



## 1921—1951 年北京协和医院药剂科学术影响力

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**【摘要】**通过回顾和整理文献发现, 1921—1951 年北京协和医院药剂科在职工共发表 61 篇论文、编著出版 6 部著作和 5 版处方集, 参编 1 部《中华药典》。本文详细梳理和分析文献内容, 探讨北京协和医院药剂科在建院之初的学术影响力, 以及对我国医药事业发展所作的重要贡献。

**【关键词】**北京协和医院; 药剂科; 处方集; 学术影响力

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## Academic Influence of the Pharmacy Department of Peking Union Medical College Hospital from 1921 to 1951

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**【Abstract】**The publications written by the employees of the Pharmacy Department of Peking Union Medical College Hospital from 1921 to 1951 were searched and reviewed systematically. A total of 61 publications, 5 versions of formularies and 6 books have been found so far. The Chinese Pharmacopeia published in 1930 was also involved. Above finding demonstrated a profound and great influence of the early generation of our department on the development of Chinese medical science and pharmaceutical science.

**【Key words】**Peking Union Medical College Hospital; department of pharmacy; formularies; academic influence

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北京协和医院于 1921 年建院<sup>[1]</sup>, 药剂科是建院之初即成立的科室之一, 曾先后被称为调剂部、药剂科、药房(含售药部、制药部及存储部)、药剂室、北京协和医学校药房、药局等。本文通过检

索和系统梳理北京协和医院药剂科于 1921—1951 年间发表的论文和著作情况, 旨在追溯其在建院最初 30 年的科研及学术影响力, 为丰富中国医院药事管理研究提供资料。

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## 1 文献检索

检索 1921—1951 年北京协和医院在册员工署名发表的论文、著作以及与北京协和医院药学工作相关的公告与报道，检索内容分为 3 部分：(1) 网络检索 PubMed、万方数据、中国知网数据库中作者单位为北京协和医学院药科、北京协和医学校药科、北京协和医院药科及北京协和医院药剂科的文献，检索词包括但不限于北京协和医院、北平协和医院、北京协和医学校、北京协和医学院、药房、药科、调剂部、药剂科、Peking (Peiping) Union Medical College、Peking (Peiping) Union Medical College Hospital、Peking (Peiping) Union Medical College and Hospital、Pharmacy、Department of Pharmacy、John Cameron、康约翰、Moody Meng、孟目的、Arthur Tye、叶进荣、

Hsu Yin-ta、徐应达、Wan-heng Tu、杜万亨等，检索时间为建库至 2020 年 6 月 30 日。(2) 手工检索综述中的参考文献及数据库中未收录的文献和著作。(3) 其他资料包括北京协和医学院和北京协和医院院长年度报告、北京协和医学院档案中心人事档案、美国洛克菲勒基金会档案中心数据库人事档案资料、散落在各地医药相关博物馆和收费网站的相关文献。排除药剂科员工离职后的所有论文及著作。

## 2 检索结果及分析

经检索和复核，1921—1951 年北京协和医院药剂科共发表论文 61 篇，最早发表的 20 篇论文见表 1；发表著作 6 部（表 2）；出版处方集 5 版（表 3）；参与编撰《中华药典》1 部。

