

# PROF. DR CARL FERDINAND RITTER VON ARLT (1812–1887): HIS LIFE AND WORK DURING HIS OPHTHALMOLOGICAL CAREER IN PRAGUE

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## SUMMARY

The aim of this paper is to provide an overview of the life and work in Prague of the famous ophthalmologist Carl Ferdinand Ritter von Arlt (1812–1887). The paper presents data on his stay in Prague while studying Medicine and working as a private physician and ophthalmologist. Professor von Arlt was Head of the Chair of Ophthalmology at Charles University. He was Director of the Eye Clinic at Prague General Hospital from 1849 to 1856. A detailed description is given of his residences and their appearance today. Very little has been written about this aspect, so the paper will be a supplement to his impressive biography. A brief, chronological, systematic and concise biography is also provided, including details of his family and his contributions to Ophthalmology.

During his 25-year stay in Prague (1831–1856), he commuted between the city centre and the General Hospital where he worked. He changed the location of his residence five times. It is important to note and not to forget where one of the greatest ophthalmologists of the 19th century worked and resided in Prague.

**Keywords:** Carl Ferdinand Ritter von Arlt, Prague, Ophthalmology, history, 19th century

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## INTRODUCTION

Carl Ferdinand Ritter von Arlt (1812–1887) was one of the outstanding ophthalmologists of the 19th century. He was Head of the Chair of Ophthalmology and Director of the Eye Clinic in Prague from 1849 to 1856. Later, from 1856 to 1883, he was Head of the 1st University Eye Clinic in Vienna. He was an exceptional lecturer, teacher and surgeon. Dr von Arlt published many scientific papers and books. He had a worldwide reputation and educated entire generations of ophthalmologists (Figure 1). The aim of this paper is to describe where he lived and worked during his ophthalmological career in Prague. A brief biography is also provided, including details of his family and his contributions to Ophthalmology.

### Biography of von Arlt prior to his arrival in Prague

Ferdinand von Arlt was born in Obergraupen (now Horní Krupka), part of the village of Graupen (Krupka)

near Teplitz (today Teplice) in Bohemia on 17 April 1812. The house where he was born was located at the entrance to the old mining trail at number 24 (Figure 2). To the west was the Gasthaus zur Erholung, and to the north was the Gasthaus zur Sonne, now St. Florian Restaurant. His house no longer exists today.

His father was Joseph (1773–1832) a mining blacksmith, son of Wenzel and Dorothea Luft from Horní Krupka, and his mother was Maria Anna, born Kohlschütten (1773–1845), housewife, daughter of Franz and Rosina Kern also from Horní Krupka.

Von Arlt had 5 siblings: Franziska (b. 1800), Joseph (1806–1832), Dominik (1809–1885), Theresia (b. 1814) and Wenzel (b. 1817).

He attended primary school from 1820 in Weisskirchitz (today Novosedlice). He lived there with his father's half-brother, teacher Dominik Schöttner. The new school building in Novosedlice was built in 1805



**Figure 1.** Ferdinand von Arlt (1812–1887) at the age of about 40 (Lithograph by Moritz Golde, printed in the studio of Franz Hanfstaengl in Dresden)



**Figure 2.** Birthplace of Ferdinand von Arlt in Obergraupen (Horní Krupka), early 20th century (arrow) (Courtesy of L. Navrátilová, Bc, Odbor kancelář starosty Krupka)

by Prince Johann von Clary und Aldringen (1753–1826) [1]. The school was in the centre of the village next to St. Valentine's Church. Today, on that site at the address Vrchoslavská 2/3, is a three-story residential building. He attended grammar school from 1825 in Leitmeritz (today Litoměřice) in Jesuitengasse, which was located next to the Episcopal Priestly Seminary (former Jesuit residence). In Litoměřice he had accommodation at the grammar school (alumnat) [2]. Today this is Jesuit Street no. 18 and 20, and the former seminary was at no. 22.

### Life and work in Prague

Von Arlt relocated to Prague with his brother Dominik in 1831. At first, he studied Philosophy at the Lyceum, before deciding to study Medicine from 1833. He graduated

in 1839 at Charles University (K.K. Karl-Ferdinands-Universität). Von Arlt was particularly interested in Ophthalmology during his studies [3]. The topic of his doctoral thesis was on blindness [4]. Charles University was located at Königstrasse no. 541/I. (today Ovocný trh no. 560/5).

At the beginning of 1840, von Arlt spent three months in Vienna, where he attended surgical courses with ophthalmologists Friedrich von Jäger and Anton von Rosas. During those three months, the landlord of his brother Dominik, who had completed his Law degree, allowed him to live with his brother. He often had lunch at the restaurant in Blutgasse [2].

