

Institute for the History of Pharmacy¹, Philipps-University, Marburg; Institute of Pharmaceutical Chemistry², Goethe University, Frankfurt am Main; Avoxa – Mediengruppe Deutscher Apotheker GmbH³, Eschborn, Germany

Seventy-five volumes of „Die Pharmazie“ – a historical review

C. FRIEDRICH¹, A. HELMSTÄDTER^{2,3,*}

Received April 1, 2020, accepted April 25, 2020

*Corresponding author: Prof. Dr. Axel Helmstädter, Institut für Pharmazeutische Chemie, Goethe-Universität, Max-von-Laue-Str. 9, 60438 Frankfurt am Main, Germany
helmstaedter@em.uni-frankfurt.de

Pharmazie 75: 289-293 (2020)

doi: 10.1691/ph.2020.0449

The journal “Die Pharmazie” was founded shortly after World War II in the German Soviet occupation zone, and made its way to the leading pharmaceutical journal in the German Democratic Republic. From the early 1960s, and under the editorial responsibility of Siegfried Pfeifer (1961–1993) and Rudolf Voigt (1961–1988), the journal continuously increased its reputation and reached its present status of a peer reviewed international journal. Pfeifer served the journal as an editor-in-chief for 32 years in total. Other long-time editors were Peter Pflügel (1989–2012) and Theodor Dingermann (since 1994). Between 1946 and 2019 more than 12.000 manuscripts from almost 120 countries were published. From the very beginning up to the present day, “Die Pharmazie” has been accepting papers from all the pharmaceutical disciplines. The journal made history by publishing the first description of the thin layer chromatography technique and personal accounts of Arthur Eichengrün, personally involved in the discovery of aspirin.

1. Introduction

Compared to the age of many pharmaceutical journals, 75 volumes are a remarkable, but not a spectacular timeframe – there are professional journals which started off in the 19th century and are continued until today, like “Archiv der Pharmazie” which is now in its 353rd volume (Friedrich 2010). Nevertheless, as the only specialist journal which has been founded in the German Soviet Occupation Zone (later German Democratic Republic, GDR) and is edited up to the present day, “Die Pharmazie” has a very interesting history (Friedrich and Müller-Jahncke 2005). A closer look gives insights into the development of pharmaceutical sciences in the GDR, and their continuity in a reunited Germany.

2. Founding period

The first issue of this journal was published in June 1946 (Fig. 1). To the rather general title “Die Pharmazie”, a lengthy subtitle was added to further explain the scope of the journal: „*Zeitschrift für Pharmazie, Pharmazeutische Chemie, Pharmakologie, Pharmakognosie, Toxikologie, Experimentelle Medizin und alle Grenzgebiete der Arzneimittelforschung; für Anbau und Verwertung von Heil- und Gewürzpflanzen; für Herstellung und Vertrieb pharmazeutischer und kosmetischer Erzeugnisse*“ (Journal for Pharmacy, Pharmaceutical Chemistry, Pharmacology, Pharmacognosy, Toxicology, Experimental Medicine and all border areas of pharmaceutical research; for cultivation and processing of medicinal plants and spices; for production and distribution of pharmaceutical and cosmetic products). As mentioned in the preface, the aim was “to unite all different sciences working on research and production of medicinal substances“ (Autorenkollektiv 1946). In the light of the difficult conditions in the Soviet Occupation Zone after 1946, “endeavors at finding, improving and producing good remedies” were of utmost importance. For this purpose, the contribution of a “fruitful exchange of ideas and research results” was planned. The foreword was not only signed by the president of the central German administration for health care in the Soviet Occupation Zone, Dr. Paul Konitzer (1894–1947), but also by professors like the dean of the Medical Faculty of the University of Berlin, the director of the Pharmacological Institute of Berlin