表 1 1921—1951 年北京协和医院药剂科最早发表的 20 篇论文

序号	发表年份 (年)	作者	文题	发表杂志
1	1921	Cameron J	Impressions of my first visit to the President of the Chinese Republic	<i>The Pharmaceutical Journal and Pharmacist</i>
2	1923	Cameron J	The System of Receiving and Issuing Prescriptions in Peking	<i>The Pharmaceutical Journal and Pharmacist</i>
3	1923	Cameron J	Formulary. A List of Drugs and Preparations Selected as Official for Use in Peking Union Medical College Hospital	<i>The Journal of American Medical Association</i>
4	1923	康约翰 (张沛霖译)	毒药及含毒性药之贮藏检验调剂法	中华医学杂志
5	1923	Cameron J	A Note on The Storing, Checking and Dispensing of Poisons and all Poisonous Preparations	<i>The National Medical Journal</i>
6	1923	Cameron J	A Note on the Preparation of "Carrel-Dakin" Solution	<i>China Medical Journal</i>
7	1923	Cameron J	A Further Note on the Preparation of "Carrel-Dakin" Solution	<i>China Medical Journal</i>
8	1923	Cameron J	Insecticides and Germicides in China	<i>China Medical Journal</i>
9	1923	Cameron J	Insecticides and Germicides in China	<i>The Pharmaceutical Journal and Pharmacist</i>
10	1923	Cameron J	Weihaiwei-Shantung-China	<i>The Pharmaceutical Journal and Pharmacist</i>
11	1923	Cameron J	A Short Note on the Common Chlorine Antiseptics	<i>The National Medical Journal</i>
12	1924	Cameron J	"ADRENALIN"	<i>The National Medical Journal</i>
13	1924	Cameron J	The Chemical Purity of Carbon Tetrachloride (四氯化碳的化学纯度)	<i>China Medical Journal</i>
14	1925	康约翰	北京药业最近之情形	化学药业杂志
15	1925	康约翰 (张沛霖译)	论文：北京协和医学校调药术之一班（附图十幅）	化学药业杂志
16	1925	Cameron J	Formulary of the Peking Union Medical College, Second Edition, P. U. M. C. Press 1924	<i>JAPhA</i>
17	1925	Cameron J	Hydrogen Peroxide	<i>The National Medical Journal</i>
18	1925	康约翰	The System of Receiving and Issuing Prescriptions in Peking	<i>China Medical Journal</i>
19	1925	康约翰	Eradication of the Cockroach (消灭蟑螂)	<i>China Medical Journal</i>
20	1925	Cameron J, Chen KK	The Old and the New in Pharmacy in China	<i>The Pharmaceutical Journal and Pharmacist</i>

表2 1921—1951年北京协和医院药剂科出版著作一览表

出版年份 (年)	作者	书名(英文)	书名(中文)	页数 (n)	出版社
-	康约翰	List of 100 Test Prescriptions with Notes and Comments on Each Prescription	100张测试处方及其注解	39	[Peipking] P. U. M. C. Press
1929	康约翰	Qualitative Chemical Analysis Tables	-	15	[Peiping] North China Pharmaceutical Society
1929	康约翰	Posological and Percentage Tables	-	103	[Peiping] North China Pharmaceutical Society
1930	康约翰	Elementary Quantitative Analysis for Pharmaceutical Students	初级药科定量分析化学	33	[Peiping] North China Pharmaceutical Society//华北药学会, The Leader Press
1930	康约翰	Special Short Course in Practical Pharmacy	实习制药简义说明	84	[Peiping] P. U. M. C. Press
1931	孟目的	Posology-Percentage-Poisons	剂量学: 百分比: 毒药	-	-

-: 仅见于图书卡片或医院档案<sup>[2]</sup>, 或具体信息不详

表3 1921—1951年北京协和医院药剂科出版处方集一览表

版次	出版年份 (年)	处方集名称	出版单位	监制	出版社	页数 (n)	药品数 (n)	制剂数 (n)	尺寸(cm)
1	1922	Formulary	Peking Union Medical College	the Hospital Committee on the Peking Union College	P. U. M. C. Press, Peking China	39	189	46	11.0×19.0
2	1924	Formulary	Peking Union Medical College	the Hospital Committee on the Peking Union College	P. U. M. C. Press, Peking China	47	215	54	11.0×19.0
3	1927	Formulary	Peking Union Medical College	The committee on the Hospital	P. U. M. C. Press, Peking China	67	230	54	9.0×14.5
4	1932	Formulary	Peking Union Medical College	The committee on the Hospital	P. U. M. C. Press, Peiping China	69	240	55	9.0×14.5
5	1942	Handbook of Therapy and Formulary	Peiping Union Medical College Hospital	Hamilton H. Anderson, Shih-hao Liu and Arthur Tye	Jen Li Press, Peking China	168	293	52	11.0×19.0

