

purpose for which we are assembled and honor the various sections and sessions by prompt and full attendance.

In a few days I shall transfer to another the duties of this exalted office which it has been my great honor to hold and faithfully perform to the best of my ability. May it be that what shall have been done will add some little measure of benefit to the cause we love so well.

TSCHIRCH, MASTER OF PHARMACOGNOSY.*

BY OTTO RAUBENHEIMER.

Those men eminent in their respective professions are truly styled "Masters." In Pharmacognosy we also have a master, namely Dr. Wilhelm Oswald Alexander Tschirch, Professor and Director of the Pharmaceutical Institute at the University Berne, Switzerland. Well known throughout the world, with former students



BUST OF DR. A. TSCHIRCH.

scattered all over the earth, Tschirch and with him his Pharmaceutical Institute, have gained a world-wide, well deserved reputation. Credit belongs to Tschirch of raising Pharmacognosy from a dead science to a live one and of creating Pharmacognosy and especially Applied Pharmacognosy as a separate and interesting study. I cannot help but recall the quotation of Tschirch which he expressed in London on September 29, 1909 when he was honored with the "Hanbury Medal," namely: "Pharmacognosy is not only an appendix to Botany, but an independent science."

On October 17, 1926, Tschirch will celebrate his 70th birthday—three score and ten of an extremely useful life in the interest of pharmacy. This is a good time for the presentation of a paper on Tschirch before the Historical Section of the A. Ph. A., of which he is an honorary member, at the Philadelphia convention in September 1926. I have divided the subject into the following chapters:

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| I. Biography. | VI. Principal Achievements. |
| II. Honors conferred on Tschirch. | VII. Biographies of Tschirch. |
| III. Bibliography. | VIII. Students of Tschirch, who are University Teachers (in akademischer Stellung). |
| IV. Orator and Necrologist. | IX. Conclusion. |
| V. Disappointments. | |

I. BIOGRAPHY.

Wilhelm Oswald Alexander Tschirch was born in Guben, Prussian Niederlausitz in Silesia, on October 17, 1856, the son of the Protestant Pastor Adolf Tschirch, a

* Section on Historical Pharmacy, Philadelphia meeting, 1926.

descendant of a Bohemian family and his wife Marie Tschirch, née Sausse. After graduating from the high school of his native town he was apprenticed to a relative, Apotheker Paul Muendel in Loschwitz near Dresden, Saxony. He passed his written and oral Assistant Pharmacist Examination with the mark "very good" on September 26, 1875 before county physician Dr. Lehmann and Apotheker Eder in Dresden. Up to March 1877 he clerked in the Apotheke in Oberlahnstein on the Rhine. It was here that young Tschirch became interested in history of pharmacy by reading Kopp's classic work "Geschichte der Chemie." For the next six months he clerked in the Muensterplatz-Apotheke in Freiburg in Breisgau, where he became acquainted with a University town. Beginning September 1877, Tschirch practiced for an entire year in the celebrated Staats—Apotheke in Berne as "Defektar," or manufacturing pharmacist, under Dr. Perrenoud the successor to Flueckiger who in 1873 was made Director of the Pharmaceutical Institute at the University Strassburg. It was in the old Staats-Apotheke in Berne that Flueckiger wrote the first edition of his "Lehrbuch der Pharmakognosie."

In October 1878, Tschirch entered the University of Berlin and studied the different subjects under the following "stars," Chemistry: Hofmann, Tiemann and Will; Physics: Helmholtz; Botany: Eichler (the successor to Braun), Ascherson and Magnus; Pharmacognosy: Garcke; Physiology: DuBois Reymond; History of Natural Sciences: Jessen; History of Chemistry: Doebner and Pharmacology: Liebreich. What an array of names that will continue to live forever.

On May 21, 1880 Tschirch passed the State Board of Pharmacy Examination as Apotheker. However, instead of becoming attached to "Mater Pharmaciae" in a practical way, he decided to take up an academic career. He continued his studies in the Botanical Institute under Prof. Schwendener and on July 25, 1881, he obtained the Ph.D. degree at the University of Freiburg with the Thesis: "Ueber einige Beziehungen des anatomischen Baues der Assimilationsorgane zu Klima und Standort."