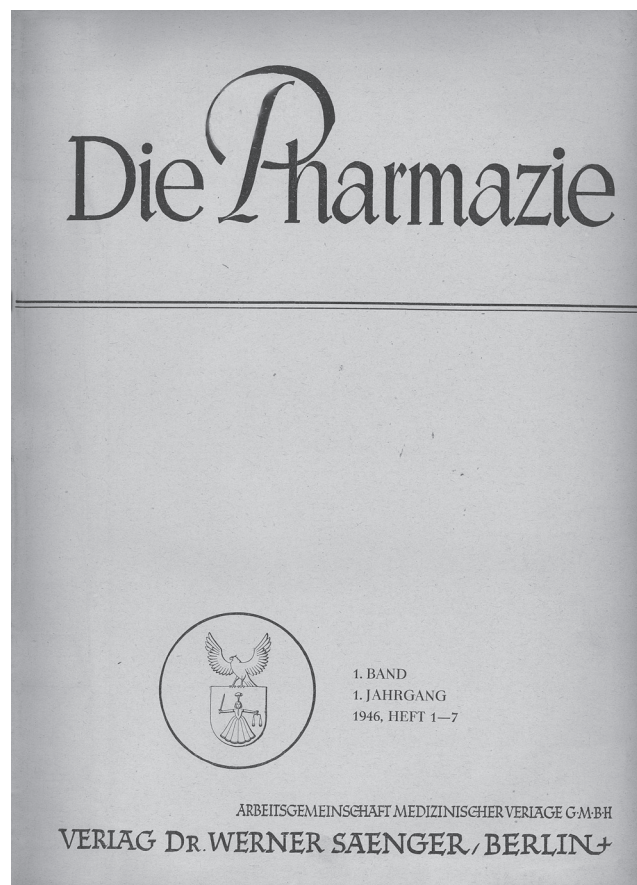


Fig. 1: Title page of the first issue of Die Pharmazie (June 1946)

University, Wolfgang Heubner (1877–1957), as well as by the pharmacy professors Theodor Sabalitschka (1889–1971) and Willy Peyer (1882–1948).

The editorial staff initially comprised G. von Bergmann, W. Mueller and Dr. Werner Saenger (1905–1983, notice from Hilde Schweizer (12/16/2019), Standesamt Aulendorf, where Saenger died on 4/25/1983). The first article explained “nature and tasks” of the journal, devoted to the pharmaceutical sciences in the broadest sense. “^{die}Pharmazie” stayed true to this tenet as long as the GDR existed, and still has the mission to offer publishing opportunities for all the pharmaceutical disciplines. Editors intended to form a repository of all work results, ideas and problems which may lead to finding, researching and producing remedies (Schriftleitung 1946). Besides original articles, more practically relevant contributions were published in particular sections like „*Arzneipflanzen-Umschau*“ (medicinal plant overview), „*Pharmazie und Recht*“ (pharmacy and law), „*Pharmazie und Wirtschaft*“ (pharmacy and economy), „*Rundschau*“ (review), „*Frage und Antwort*“ (question and answer), „*Gedenktage*“ (memorial days) and „*Buchbesprechungen*“ (book reviews). Additionally, the journal wanted to honor the great cultural achievements of pharmacy and pharmacists with the section “*Museum der Pharmazie*” (museum of pharmacy). Thus, it is no coincidence that already the first volume contains an article about professional relationships between physicians and pharmacists written by the famous medical historian Paul Diepgen (1878–1966).

In the first volume already, reflecting the main pharmaceutical research area in mid-20th century Germany, various works on pharmaceutical chemistry were published, like an article on the influence of the acidity level on adrenaline oxydation and on the chemistry of anthelmintics. The publisher himself, Werner Saenger, reported on streptomycin in the second volume. There were also contributions on the determination of “photometric uric, blood sugar, common salt and blood chalk” as well as on the glass electrode. Rudolf Schmidt-Wetter (1919–1978) discussed the question of terms of sale for over-the-counter products. Some articles referred to problematic supply conditions, for example describing coffee surrogates or “German house tea”.

It is remarkable that authors from the Western occupation zones also published in this journal in its first years and that political statements are missing mostly, notifications of the Soviet military administration were passed on matter-of-factly, sometimes even grievances were reported.

One year after Saenger had moved to Aulendorf in Württemberg in 1950 (notice from Landesarchiv Berlin 8/16/2019), his publishing company was forced into liquidation and had to cease their production.