From 1840 to 1842, he was assistant to Prof. Johann Nepomuk Fischer – the founder of modern Ophthalmology in Bohemia – at the Eye Clinic in Prague. The field of Ophthalmology thus became his specialization [5,6].

He first lectured on the field of ear diseases in 1843, i.e. he completed his postdoctoral thesis, to become the first Assistant Professor of Otology in the Monarchy, and, four years later, to become Assistant Professor of Pathological Anatomy of the Eye at the University of Prague. In 1848, von Arlt received a Master's degree in Ophthalmology from the University of Vienna [7].

From 1842 to 1849, he ran a private practice in Ophthalmology, as well as in Internal Medicine, Surgery and Otology. He also worked as an intern at the District Office of Kauřim (today Kouřim) in 1842–1845, as a medical doctor at the Prague Hradčany Institute for the Blind in 1842–1856 and in the educational institution for young offenders and the association for the benefit of released prisoners in 1843–1848 [3]. Von Arlt was also involved in public activities. In 1850, he became the Councillor of Prague's New Town [7].

In 1836, he became engaged to Maria Theresia Dittrich (1813–1876), the daughter of a district physician in Leitmeritz. They were married in 1842.

They had eight children, but only three survived: Ferdinand (1842–1917) an ophthalmologist, Marié (1852–1934) married to Karl Sindl and Wilhelm (1853–1944) agronomist, ski pioneer and alpinist [8]. He visited his birthplace many times and treated his former fellow citizens for eye diseases. Together with his brother Wenzel, the Mayor of the village, he founded a small school in 1870 so that the children would not have to travel far to be educated [9].

From 1846, he supplemented his teacher J. N. Fischer at the Eye Clinic in Prague, and after the latter's death in 1847, von Arlt became his successor and Acting Head of the Clinic. In January 1849, he became an Associate Professor, and in September a full Professor of Ophthalmology at the University of Prague. He became Head of the Chair of Ophthalmology and Director of the Eye Clinic in Prague until the end of June 1856. The Clinic at

that time was located at Lindengasse 499 / II, today it is U Nemocnice 2. In 1854–1855 he served as Vice-Dean of the faculty [10].

In 1852, the 80-bed Eye Clinic was located on the second floor of the East Wing of the building. [11]. After reconstruction of the General Hospital (1840), the Eye Clinic had an operating theatre (room 119), four rooms and an assistant's room. The auditorium (lecture hall) was shared with the Internal Clinic. After von Arlt's appointment as a full Professor, the premises of the Eye Clinic were increased by two large rooms and three small rooms, one of which was for trachoma patients, and one for microscopic and pathological-anatomical examinations. A second assistant's room was set up. One room (room 119) was converted into a lecture hall and operating theatre. Von Arlt enlarged the Clinic's collection of instruments with historically interesting ophthalmological instruments housed in the Acological Cabinet of the Surgical Clinic [10,12] (Figure 3).

Dr von Arlt was one of the most famous ophthalmologists of the 19th century. Some considered him the "cornerstone" of European Ophthalmology [13]. He was an exceptional lecturer, teacher and surgeon. He published numerous scientific papers and books. He had a global reputation. He educated entire generations of ophthalmologists. Among his more famous students and assistants in Prague were Albrecht von Graefe (autumn 1848 and July 1850), Ernst Adolf Coccius (1848), Julius Jacobson and August von Rothmund (1854), Louis de Wecker and Wilhelm Manz (1856), Anton von Trötsch (learned from Arlt the basics of Otology and Ophthalmology in 1854) [14–16].

Von Arlt was the first to give an accurate description of trachoma (1855) and was the first to understand the essence of the pathogenesis of myopia (1854), arguing



**Figure 3.** Eye Clinic was located on the second floor in the east wing of the general hospital in Prague (today U Nemocnice 2)

that spectacles could only be prescribed by ophthalmologists. His idea was to carry out vision-tests on a scientific basis. This was later accomplished by Herman Snellen and Eduard Jäger [17].

His well-known eponyms are Arlt's Triangle (1856) and Arlt's pterygium operation (1850). In Prague, he published his trilogy "Eye Diseases for Practitioners" (Die krankheiten des Auges für praktische Ärzte geschildert) between 1851–1856 and achieved world fame in professional circles [18]. In 1844–1849 he was a consultant on Ophthalmology for the Prague "Quarterly Journal of Practical Medicine" (Vierteljahrsschrift für die praktische Heilkunde). From 1855, von Arlt was one of the co-publishers of the "Archiv für Ophthalmologie" journal [3].