## 2.1 论文: 传递先进管理经验, 引领药学学术发展

从论文发表时间分布来看, 1921—1931年是药剂科科研论文的丰收年, 国外期刊发表论文16篇, 国内期刊发表的中文和英文论文共35篇; 1932—1941年国内中文期刊发表论文10篇; 1942—1951年无论文产出。由此可见, 学术发展受时局动荡的影响较大。

从论文作者分布来看, 第一任药房主任康约翰(Cameron J)发表论文47篇, 占论文总数的77.0% (47/61), 反映其是一位勤奋、高产的药师和科室带头人。北京协和医(学)院建院宗旨为“科学济人道”, 鼓励以科学推进临床医疗。1921—1927年的医院年度报告收录了当年各个科室的论文发表情况, 仅1927年医院年报记录的当年发表论文题录中, 药剂科主任康约翰即有7篇论文(图1)<sup>[3]</sup>。

从论文主题分布来看, 药品质量管理和调剂流

程管理是当时的工作重点(47.5%, 29/61, 图2)。分析康约翰所发论文的具体内容, 可追溯我院药事管理的形成与发展脉络: 1921—1923年重点向海外介绍当时中国医药政策和工作模式(2篇); 1923年重点关注毒药及含毒性药的贮藏检验调剂方法(3篇)以及含氯消毒剂的制备、检验与混淆品对消毒杀菌效果的影响(6篇), 1924—1925年主要提醒同行注意肾上腺素、四氯化碳和过氧化氢的降解稳定性及其效价检测, 提出应对药品和原料药进行定性、定量检测(4篇), 并从调剂、制剂、库存、麻醉药管理、教学培训、处方集等多角度全流程分享北京协和医院的管理经验(7篇); 1926—1927年重点关注中国药品市场质量, 强调当药品质量参差不齐, 购买药品和药用原料时务必标注所需品质, 并根据国外药典进行必要的定性、定量检测(10篇); 1928—1930年分别就压制片、皮下注射

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## PUBLICATIONS BY MEMBERS OF THE HOSPITAL STAFF\*

July 1, 1926 - June 30, 1927

Johannes H. Bauer, T'ang Fei-fang, Yü Ho, and Carl TenBroeck  
(J. Bauer, F. T'ang, H. Yü, and C. TenBroeck)The serological types of tetanus bacilli found in China.  
(Abstract)

Transactions Sixth Congress Far Eastern Association Tropical Medicine, September, 1926.

John Cameron

Some observations on pharmacy in Great Britain.  
*Pharmaceutical Journal (London)*, August, 1926.

The danger of purchasing anywhere.

*China Medical Journal*, December, 1926.

Pharmacy in China in 1927.

*American Druggist*, March, 1927.

A pharmaceutical aspect of China in 1927.

*American Journal of Pharmacy*, March, 1927.

Adulterations.

*China Medical Journal*, April, 1927.

Pharmaceutical sterilization.

*China Medical Journal*, April, 1927.

A few practical suggestions for hospital pharmacies in China.

*China Medical Journal*, May and June, 1927.

James R. Cash (J. R. Cash)

Vital staining characteristics of the epithelioid cells in experimental tuberculosis.

*Proceedings Society for Experimental Biology and Medicine*, December, 1926.

Cheer Sheo-nan and George Y. C. Liu (S. N. Cheer and Y. T. Loo)

Blood transfusion as one of the therapeutic measures in general practice.

*National Medical Journal of China*, April, 1927.

\*In order to avoid any ambiguity, the name of author is given in parentheses after the name more commonly used.