“^{die}Pharmazie” was now published by „Arbeitsgemeinschaft medizinischer Verlage GmbH“, from which the publisher „Volk und Gesundheit“ (People and Health) emerged in 1953. Editor was now the Ministry of Health. From issue 1, 1951, on, Konstantin Pritzel (1913–?) was editor in charge, but already in August, Dieter Baumann (1914–2009) took over. He had studied pharmacy in Frankfurt/Main and worked in several pharmacies in Berlin. Due to his antifascist stance – he belonged to a resistance group – he was accused of high treason and thus imprisoned. He was paroled after 1945, becoming a member of the communist party KPD September 2, 1945 (Meyer 2019). After the war, Baumann cared for the reconstruction and restructuring of pharmacies and regulatory drug affairs in the Soviet Occupation Zone. After working as pharmacy principal and employee of the public health department, he became the main consultant and department manager of the German Central Health Administration Board in Berlin-Weißensee in 1947. From 1949, after the founding of the GDR, he worked in the Ministry of Health (Friedrich et al. 2009).

In 1952, Kurt Mothes (1900–1983), a renowned professor (Friedrich 2008), became head of the editorial board. From 1953 onwards and along with Mothes and Baumann, Hans Knöll (1913–1978), pharmaceutical technologist Ulrich Bogs (1908–1984), pharmacologist Fritz Hauschild (1908–1974) and Hans Seel (1898–1961), professor for medical microbiology and epidemiology, Paul Oesterle (1900–1971) and Erich Fürchtegott Heeger (1907–1959) (Mothes 1959), professor for plant cultivation science, formed the editorial board. Attracted by the international reputation of Kurt

Mothes, the first international contributions were made after 1953, i. e. from the Soviet Union, Czechoslovakia, and Japan, but still in German language.

In 1956, Mothes handed over the management of the editorial board to his trainee, Hilmar Friedrich (1920–2012). Under his guidance there was a rise in international contributions – from the Czech Republic (then ČSSR), Poland, France, Hungary, Sweden, Brazil and Greece. Hilmar Friedrich left the GDR in 1961 before the wall was built and started working at Münster University, in Hamburg (1963–1967) and again, in Münster (from 1968).

The editorial board now had to find a new editor-in-chief before the inner-German border closed on August 13, 1961. Siegfried Pfeifer remembered in 2007 that he and Rudolf Voigt (1921–2008) had been asked on behalf of the editorial board by Paul Oesterle whether they would like to become editors-in-chief. While Voigt was reluctant, because he was rather busy with his habilitation project, Pfeifer was interested immediately. After some consideration both agreed, because the mutual respect and sympathy and a general consensus in basic ideas was a good foundation for working together (Pfeifer 2007). Both signed the contract with the publisher “Volk und Gesundheit” (People and Health), after Mothes had given them a more profound insight into their tasks as editors.

3. The Pfeifer/Voigt era

Siegfried Pfeifer was born 1926 in Meerane and studied pharmacy in Jena. He received his PhD at Humboldt University of Berlin 1955 and habilitated in 1961. Becoming professor in the next year, he represented pharmaceutical chemistry but soon became a forerunner of biopharmaceutics, a completely new pharmaceutical discipline that time (Voigt and Pflügel 1991).

Rudolf Voigt (1921–2008) was born in Schwibus, today Świebodzin, Poland. After military service from 1940 and a following imprisonment, he began his studies in 1950 at Humboldt University, Berlin, and received his PhD in 1957. In 1961, he habilitated and became professor with teaching assignment in 1963. Six years later, he became a regular professor for pharmaceutical technology (Keipert 2008; Hedrich-Trimborn 2019).