He became Assistant to the celebrated botanist Pringsheim in Berlin, where he conducted research on Chlorophyll which he published as his first book "Untersuchungen ueber das Chlorophyll." Then he was Assistant to the chemist and former Apotheker Ziurek, who opened the first laboratory for applied chemistry in Berlin. Here he not only became proficient in chemistry, but also found a bride, namely, his cousin Elise Ziurek. Tschirch very aptly describes this in his book "Erlebtes und Erstrebtes," in a chapter entitled: "Ich suchte Belehrung und fand eine Braut" (I looked for knowledge and found a bride).

During three years, beginning October 1, 1881, Tschirch was Assistant in the Plant-Physiological Institute of the Agricultural College in Berlin. His interests in Botany and Pharmacognosy date back to 1879 when he founded the Akademisch-Pharmakognostischer Verein in Berlin, principally intended for students. In 1882 he was one of the founders of the Deutsche Botanische Gesellschaft in which he acted as Secretary until his removal to Switzerland in 1890.

On October 30, 1884, he established himself as Privatdozent in Botany und Pharmacognosy at the Friedrich Wilhelm Universität in Berlin. In 1888 und 1889 Tschirch undertook a Botanical Expedition to India, Java, Singapore and Ceylon. His collection of plants is published in his "Indische Heil- und Nutzpflanzen (Heyfelder, Berlin, 1891), illustrated with 12 excellent heliographs.

On March 19, 1890, an important date in the annals of pharmacy, Tschirch received a call as Professor of Pharmacy and Pharmacognosy at the University of Berne, as the successor of Perrenoud. By the acceptance of this chair Germany lost, but Switzerland gained a teacher who was destined to become one of the greatest scientists of our age, a "Master of Pharmacognosy." Here in Berne Tschirch developed the celebrated Pharmaceutical Institute of which he is the Director. In 1907 the University of Berne conferred upon him the degree of M.D. (*honoris causa*), and during the academic year 1908-1909 he was rector of the University.

Tschirch became a Chairman of the Board of Pharmacy and of the Swiss Pharmacopœia Revision Committee. He represented Switzerland at the Brussels Conference in 1902 and at the 11th International Congress of Pharmacy at The Hague in 1913, where he delivered his classic lecture "Die Enzyme und ihre Bedeutung fuer die Pharmakognosie."

At the present date he again is Chairman of the Committee of Revision of the Swiss Pharmacopœa Edit. V.

He remained faithful to Berne, although a professorship at Zürich was offered to him; and even the tempting offers of Vienna did not draw him away.

II. HÓNORS CONFERRED ON TSCHIRCH.

Besides the honors mentioned in the previous chapter, the following additional ones were conferred upon Tschirch, especially in the form of honorary membership.

Honorary Member of

- 1881 Akademisch Pharmakognostischer Verein, Berlin.
- 1884 Landwirtschaftlicher Verein Agraria, Berlin.
- 1886 Gesellschaft Naturforschender Freunde, Berlin.
- 1889 Kais. Leopoldin. Karolin. Akademie der Naturforscher (Member).
- 1891 Berner Kantonaler Apothekerverein.
- 1892 Pharmaceutical Society of Great Britain (Corresponding Member).
- 1893 Philadelphia College of Pharmacy and Science.
- 1893 Société de Pharmacie à Paris.
- 1894 Allgemeiner Oesterreich. Apothekerverein, Vienna.
- 1896 Pharmaceutical Society of Great Britain, London.
- 1898 Russische Pharmaceut. Gesellschaft, Moskau.
- 1898 Pharmaceutical Conference, London.
- 1899 Allerhöchst bestätigte Pharmaceutische Gesellschaft, St. Petersburg.
- 1904 Association générale du corps pharmaceutique de Roumanie.
- 1904 Deutscher Apothekerverein.
- 1906 Schweizer Apothekerverein.
- 1909 Société Imperiale des Naturalistes à Moscow.
- 1909 Hanbury Medallist.
- 1910 AMERICAN PHARMACEUTICAL ASSOCIATION.
- 1910 Société de Pharmacie d'Anvers.
- 1911 Ungarlandischer Apothekerverein.
- 1911 Farmaceutiska Föreningen Stockholm.
- 1912 Société Vaudoise des Sciences Naturelles Lausanne.
- 1913 Farmaceutiska Föreningen, Finland.
- 1913 Nederlands Maaschappij ter bevordeving der pharmacie.
- 1914 Deutscher Apothekerverein in New York.
- 1915 Züricher Naturforschende Gesellschaft.
- 1918 Deutsche pharmazeut. Gesellschaft, Berlin.