图 1 1927 年北京协和医院年报记录的药剂科主任康约翰所发论文题录<sup>[3]</sup>

“初级药科定量分析化学”（4篇）。论文内容从侧面反映出康约翰不仅乐于介绍和引入英国和美国的毒麻药管理法规、严格的操作流程、规范的药品质量管理与检验方法、实用型药学人才培训方法与教程，同时乐于向国际同行分享北京协和医院的药事管理经验和药品质量管理，向全球宣传北京协和医院药事管理模式和体会。

## 2.2 著作：本土化实用型药学人才培养教材的范本

6部著作中，康约翰著有5部，这些著作是在民国初期我国现代药学教育匮乏的大背景下编写和出版的教材，内容简明实用，不仅用于北京协和医院内部职工和进修生培训、学习，亦作为1929年开办的北平药学讲习所的授课与毕业考试用书，以及当时北平地区司药和药剂师的资格考试复习资料。

由北京协和医院药学人员联合华北药学会发起和创建的北平药学讲习所，将北京协和医院药剂科内部专业培训模式外延，获得了当时北平市卫生局的支持，并争取到协和医学院药理系捐助仪器和药品，以及洛克菲勒基金会驻京办事处捐助的开办费<sup>[4]</sup>。从《初级药科定量分析化学》的序言可知，讲习所毕业考试由华北药学会执行委员组织，考试类型和复杂难度分为司药和药剂师两种。

需要说明的是，孟目的的著作仅见于北京协和医院档案和文献<sup>[2]</sup>。在1931年北平药学讲习所第一批学员毕业时的《药刊》专刊上，孟目的以华北药学会的名义撰写发刊词，并与杜万亨分别从教学和研究的角度对北平讲习所的工作进行了总结，为后人继续和发扬药学教育、提高我国药品管理水平，打下了良好基础<sup>[5-6]</sup>。

## 2.3 处方集：创中国药品遴选与性价比管理之先河

北京协和医院第一版处方集于1922年出版，至1942年间先后出版了5版（图3）。这些处方集对于规范医疗机构内部药品使用与管理、保障教学医院的医疗安全与合理用药，发挥了积极作用；对于进一步探讨当时的流行病学特点、诊疗药品品种与发展、胰岛素-磺胺类药物-青霉素-过敏原检测试剂等标志性药物的使用年代等，均具有极高的研究价值。

笔者通过分析发现，第1版与第2版处方集的篇幅和品种相差不大，且特意预留若干空白页用于增补药品时抄写。1927年第3版和1932年第4版改为口袋书形式，不再预留空白页，处方集中也不再包括试用药品目录。1935年曾再次印刷第4版处方集。