Both shaped the journal in a remarkable manner. Already at the very beginning the two editors faced significant challenges. After the wall had been built, numerous authors from the German Federal Republic stopped submitting manuscripts in protest. At the same time, articles from the GDR and other socialist states arrived sparsely as well, because many authors wanted to wait and see how the closing of the inner-German border would affect international politics. Thus, filling the proposed 80 pages per issue became rather difficult. As there was a violent competition on paper contingents these days, editors-in-chief saw the danger to share their quota with other journals, what most probably would have been irreversible. Facing this situation, they actively approached colleagues from other pharmaceutical universities for contributions and also spent a lot of time writing research publications and reviews themselves. Working with the former secretary of the editorial board emerged as another challenge. Although she was non-specialist, she had corrected the manuscripts with great autonomy, most probably because the former editors Mothes and Friedrich had tried to avoid this kind of workload. Due to her unfamiliarity with the subject, many of the contributions showed faults and inconsistencies, so that conflicts with the new editors became unavoidable. With the employment of Ingeburg Elske, who worked many centuries until her 72nd birthday in 1993 as editor's secretary with great care, the problems were solved. Additionally, chemical formulae were unattractive and partly wrong, so that they did not at all meet the intended high standards of the journal. Modern and consistent design was achieved by the work of Helmut Döhnert, a chemical engineer, employed as an illustrator. Pfeifer and Voigt, in trustful cooperation, further professionalized the journal by enacting rather strict instructions for manuscript preparation.

By the end of the 1960s, shortage of manuscripts was overcome, so that 40 to 50 manuscripts arrived monthly which had to be judged by the editors. They classified them into four categories after a

first reading. Some were accepted immediately and subjected to formal editorial revision without further judgement. Others were immediately rejected because they did not fit the journal's profile or did not reach the necessary scientific standards. The third category comprised manuscripts to be revised by the authors before further judgement. The fourth category of manuscripts was sent to external reviewers, mostly members of the editorial board.

Pfeifer himself took over the largest part of editorial work in detail. He tried to publish a journal which met international standards, both scientifically and in design (Pfeifer 2007). In order to accomplish this, he corrected manuscripts rather strictly, omitting lengthy wording and redundancies. After significant shortening, some "original articles" ended up as so called "short original notes". The collaboration of Voigt and Pfeifer was characterized by harmony and friendship, as Pfeifer reported (Pfeifer 2007). In this spirit, they resisted attempts to separate them into an editor-in-chief and a deputy editor, which would, in theory, have better met the socialistic principle of singular leadership and responsibility. Both worked together in the best possible way until 1988. These decades "Die Pharmazie" attracted growing international attention regarding authorship and subscriptions. The journal concentrated on scientific contributions and left aside political issues like glorification of the socialistic system, even in view of memorial days like the anniversary of the founding of the GDR. This would not have found the interest by the international scientific community and made the journal politically unassailable.

Many faculty members of pharmaceutical university departments served as editorial members in the 1960's and 1970's: Egon Hannig (1919–1999) from Halle, Walter Poethke (1900–1990) from Jena, Harald Bräuninger (1911–1988) from Rostock, Günther Wagner (1925–1999) from Leipzig and Roland Pohloudek-Fabini (1913–1985) from Greifswald. Ulrich Schneidewind (1926–2002), Jochen Richter, director of the institute for drug affairs of the GDR, pharmacist Paul Sadowski from Halle, and medical doctor Horst Burghardt from Berlin were delegated by the Ministry of Health. Since the beginning of the 1960's Sadowski (together with U. Bogs), worked on a supplement called "Pharmazeutische Praxis". This was edited in order to publish contributions not so strictly scientific but of high relevance for the practice of pharmacy. The journal had several categories of publications, so scientific works (original articles, short communications), events and

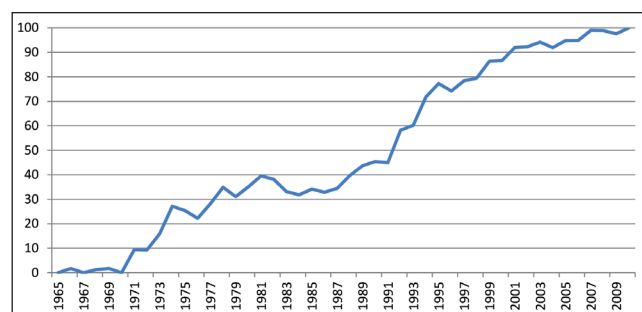


Fig. 2: Constantly rising number of English language manuscripts

lectures (Pharmaceutical Society of the GDR, from 1970 also Pharmaceutical Society of the FRG), book reviews, notifications, university news and personal matters. From 1972 on, the column "book reviews" was devoted to "new and available books of medicine and biology", later including works on veterinary medicine. From 1977 onwards, special sections devoted to continuing education and expert training were published occasionally. This clearly shows that "Die Pharmazie" was still an important journal devoted to science but also pharmaceutical practice and professional development in the GDR.