1922 Finska Apothekare Föreningen, Helsingfors.

1923 Oesterreich Pharmazeut. Gesellschaft (Corresponding member since 1893).

On March 19, 1915, Tschirch celebrated his 25th anniversary as Director of the Pharmaceutical Institute of the University of Berne. On that occasion his former students and friends surprised him with a volume "Vortraege und Reden," containing a selection of Lectures and Speeches of the "Master of Pharmacognosy." Among the many subscribers I find also twenty-five from the United States.

On October 17, 1926, Tschirch celebrates his 70th birthday and his friends and admirers presented him with a Festschrift containing original researches in Botany, Pharmacognosy, Chemistry and Pharmacy. The writer who had charge of the advance subscription in the United States is indeed glad to report over 100, not a bad showing for our commercialized country!

III. BIBLIOGRAPHY.

Tschirch has been and still is a very prolific writer and his highly instructive and interesting papers have been published in the pharmaceutic and scientific literature throughout the world. It is beyond the scope of this paper to enumerate all these writings, but suffice it to mention that the Swiss Apothecaries Society has published such a compilation under the title: "Verzeichnis der Publikationen von Prof. Tschirch und seiner Schule."

The following books are from the pen of Tschirch and have been published:

1884 Untersuchungen ueber das Chlorophyll.

1885 Grundlagen der Pharmakognosie (together with Flueckiger) translated by Power.

1889 Angewandte Pflanzenanatomie.

1889-95 Wandtafeln für den Unterricht in der Pflanzenphysiologie (with A. B. Frank).

1891 Indische Heil- und Nutzpflanzen, with 128 plates.

1893 Das Kupfervom Standpunkt der Gerichtlichen Chemie, Toxikologie und Hygiene.

1893-1900 Anatomischer Atlas der Pharmakognosie und Nahrungsmittelkunde (with Oesterle).

1895 Flueckiger—Biographie.

1899 Die Harze und Harzbehalter; 1906, sec. edit.

1908 Die Chemie und Biologie der pflanzlichen Sekrete.

1908 Naturforschung und Heilkunde. Rectors' address.

1915 Kriegskemie (French: l'industrie chimique et la guerre).

1916 Kriegsbotanik.

1920 Die biochemische Arbeit der Zelle der höheren Pflanzen und ihr Rhythmus.

1922 was published in Schweiz, Apotheker Zeitung a list of the publications under the title: "50 Jahre im Dienste der Pharmacie und Naturforschung." It contains besides the above named books the following chapters:

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| 1. Pharmakognosie—72 publications. | 8. Tropenreise—16 publications. |
| 2. Kleine Beiträge zur Pharmakobotanik und Pharmakochemie—29 publications. | 9. Feigenprobleme—6 publications. |
| 3. Untersuchungen über die Sekrete spez. die Harze—125 publications. | 10. Chlorophyll und andere Pflanzenfarbstoffe—28 publications. |
| 4. Untersuchungen über die Abführmittel—43 publications. | 11. Pharmacie, pharmazeutische und toxiologische Chemie—28 publications. |
| 5. Untersuchungen über das Süssholz und das Glycyrrhizin—6 publications. | 12. Pharmacopœa—12 publications. |
| 6. Anatomie—42 publications. | 13. Photographie—5 publications. |
| 7. Physiologie und Biologie—27 publications. | 14. Gedächtnisreden, Nekrologe und Biographien—22 publications. |
| | 15. Andere Reden—7 publications. |
- 1924 Die Beziehungen Zwischen Pflanze und Tier im Lichte der Chemie.

Last, but not least, his masterwork "Handbuch der Pharmakognosie." This classic work was begun in 1908 and completed in 1926. According to the bound sets in my library it is divided as follows:

- Part I General Pharmacognosy in 2 volumes—1072 pages.
- II Special, 2 volumes—1626 pages.
- III Special, 2 volumes—1176 pages.
- IV Index to be completed in 1926.

IV. ORATOR AND NECROLOGIST.

Tschirch holds the reputation of being quite an orator. He visits the different congresses, conventions and meetings and similar to the late Dr. Vrij, who was named the "Flying Dutchman," he can be called the "Traveling Swiss." His lectures before these bodies are renowned and he is a guest who is welcomed everywhere. Tschirch was invited to come to the United States this year and attend the International Botanical Congress at Ithaca, N. Y., but owing to his advanced age he had to decline the invitation.