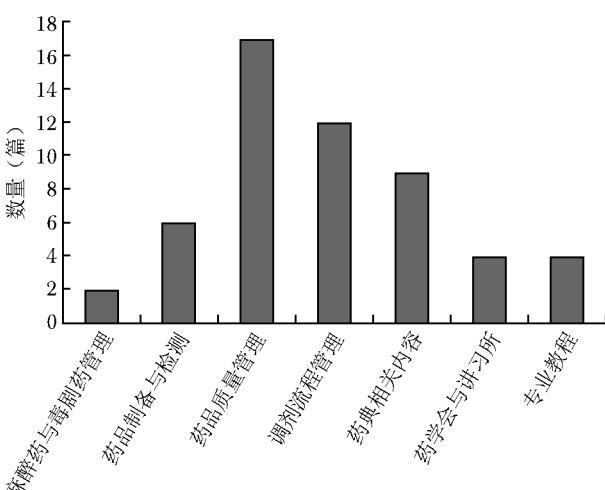


图 2 1921—1951 年北京协和医院药剂科论文主题分布

药物、挥发性全身麻醉剂、鱼肝油等制剂或剂型撰文介绍和探讨（5篇）；1932—1933年分4期连载

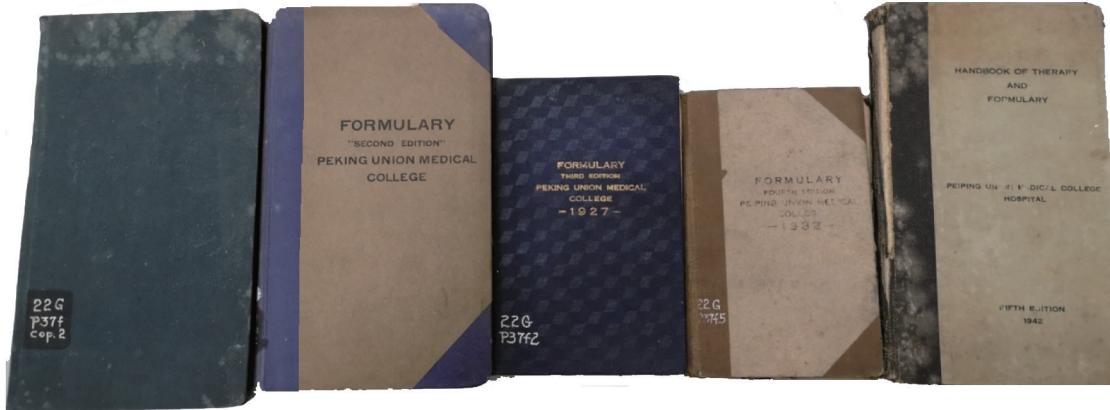


图 3 1921—1951 年北京协和医院药剂科出版的 5 版处方集封面

1942年第5版处方集是篇幅最大、药品和制剂数量最多、管理法规与药品分类内容最全面的一版处方集。

对北京协和医院药事管理工作的海外报道，最早可追溯至 *JAMA* 于 1923 年刊登的书讯<sup>[7]</sup>，文中盛赞北京协和医院采用的科学遴选方式以及处方集模式（图 4）。由此可见，北京协和医院的首版处方集在国内外均具有特殊意义。

这些始于 20 世纪 20 年代的医院处方集表明，北京协和医院建院之初不仅在医疗、教学领域处于世界领先水平，在药品遴选、合理使用、处方审核、规范采购等药事管理方面也奠定了扎实的基础。处方集中品规数与制剂数量的变化，既体现了医院学科和病种的发展变化，也间接反映出我国制药工业的时代水平。

## 2.4 《中华药典》：推动我国药品质量管理水平

面对 20 世纪初中国药品市场上假药与赝品鱼龙混杂的局面，药学人员一直呼吁民国政府加强对药品质量的监管，呼吁编撰《中华药典》。时任北京协和医院药剂科主任的康约翰多次撰文呼吁警惕市场假药风险及撰写药典的必要性和紧迫性。基于上述现状及有识之士的强烈呼吁，1930 年《中华药典》正式出版，北京协和医院药剂科药师孟目的为主要参编人员，北京协和医学院药理系伊博恩教授应邀参与中药部分的编目与审核。

随着《中华药典》的出版，孟目的联合其他编撰专家相继发表了9篇论文，介绍和宣传药典检测方法及其科学性，介绍药典编撰的过程和体会，体现了孟目的等药典编撰专家及药学专业人员对振兴祖国医药工业水平和药品管理水平的迫切心情<sup>[8-9]</sup>。

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**Occupation.** In the main, the author has limited himself to the concept of "occupation" as it applies to the Negro race group; he speaks of "psychosis and delirium, in spite of the broader nature of his title. He is by no means clear as to the distinguishing features. The features studied are: certain body movements, including "brain capacity" (by which he means skull capacity or brain size); certain psychometric tests; a series of traits derived from descriptive evidence of the conduct of the children and from which a social index is derived; and finally, the "intelligence quotient or "intelligence test," which is described in detail; an educational attainment scale, and an industrial rating scale. These are correlated with the Negro's social and economic status. The material is somewhat disconcerting, and its practical bearing will be discernible only to those who are thoroughly familiar with psychometric methods.