At the end of the 1970s, the editors-in-chief decided that it was time to rejuvenate the editorial board. After retirement from their positions, members between their 65th and 75th year of age were

requested to leave. Eventually in 1985, Lothar Kny and Karl Hiller (Berlin), Michael Dittgen and Peter Pfflegel (1936–2017, both from Greifswald), Peter Nuhn and Martin Luckner (1935–2004) (both from Halle) as well as Fritz Markwardt (1924–2011) (Erfurt) replaced retiring colleagues.

By the end of 1988, Rudolf Voigt retired after becoming emeritus professor, Peter Pfflegel (1936–2017) from Greifswald took over his position as deputy editor-in-chief.

4. Development after 1990

After Germany's reunification in 1990, editors of "Die Pharmazie" again faced severe challenges mainly due to economic problems of the publisher. After several months of uncertainty, the so called Govi-Verlag, publishing company of the Federal Union of German Associations of Pharmacists, located in Eschborn near Frankfurt am Main, took over (Egenolf 1993). Finally, and with the feeling that he had accomplished what he was meant to do, Siegfried Pfeifer retired from his position as editor-in-chief after more than 32 years by the end of 1993. Peter Pfflegel moved to the position as editor-in-chief, working closely together with Professor Theodor Dingermann (born 1948), pharmaceutical biologist from Goethe University, Frankfurt. Axel Helmstädter (born 1961) joined the team as managing editor (Anonymous 1993). The subtitle was changed into "An International Journal of Pharmaceutical Sciences". In 1997, Prof. Hartmut Derendorf (born 1953), Gainesville, FL, USA, started to represent the journal in the US as Editor North America. Since then, editors have been trying to continue the tradition of the journal, but adapt it to modern developments in the publishing business. In May 1995 information about the journal, instructions for authors and tables of contents were provided online. Firstly in 1999, full articles were made available online for subscribers. In 2006, an online submission tool was established, and no manuscript submissions on paper were accepted anymore. Eventually, in 2020, the journal turned to full open access, so papers are available free from the Ingentaconnect platform, while authors and their institutions have to contribute to publishing costs. Again, editorial staff changed significantly in 2012, when Professor Sandra Klein, Greifswald, took over the position of editor-in-chief for technological, analytical, biopharmaceutical, and historical manuscripts from Peter Pfflegel who retired after decades in service of the journal. Other editors remained on board, following the tradition of great continuity in editorial work for "Die Pharmazie".

5. Some statistics

As has been shown, the journal was founded in Germany immediately after World War II and soon found its role as the central, science based professional publication for pharmacists in the GDR. So it was clear, that contributions were made in German language. However, after Siegfried Pfeifer and colleagues started to concentrate on truly scientific original work and to open up the

Table 1: Top ten authors PHARMAZIE 1946–2019*

Rank	Author	No of contributions
1	Günther Wagner, Leipzig	270
2	Reinhard Hüttenrauch, Jena	212
3	Siegfried Pfeifer, Berlin	181
4	Rudolf Voigt, Berlin	127
5	Helmuth Kala, Halle	106
6	Jozef Čižmarik, Bratislava	95
7	Karl Hiller, Berlin	92
8	Peter Nuhn, Halle	88
9	Klaus Görlitzer, Braunschweig	87
10	Peter Pfflegel, Greifswald	86

* Statistics according to Clarivate Web of Science

REVIEW

Table 2: Top ten home countries of Pharmazie authors 1946-2019*

Rank	Country	No of manuscripts
1	Whole Germany	4668
2	PR China	1029
3	Egypt	750
4	Czech Rep/Slovakia	656
5	Poland	590
6	India	580
7	Hungary	391
8	USA	335
9	Japan	280
10	Turkey	268