During my European trip this summer I had the privilege and pleasure to visit the Pharmaceutical Institute in Berne and also share the hospitality of Tschirch and his family at Villa Tschirch, his home at 32 Kollerweg. The professor instructed me to express his regrets for declining this invitation and honor to preside over the Section on Pharmaceutical Botany at this Congress.

Tschirch, furthermore, obtained quite some fame as a Necrologist. His obituaries are masterworks and I beg to point out the following ones on: Schleiden, Marggraf, Wigand, Ziurek, Eichler, Darwin, Flueckiger, Perrenoud, Demme, A. W. Hofmann, Zahn, Drechsel, Nencki, Garke, Haller, Hilty, Huder, Hartwig and Schwendener.

V. DISAPPOINTMENTS.

Like all men, even great men, Tschirch also had disappointments, which are the following:

1. As early as 1883, in Berlin, Tschirch began the organization of the Deutsche Pharmazeutische Gesellschaft. Owing to opposition, especially on part of the Deutsche Apotheker Verein, he dropped the matter which, however, under Prof. Hermann Thoms became a reality on November 6, 1890. Nevertheless Tschirch deserves credit for the conception of the idea and for his efforts in that direction.
2. In 1885 he proposed the establishment of a Pharmaceutical Institute at the University of Berlin. This proposal was supported by the Akademisch-Pharmakognostische Verein and also by Flückiger. Again in 1887 he renewed this proposal, which, however, was not accepted by the Educational Department. The Pharmaceutical Institute of the University did not realize until 1895 with Prof. Thoms as its Director and on October 27, 1902, received its own home in the Luisen Strasse, Berlin-Dahlem.

VI. PRINCIPAL ACHIEVEMENTS.

There can be briefly summarized as follows:

1. Elevation of Pharmacognosy to a distinct separate study and science.
2. Rejuvenation of the Section of Pharmacy in the Gessellschaft der Natur-

forscher und Aerzte. This was established through the efforts of Trommsdorff in 1836 at the Jena meeting. Gradually it fell asleep until Tschirsch at the meeting in Strassburg in 1885 passed a resolution that a Committee shall be appointed annually which shall provide papers for the next year's session.

3. Establishment of the up-to-date Pharmaceutical Institute at the University of Berne.

4. Establishment of the world renowned Pharmaceutical Museum containing "drugs in original packages," which the writer had occasion to visit and study in August 1926.

5. Education of Pharmacists and Doctors of Philosophy scattered throughout the civilized world.

6. Publication of the classic "Handbuch der Pharmakognosie."

His pet subject is the creation of an International Pharmacopœia Bureau. After several efforts this was clearly described at the meeting of the Swiss Apothecaries Society in Fribourg in August 1913. About the same time in September 1913, at the 11th Congrès Internationale Pharmaceutique, the late Prof. Jos. P. Remington in his paper "An International Pharmacopœial Bureau" supported Dr. Tschirsch in his views. It is to be hoped that such an institution will come to life for the sake of international uniformity, and Tschirsch again will get credit for its origin.

VII. BIOGRAPHIES OF TSCHIRCH.

The following books, all of which are in the author's library, contain biographies of Tschirsch, and have been useful in the compilation of this sketch.

Real-Enzyklopaedie der gesamten Pharmazie, 2 ed., Band XIII, p. 154.

Schelenz: Geschichte der Pharmazie, pp. 718 and 719.

Reber: Gallerie hervorragender Therapeutiker und Pharmakognosten der Gegenwart, pp. 43 and 46 and 355-360, containing his photo as Dozent.

Last, but not least, his autobiography, "Erlebtes und Erstrebtes," Lebenserinnerungen von A. Tschirsch with many illustrations and his photo in 1920. Verlag von Friedrich Cohen in Bonn, 1921. I would advise anyone wishing further particulars to read this excellent autobiography.

VIII. STUDENTS OF TSCHIRCH.

Tschirsch always said that his students belonged to his family and are welcome guests in Villa Tschirsch, his home. Therefore in his biography, some of them ought to be mentioned, especially those which hold academic positions.

