide "Derritox" (7).

Unfortunately, the laboratory of Wilhelm Grining did not survive its owner. In 1940 it was closed due to repatriation of German inhabitants (7). The inventory of the lab was evaluated at 50 000 Ls (7). In 1941 the remainder of chemicals and medicaments were passed to the Main Pharmacy's Board No. 1 (7). However, the building of Grining's laboratory remained, the Experimental Vitamin and Hormone production plant started to form there, and that was the beginning of the company now known as the "Grindeks".

Farmacijas magistras Wilhelm Grining ir jo farmacinē laboratorija

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Raktažodžiai: farmācijas istorija, Wilhelm Grining, „*Liquor ferri albuminati Gruning*“, W. Grining farmacinē laboratorija.

Santrauka. Apie Latvijas farmācijas pramonēs istorijā XIX–XX a. sandūroje, ypač apie mažų farmācijas įmonių raidą Rygoje, žinoma labai mažai.

Farmacijas magistro Wilhelm Grining laboratorijā (īkurta 1899 m.) išgarsino „*Liquor ferri albuminati Gruning*“ tinktura, kuri skirta anemijai gydyti. Ji tapo populiarī visoje Rusijos imperijoje. Laboratorijos savininkas Wilhelm Grining buvo išsilavinęs žmogus ir geras verslininkas. Jis buvo vaistinininko sūnus, todėl nuo vaikystės gerai žinojo vaistinės kasdienybę bei vaistinės savininko darbo specifiką. Wilhelm Grining ypač domėjosi baltymais. Jis skaitė pranešimus Rusijos farmācijas sąjungos suvažiavimuose, o savo darbus publikavo Rusijos farmaciniame leidinyje. Be to, manoma, kad Wilhelm Grining yra vaistažolių mišinio „Trejos devynerios“ autorius.

Rengiant šį straipsnį, buvo tyrinėjama Wilhelm Grining biografija, taip pat medžiaga apie jo farmacinėje laboratorijoje gaminamus produktus. Šiame straipsnyje analizuojama Latvijos valstybės istorijos archyvo medžiaga, taip pat XIX a. vokiečių farmācijas istorijos leidiniai.

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