**Die kritischen Erörterungen nach anthropologischen Methoden.** Beiträge zur Rassentheorie. Mit einem Geleitwort von Professor Dr. Karl Weigelt, Düsseldorf. Von Paul Fries. 948 S., F. 431, mit 23 Illustrationen. Berlin: Julius Springer, 1929.

This is an exhaustive treatise on *anthropological racism*, it begins with a detailed exposition of the various theories concerning the origin of the races, and with which the author concludes, are satisfactorily. The author concludes that there must be something in race predisposition; especially in certain race mixtures. The second part is a minute and detailed description of the racial characteristics of the Negro race. One wonders how, in a single lifetime, so much material could have been gathered, and the detail is such as to be overwhelming. The third part is devoted to the social relationships of the *cretin* to his community and his psychological development. The third part is devoted to a discussion of the nature and causes of *cretinism*, together with points on different forms of *cretinism*, the treatment, and the social estimation of the possibilities of combating *cretinism*, the treatment and its effects. The whole is followed by a bibliography of 1100 numbers. This important work is worthy of careful attention by any one interested in *endemic cretinism*.

extant, to the relative availability and cost of drugs in two widely separated countries, based on the assumption that a physician's list, consisting of twenty-five preparations, for various reasons, have not been admitted to the pharmacopoeia, but are to be kept in stock in the pharmacy. It is hoped that most of them will be admitted, and that as yet unrepresented drugs will be added to the list. In American hospitals, even of the better sort, it is not uncommon to find bottles in the dispensary case bearing proprietary names instead of the names of the U. S. Pharmacopoeia. As a measure to overcome this difficulty, it will well be advised, as is the suggestion of the author, to have the name of the drug, whenever possible, the nonproprietary substance; that the same general rule should be applicable to prescriptions; and that the nurses should be trained to use the nonproprietary drugs. The author, Paul Fries, of the University of Berlin, Committee is to be congratulated on its modern attitude and on its recognition of a high ethical standard in the prescribing of drugs as witnessed by their little formula.

**Die Meister des Gewerbes in Südsachsen.** Herausgegeben von Prof. Dr. L. R. Grote, Privatdozent an der Universität Halle und Dr. Paul Fries, 92 S., 279, mit 26 Abbildungen. Leipzig: F. Deuticke, 1929.

These essays are the best of the many, presented by a German publisher, to present the details and the ethics of the period. The essays are written by the men who have made the advances and discoveries recorded. The series on philosophy consists of ten volumes. In the present two volumes the author is German, and the essays are written in German and follow with statements of their contributions to medical science and their opinions as to the eventual value of such contributions to the world. The essays are written in German, and the unevenness in presentation, but all of the papers are of interest, coming as they do from men who have reached the heights of their work. Particularly noteworthy, because of their literary merit, are the contributions of Wilhelm Reiss and Felix Marchand.

**MEDICAL DIAGNOSIS FOR THE STUDENT AND PRACTITIONERS.** By

FORMULARY. A List of Drugs and Preparations Selected as Official for Use in Peking Union Medical College Hospital. Prepared under the direction of Charles Lyman Greene, M.D., Attending Physician, St. Luke's Hospital, St. Paul. Fifth edition. Cloth. Price, \$12. Pp. 1453, with 637 illustrations. Philadelphia: P. Blakiston's Son & Co. 1922.