#### Von Arlt's residences in Prague

During his medical studies in Prague, for almost 7 years from 1833 he lived in rented properties. He was hired as a tutor for the youngest son of the wealthy merchant Franz Kose at Rittergasse 398/I in the Old Town (today Rytířská 26), very close to Charles University [19]. It was originally a Gothic building, which was rebuilt in the Baroque style with a big portal. The present-day appearance was designed by Karl Schmidt in 1790. Currently, the lower floors provide office spaces, and the upper floors of the building are used for residential purposes.



**Figure 4.** Part of the map of Prague in the first half of the 19<sup>th</sup> century. Places where Ferdinand Arlt lived at Vieh Markt no. 285 (black arrow) and Schwarze Gasse no. 155 (white arrow)

In 1843, he lived in the north-western part of Viehmarkt (since 1848, Charles Square/Karlovo náměstí) in the New Town at number 285/II. The building was called The Red Bell. In 1841, a new three-story, two-wing building was constructed on the foundations of a mediaeval house, the plans of which were drawn up by the builder Jan Maxmilián Heger. The house was modified several times. Between 1993 and 1995, a total reconstruction took place, according to the design of the architect Štefan Blocha. Today, at the address Karlovo náměstí no. 19 is a modern building with a centre for electronic products and a cinema in the basement [20] (Figure 4).

From 1844 to 1847, he lived in the centre of Prague (near the Old Town Square), at Schwefelgasse no. 475/I. Since 1894, it has been called Melantrichova Street (no. 16). Above the entrance are sculptures of two golden bears. That is why the house is called "House at the Two Golden Bears" (Dům u Dvou Zlatých Medvědů). It is a large Renaissance building, one of the oldest buildings in Prague, built in 1559–1567 on the site of two Gothic houses. The building was reconstructed in 1975–1980 [21–23] (Figure 5). In 1846, his teacher J. N. Fischer lived in Prague's New Town at Heinrichsgasse no. 889 on the ground floor (today Jindřišská 17) [24].



**Figure 5.** Schwefel Gasse no. 475, today Melantrichova Street no. 16 (Photo: Ben Skála, 2010)

From April 1847, his residence was at Schwarzegasse no. 155/II, next to the Evangelical Church of St. Michael. That street was renamed Opatovická ulice in the 1860s. Today there is a new residential building at 26 Opatovická Street which was built around 1940 [25,26] (Figure 4).

Before leaving for Vienna, his last residence in Prague, from 1853, was in Ursulinergasse no. 1370/II in the 2<sup>nd</sup> quarter of Prague-New Town. From 1870, the street was called Ferdinand Street, and from 1919, Národní třída – National Street. At present it is Národní no. 1393 [27]. Building no. 1370 was located between the Baroque Roman Catholic Church of St. Ursula and the old National Theatre of 1881. It was built in the middle of the 19<sup>th</sup> century, as a series of two Classicist buildings, known as Chour's houses. The building was demolished in the late 1950s. Since 1983, the building of the New National Theatre – Nová Scéna (Laterna Magika) – has been located on this site (Figure 6).

During von Arlt's stay in Prague, he visited his birthplace Obergraupen and Leitmeritz several times. He also visited Vienna three times (1840, 1844 and 1848), Dresden (1849), and a Salzkammergut resort (1850), Leipzig (1852) and, in 1853, he visited his student and friend Albrecht von Graefe in Berlin for the first time [2].

### Leaving for Vienna

The Dean of the Vienna Faculty of Medicine, Prof. Dr Johann Dlauhy (1808–1888) invited him to Vienna, where he became Head of the 1st University Eye Clinic from 1856 to 1883. He succeeded Prof. Anton von Rosas in that position, where he remained for a full 27 years. He reformed the world's first Eye Clinic [28]. He was knighted for his achievements by decree of the Austrian state with the epithet "Ritter von Bergschmidt" [29].



**Figure 6.** Ursulinergasse no. 1370 (arrow), today Národní no. 1393

On 7 March 1887, Dr von Arlt died in his apartment at Bellariastrasse no. 12 in Vienna, from hypostatic pneumonia, due to repeated amputations and surgery to his left leg as a consequence of thrombosis. He was buried in the Central Cemetery in Vienna (block 12, row 13, grave number 22) [30].

## Conclusion

Professor Ferdinand von Arlt was an outstanding ophthalmologist, eye surgeon, researcher, exceptional lecturer and teacher, who made a major contribution to the de-

velopment of Ophthalmology in the 19th century. He was Head of the Chair of Ophthalmology and Director of the Eye Clinic in Prague from 1849 to 1856. Dr von Arlt educated many prominent ophthalmologists. He published numerous scientific works. He established international fame among ophthalmological specialists. During his 25-year stay in Prague, Ferdinand von Arlt commuted between the city centre and the General Hospital where he worked. He had five changes of residential address. It is important to note and not to forget where one of the greatest figures of international Ophthalmology worked and lived in Prague.

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