* Statistics according to Clarivate Web of Science, March 2020

Table 3: Top 10 contributing institutions 1946-2019*

Rank	Institution	No of manuscripts
1	Martin-Luther University, Halle-Wittenberg, Germany	638
2	Ernst-Moritz-Arndt University, Greifswald, Germany	622
3	Humboldt-University, Berlin, Germany	567
4	University of Leipzig, Germany	460
5	Alexandria University, Egypt	292
6	German Academy of Sciences, Berlin, Germany	239
7	Free University, Berlin, Germany	203
8	University of Szeged, Hungary	196
9	Comenius University, Bratislava, Slovakia	188
10	National Research Centre, Cairo, Egypt	178

* Statistics according to Clarivate Web of Science, March 2020

Table 4: Articles from PHARMAZIE 1946–2019 with more than 100 citations*

Rank	Authors	Title	Bibl. data	Citations
1	Stahl E	[Thin-layer chromatography; methods, influencing factors and an example of its use] (German)	21 (1956), 633–637	442
2	Schulz M, Schmoldt A	Therapeutic and toxic blood concentrations of more than 800 drugs and other xenobiotics	58 (2003), 447–474	353
3	Roeder E	Medicinal plants in Europe containing pyrrolizidine alkaloids	50 (1995), 83–98	216
4	Bhadra D, Bhadra S, Jain P, Jain NK	Pegnology: a review of PEG-ylated systems	57 (2002), 5–29	187
5	Uner M	Preparation, characterization and physico-chemical properties of Solid Lipid Nanoparticles (SLN) and Nanostructured Lipid Carriers (NLC): Their benefits as colloidal drug carrier systems	61 (2006), 375–386	178
6	Roeder E	Medicinal plants in China containing pyrrolizidine alkaloids	55 (2000), 711–726	216
7	Joshi KC, Chand P	Biologically-active indole derivatives	37 (1982), 1–12	168
7	Tonnesen HH	Solubility, chemical and photochemical stability of curcumin in surfactant solutions	57 (2002), 820–824	168
9	Chen KM, Ge BF, Ma HP, Liu XP, Ba MH, Wang Y	Icariin, a flavonoid from the herb Epimedium enhances the osteogenic differentiation of rat primary bone marrow stromal cell	60 (2005), 939–942	137
10	Bojarski AJ, Cegla MT, Charakchievaminol S, Mokrosz MJ, Mackowia KM, Misztal S, Mokrosz JL	Structure-activity relationship studies of CNS agents. 9. 5-HT _{1A} AND 5-HT ₂ receptor affinity of some 2-substituted and 3-substituted 1,2,3,4-tetrahydro-beta-carbolines	49 (1993), 289–294	135
11	Heber D, Heers C, Ravens U	Positive inotropic activity of 5-amino-6-cyano-1,3-dimethyl-1,2,3,4-tetrahydro[2,3-D]pyrimidine-2,4-dione in cardiac-muscle from guinea pig and man.6. Compounds with positive inotropic activity	48 (1993), 537–541	133
12	Markwardt DT, Fink G, Kaiser B, Klöcking HP, Mowak G, Richter M, Stürzebecher M	Pharmacological survey of recombinant hirudin	43 (1988), 202–207	126
13	Rollas S, Kalyoncuoglu N, Suraltiner D, Yegenoglu Y	5-(4-Aminophenyl)-4-substituted-2,4-dihydro-3H-1,2,4-triazole-3-thiones – Synthesis and antibacterial and antifungal activities	48 (1993), 308–309	126
14	Didry N, Dubreuil L, Pinkas M	[Antimicrobial activity of thymol, carvacrol and cinnamaldehyde alone or in combination] (French)	48 (1993), 301–304	124
15	Schnitzler P, Schon K, Reichling J	Antiviral activity of Australian tea tree oil and eucalyptus oil against herpes simplex virus in cell culture	56 (2001), 343–347	124
16	Deli J, Lorand T, Szabo D, Foldesi A	Potential bio-active pyrimidine derivatives. 1, 2-Amino-4-aryl-8-arylidene-3,4,5,6,7,8-hexahydrochinazolines	39 (1984), 539–540	122
17	Labanauskas L, Kalcas V, Udrenaitė E, Gaidelis P, Brukstus A, Dauksas V	Synthesis of 3-(3,4-dimethoxyphenyl)-1H-1,2,4-triazole-5-thiol and 2-amino-5-(3,4-dimethoxyphenyl)-1,3,4-thiadiazole derivatives exhibiting anti-inflammatory activity	56 (2001), 617–619	108
18	Pandeya SN, Dimmock JR	Recent evaluations of thiosemicarbazones and semicarbazones and related-compounds for antineoplastic and anticonvulsant activities	48 (1993), 659–666	106