It is interesting to note that in a country where medical practice has hardly a foothold, it is in the where prescriptions in the hospital are based on a scientific selection of drugs—a fact that applies to only a few hospitals in the United States. The Faculty of Pharmacy of the Catholic University College, in its worthy endeavor to rationalize medical practice, has established a formalized, wherein may be prescribed the drugs, mostly nonproprietary, which may be used in the hospital. This formularies, published by the Hospital Committee with two objects in mind, first, to promote the teaching of rational drug therapy without expense, and second, to provide a means of economy compatible with the welfare of the patients of the hospital. To secure the first aim, it has been the intention of the Hospital Committee to include only those drugs which are safe, mixtures and useless drugs, encouraging reliance on drugs of minimum value. From the standpoint of economy, it has been decided to include only those drugs of special preparations required to be carried in stock to the minimum, and to eliminate needlessly expensive drugs when others will serve just as well. The following information is given as to dosage, except in the case of preparation or mixture peculiar to this formulary. According to the committee, it is expected that the formularies will be used in conjunction with the Drug Preceptor of the Council on Pharmacy and Chemistry of the American Medical Association.

Association. In general, it is drawn up along the lines of "Useful Drugs," but omits all pharmacological and therapeutic discussion. Eighty preparations that are described in "Useful Drugs" are not included in this formulation, while twenty-three remedies not described in "Useful Drugs," have been incorporated. This difference is due to a considerable although, curiously enough, no reference is made to physiology. Some parts are in evidence, but mention of further research is omitted. The book is a compilation of cases, and the old statistics are of course included. The author's orthography seems too exclusively Germanic, and no one glancing at this book would imagine any gynecologic work had ever been done outside the former central empires. Practically the

图 4 JAMA 于 1923 年第 81 卷刊载书讯介绍北京协和医院第 1 版外文集

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图 4 *JAMA* 于 1923 年第 81 卷刊载书讯介绍北京协和医院第一版处方集

3 结语

1921—1951年北京协和医院药剂科发表了61篇论文、编著出版6部著作和5版处方集，参编1部《中华药典》，既反映了北京协和医院的药事管理、药品供应与工作流程变迁，与医院的医教研整体发展水平相契合；同时集中体现了在当时医药市场混乱与

药学教育落后的年代，药学前辈们的药学水平和职业担当，他们能够独立潮头、勇于开拓创新，对我国药学事业的发展产生了巨大影响。

**作者贡献：**朱珠负责文献检索与文稿撰写；张波、李乃适参与讨论修改；唐彦、梅丹、李大魁参与项目组织与内容审核。

**利益冲突：**无

**志谢：**感谢北京协和医学院档案中心、中国医学科学院图书馆过刊部、《中国药学杂志》编辑部、美国中华医学基金会北京代表处、美国洛克菲勒基金会档案中心的鼎力支持与无私帮助。

**注：**本文所有英文名采用如下翻译规则：在民国杂志或回忆录等文献中出现过固定中文名的遵照原中文名翻译，其余按照《世界人名翻译大辞典》翻译。

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· 封面故事 ·

## 人工智能改变医学未来

北京协和医学院临床医学(八年制)2017级 张丁月

本期封面主题为人工智能在医学影像领域的应用。提到人工智能，最直观的联想是科幻电影里具有人类外形，可以运动、对话的机器人。然而，医学中的人工智能则更为抽象，它是一种算法，对数据进行收集、运算和输出，但不以可视化的形象出现。因此，如何将这一抽象概念展示给读者是本次封面创作的难点。

最终，本期封面选择佩戴虚拟现实眼镜的医生和医学影像显示屏为“人工智能”形象的主体，并以两侧的抽象图案代表信息的输入与输出，整体反映医学人工智能的工作原理。输入信息融合

了DNA、基因组学、CT、病理切片等多种视觉形象；输出信息则用树形图表示人工智能的“分类”功能，背景则添加了算法示意图和代码元素。画风上，运用抽象简洁的色块风格以及蓝白为主的配色，增强了画面的科技感。

人工智能在医学领域的研究和应用已经有了惊人的突破性进展，这一方面得益于从事医学人工智能研究的科学家的不懈努力，另一方面，医生在尝试用人工智能解决临床问题的过程中也贡献了不朽智慧。随着人工智能在医学领域的普及和应用，相信医学未来必将发生翻天覆地的变化。