Prof. von *Itallie*, Leiden, Holland.
 Prof. Schlotterbeck (†), Ann Arbor, U. S. A.
 Prof. Stevens, Ann Arbor, U. S. A.
 Prof. Hobbs, Cleveland, U. S. A.
 Prof. Clair A. Dye, Columbus, Ohio, U. S. A.
 Dr. Karl Dieterich (†), Helfenberg b. Dresden,
 Saxony.
 Dr. R. Westling, Stockholm, Sweden.
 Prof. Laurén, Helsingfors, Finland.
 Prof. Emmanuel, Athens, Greece.
 Prof. Tunmann (†), Vienna, Austria.
 Prof. Wester, s'Gravenhage, Holland.
 † Deceased.

Prof. Augustin, Budapest, Hungaria.
 Prof. Stscherbatscheff, Moskau, Russia.
 Prof. Shirasanva, Tokyo, Japan.
 Prof. Elfstrand, Upsala, Sweden.
 Prof. Cornelson, Rumania.
 Prof. Mjoen, Oslo, Norway.
 Prof. Benedicenti, Italy.
 Prof. Dezani, Turin, Italy.
 Prof. Mazurkievicx, Warschau, Poland.
 Prof. Ragab Fahmy, Cairo, Egypt.
 Prof. Urgoc, Tragreb, Agram, Jugoslavia.
 Prof. Takahaski, Tokyo, Japan.
 Prof. Otto Proskau, Prussia.

Prof. Lenz, Berlin.
 Dr. Arveng, Barr, Alsace.
 Dr. Bavasini, Rome, Italy.
 Dr. van Eijken, Java.
 Dr. Tsakalotos, Athens, Greece.
 Prof. Hugo Schaefer, New York, U. S. A.

Prof. M. Dittmar, New York, U. S. A.
 Prof. E. Fullerton Cook, Philadelphia College.
 Prof. Oktani Nogoya, Japan.
 Prof. Tmiya, Japan,
 and many others scattered throughout the world.

IX. CONCLUSION.

In conclusion I beg to mention the motto of Tschirch:

“Froh und Frei
 Klar und Wahr”

which freely translated would be

“Gay and Free
 Clear and True”

Let me hope that this sketch will serve as an inspiration to other members of the A. PH. A. to present biographies and other historical data to the Historical Section.

In order to make this biography as correct and complete as possible, in fact, to bring it right up-to-date, Madame Tschirch had the kindness to look over and augment my original manuscript, for which favor I again express my sincere thanks.

As to Tschirch it is my sincere wish, in which, no doubt, every member of the A. PH. A. will join me:

“Hoch und noch lange soll er leben.”

ASSOCIATION OF OFFICIAL AGRICULTURAL CHEMISTS.

The forty-second annual convention of the Official Agricultural Chemists will be held in Washington, D. C., October 18. The officers are: *Honorary President*, H. W. Wiley, Washington; *President*, W. W. Randall, Baltimore; *Vice-President*, W. H. MacIntire, Knoxville; *Secretary-Treasurer*, W. W. Skinner, Washington, D. C.

BALTIMORE VETERAN DRUGGISTS ORGANIZE.

The Baltimore Veteran Druggists' Association came into existence, September 10, 1926, when Messrs. E. F. Kelly, Samuel Y. Harris, A. R. L. Dohme, Charles Meyer, Charles Neal, A. G. DuMez, John B. Thomas, William Fouch, David M. Millard, R. E. L. Williamson, George Bunting and E. G. Eberle, assembled at Hotel Rennert for lunch. R. E. L. Williamson was elected temporary *President*, A. G. DuMez, temporary *Secretary*, Charles Neal, temporary *Treasurer*.

A committee to draw up details of organization was appointed consisting of E. F. Kelly,

A. R. L. Dohme, George Bunting, E. G. Eberle and A. G. DuMez.

The report of the foregoing committee was presented at the meeting of October 6, at Hotel Rennert. Wilhelm Bodemann was elected at the first meeting by unanimous vote. The third Wednesday was selected as the day of the monthly gatherings. Experiences and anecdotes added zest to the first session; historical accounts and old pharmacies were subjects of conversation at the second ceremonial, at which time a report was made of the meetings in Philadelphia.

ANNIVERSARY OF THE GERMAN APOTHECARY SOCIETY OF THE CITY OF NEW YORK.

The German Apothecary Society of the City of New York will celebrate its seventy-fifth anniversary October 7th at the Hotel Roosevelt. The Chairman of the Committee having this celebration in charge is Robert S. Lehman. It is anticipated that the celebration will be largely attended by the members and guests from various sections of the country.