* Statistics according to Clarivate Web of Science, March 2020

journal for an international audience in the early 1960s, more and more English language papers were published. In 1966, the first three English manuscripts appeared in print, submitted from Egypt (El-Hamidi and Ahmed 1966; Elmunajjed et al. 1966), and India (Tewari and Taneja 1966). From the early 1970s onwards, the number of English manuscripts rose sharply (Fig. 2), and the last German paper, besides a more political statement (Folkers 2013) was published in September 2009 (Möhrle and Berlitz 2009). Between 1981 and 1994, also French manuscripts, in total 68, were published now and then. From 1946 until the end of 2019, “Die Pharmazie” published (according to Clarivate Web of Science) 12,942 manuscripts from almost 120 countries. Most of them, primarily in the early years, were of German origin, of course. In the first decades, foreign manuscripts were mainly submitted from scientists in Eastern countries, so called “sozialistische Bruderstaaten” (socialistic brotherhood states), like Poland, Hungary, Slovakia etc. Many contributions were traditionally also made from universities in Egypt and India. The last ten years, more and more papers originated from the Far East, mainly China and Japan. For top ten lists of authors, their home countries and institutions over the last 75 volumes, see Tables 1-3. “Die Pharmazie” publications also exerted a considerable impact, usually expressed in citation statistics. A list of papers cited more than 100 times is given in Table 4.

6. Publication highlights

In the 75 years of its history, “Die Pharmazie” published a variety of articles of significant impact on science and society. A particular highlight might be the first description of the thin layer chromatography technique, introduced in the 1950s by the German pharmacist Egon Stahl (1924–1986) (Stahl 1956). This is also the most often cited publication from “Die Pharmazie” ever (see Table 4). Stahl had managed to significantly improve the technique, in principle invented some years earlier, by his way to reproducibly prepare a most favourable stationary phase to be spread on glass plates, and described this in detail in “Die Pharmazie” the very first time.

As Sneader (2000) has shown, an early publication in “Die Pharmazie” significantly changed our knowledge about the history of aspirin. This was authored by Arthur Eichengrün (1867–1949) claiming priority for the discovery of acetylsalicylic acid. In the literature, so far, Felix Hoffmann (1868–1946) and Heinrich Dreser (1860–1924) were known as the inventors of the drug. Eichengrün (1949) however, claimed that the synthesis was, in fact, his idea and Hoffmann only followed Eichengrüns instructions without being aware of their significance. Dreser did not even deserve any credits, he even strongly opposed marketing of the drug at the beginning. Eichengrün, who was of Jewish faith, had firstly explained his view in a letter sent from the Nazi concentration camp in Theresienstadt, where he had been imprisoned in May 1944, to the Bayer company. It is assumed that his contributions had been written out of history because he was a Jew (Sneader 2000), what he tried to correct when the Nazi Regime came close to its end (and realizing that he had nothing to lose anymore). Already in 1947, in an article on the occasion of Eichengrün’s 80th birthday, “Die Pharmazie” had correctly stated that the development of aspirin had to be traced back to his initiative (“*Auch die Entwicklung des ‘Aspirin’ ist auf seine Initiative zurückzuführen*”) (Stadlinger 1947).

“Die Pharmazie” published special issues now and then, particularly to honor important pharmaceutical scientists with special issues, so in 1991 at the occasion of the 65th birthday of Siegfried Pfeifer with several contributions all dedicated to the long-time editor. Similarly, Theodor Dingermann was honored with a special issue in 2013.

Between 1997 and 2010, “Die Pharmazie” published abstracts and proceedings of the biannual “Drug Optimization via Retrometabolism Conference” (later “Conference on Retrometabolism Based Drug Design and Targeting”). The term retrometabolic drug design, introduced by Nicholas Bodor (born 1939) describes a strategy for the design of safer (“soft”) drugs either using a predictable metabolism to an inactive moiety or using targeted drug delivery approaches. Participants of the conferences published their results in a series of invited contributions as did Bodor himself (Bodor and Buchwald 2010; Buchwald and Bodor 2014).

Conflicts of interest: Axel Helmstädter is currently working as managing editor of “Die Pharmazie” as an employee of the publisher.

References

- Anonymous (1993) The editorial team from 1994. *Pharmazie* 48: 882.
- Autorenkollektiv (1946) Zum Geleit. *Pharmazie* 1: 1.
- Bodor N, Buchwald P (2010) Recent advances in retrometabolic drug design (RMDD) and development. *Pharmazie* 65: 395–403.
- Buchwald P, Bodor N (2014) Recent advances in the design and development of soft drugs. *Pharmazie* 69: 403–413.
- Egenolf PJ (1993) Thank you, Siegfried Pfeifer! *Pharmazie* 48: 880.
- Eichengrün A (1949) 50 Jahre Aspirin. *Pharmazie* 4: 582–584.
- El-Hamidi A, Ahmed SS (1966) The content and composition of some umbelliferous essential oils. *Pharmazie* 21: 438–439.
- Elmunajjed DT, Fayed MBE, Sallam LAR (1966) Steroid sapogenins XI. Byproducts from the side-chain degradation of diosgenin. *Pharmazie* 21: 598–599.
- Folkers G (2013) Freiheit in der Forschung. *Pharmazie* 68: 506–520.
- Friedrich C (2008) Kurt Mothes: Pharmazeutischer Biologe von Weltruf. *Pharm Ztg* 153: 424–427.
- Friedrich C (2010) Apotheker als Zeitschriftenredakteure. *Pharm Ztg* 155: 1248–1253.
- Friedrich C, Probst H, Schaefer M (2009) Zum 95. Geburtstag von OPhr Dietrich Baumann. *Dtsch Apoth Ztg* 149: 495.
- Friedrich C, Müller Jahncke WD (2005) Von der Frühen Neuzeit bis zur Gegenwart, Eschborn, p. 570–572 (Geschichte der Pharmazie / R. Schmitz; 2).
- Hedrich-Trimborn L (2018), Zur Entwicklung der pharmazeutischen Zweigdisziplin Pharmazeutische Technologie bis 1980. Stuttgart, pp. 129f.
- Keipert S (2008), In memoriam Professor Dr. Rudolf Voigt. *Pharm Ztg* 153: 1593–1594.
- M[othese] K (1959) Prof. Dr. phil. habil. Erich Heeger zum Gedächtnis. *Pharmazie* 14: before 177.
- Meyer U (2019) Kein Kommunist im üblichen Sinne – der Apotheker Dieter Baumann (1914–2009) in der NS-Zeit. In: Anagnostou S, Retzar A (2019) Facetten der Pharmaziegeschichte. Festschrift für Christoph Friedrich zum 65. Geburtstag. Stuttgart, pp. 115–132, here 127. (Veröffentlichungen zur Pharmaziegeschichte; 15).
- Möhrle H, Berlitz J (2009) Regioselektivität bei der Dehydrierung von substituierten Ethylendiaminen als Nicotin-Modelle. *Pharmazie* 64: 565–573.
- Pfeifer S (2007) Bemerkungen zur Arbeit der Chefredaktion der Zeitschrift *Pharmazie* 1961–1988 (typescript).
- Schriftleitung (1946) Wesen und Aufgaben dieser Zeitschrift. *Pharmazie* 1: 2.
- Sneader W (2000) The history of aspirin, a reappraisal. *Br Med J* 321: 1591–1594.
- Stadlinger H (1947) Dr. Ing. e.h., Dr. phil. Arthur Eichengrün 80 Jahre. *Pharmazie* 2: 383–384.
- Stahl E (1956) Dünnschicht-Chromatographie (Methode, Einflußfaktoren und einige Anwendungsbeispiele). *Pharmazie* 11: 633–637.
- Tewari SN, Taneja BO (1966) Studies in the smoking of narcotic drug-opium. *Pharmazie* 21: 699–700.
- Voigt R, Pflügel P (1991) Prof. Dr. rer. nat. habil. Siegfried Pfeifer 65 Jahre. *Pharmazie* 46: 385–386.