陈正仁论文集

中华微生物学和免疫学杂志编辑部

前　言

陈正仁教授是我国著名微生物学，免疫学专家，是新中国生物制品事业的开拓者。陈老从事微生物学，免疫学和疫苗学工作五十余载，为我国卫生防疫事业作出了卓越贡献。

陈老一生坚持科学实验，倡导研究与生产实践相结合。在他的领导和组织下研究开发了多种细菌性疫苗，在疫苗学方面撰写了数十篇论著。在陈老与世长辞一周年之际，为纪念他和推动我国生物制品事业的发展，陈老的夫人王诗恒教授收集了陈老的遗著，编辑出版《陈正仁论文集》。论文集凝集了陈老一生心血，是他开拓生物制品事业的记载，也是我国生物制品发展史中的光辉篇章。

《陈正仁论文集》的出版，我们——陈老的后辈和学生感到无限欣慰。论文集反映了陈老的科研思想和研究成就，亦反映他的优良品德。从论文集中，我们可以汲取陈老的科学知识，学习他严谨治学的科学态度，学习他为发展生物制品事业的奉献精神。

《陈正仁论文集》的出版，将激励我们为生物制品事业的发展继续努力奋斗。

卫生部北京生物制品研究所　赵　铠

1993年5月20日

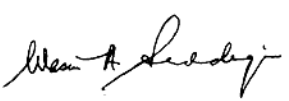
IN MEMORY OF DR. CHEN ZHENG—REN

I feel greatly honored to write this in memory of Dr. Chen Zheng—ren. I first met Dr. Chen in April of 1982, when I visited the People's Republic of China as the guest of the Chinese Academy of Medical Sciences. During my 5 day stay in Beijing, I met Dr. Chen Zheng-ren twice and spent an entire day at the National Vaccine and Serum Institute. Dr. Chen was proud to show me the laboratory where the human malaria parasite, Plasmodium falciparum, was cultivated in-vitro. The scientific facilities of the Institute were impressive. Equally striking, though, was the scientific knowledge of Dr. Chen Zheng-ren and his commitment towards benefitting his fellow human beings through his work. Even at our first meeting, I was struck by the vision Dr. Chen Zheng-ren had of making his Institute a world class center for vaccine production. I vividly remember the way his eyes sparkled when he spoke of his ultimate goal of eradicatng infectious diseases in his beloved country—the People's Republic of China.

In January of 1983, Dr. Chen spent one week as a guest of the Department of Tropical Medicine and Medical Microbiology of the John A. Burns School of Medicine, University of Hawaii. Dr. Chen Zheng-ren gave a series of lectures and seminars to graduate and medical students entitled, "Epidemiological Studies of Epidemic Meningococcal A Group Vaccine in China," and ,"Present Status of Malaria and its Control in China." Dr. Chen's stay also provided me and my malaria research group an opportunity to learn extensively about China from Dr. Chen and become better acquainted with him personally. We were all impressed with his depth of scientific knowledge and his enthusiasm to extend himself into international collaboration. He was to be a member of an international team which was then being planned to conduct field studies with the human malaria vaccine and other infectious diseases. Dr. Chen was very comfortable in this international ambiance and eager to discuss international collaboration with my laboratory.

In April, 1985. Dr. Chen was an honored guest delegate at the Asia and Pacific Conference on Malaria: Practical Considerations on Malaria Vaccines and Clinical Trials. This was an international conference which brought together the world's leading research scientists currently working on the development of malaria vaccines together with reknown scientists in related fields and prominent health policy-makers from the nations of Asia and the Pacific Basin to exchange ideas and recommendations for the development of a strategic plan for the evaluation and field testing of malaria vaccines when they become available for clinical trials. In Session IV: Strategies for Future Malaria Vaccine Trials I of the conference, Dr. Chen presented a key paper entitled, "Experiences from Clinical and Field Trials of Antibacterial and Antiviral Vaccines." His paper was well received by fellow scientists of the U. S. A., Europe, and the Asia and Pacific regions. His sound presentation and the scientific substance of his paper caused it to become the prototype for future field trials of malaria vaccines.

Through the time that Dr. Chen and I spent together especially during his extended second stay in Hawaii, we had ample time to become aquainted as fellow scientists. But more than that, as our association grew, he became my personal friend. I developed a great respect for Dr. Chen Zheng-ren for being a decent, caring human being. This sentiment was shared by my family and my research staff for, simply through contact with him, one could appreciate his effervescent good humor and sense his outstanding human qualities. I will cherish all of the memories I have of interacting with him as a scientist and friend. In Dr. Chen Zheng-ren's death, People's Republic of China lost a leading scientist and noble human being-one who had the great vision to build the National Vaccine and Serum Institute of the People's Republidc of China into a leading international center of repute, plus the scientific capability and human compassion to dedicate himself towards ending the suffering of his fellow human beings. Personally, I will sorely miss Dr. Chen Zheng-ren for he was my respected colleague, a genuine friend, and a decent man.



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陈正仁教授生平

卫生部北京生物制品研究所原所长，名誉所长，我国著名微生物学及免疫学专家陈正仁教授因患肺癌医治无效于1992年8月25日19时25分在北京逝世，享年78岁。

陈教授1914年诞生于湖南长沙一工人家庭。1940年毕业于湖南湘雅医学院，此后一直从事卫生防疫和生物制品研制工作，早年曾在湖南省省卫生防疫处工作，兼任常德卫生院院长以及湖南省卫生试验所所长，后任昆明卫生防疫处主任。1945年到北平中央防疫处(即现在的北京生研所前身)任技佐，技正。解放后该处直属卫生部他改任检定科科长，菌苗室主任、付所长、所长、名誉所长。他热心专业和学会工作，多年来担任卫生部生物制品委员会付主任委员和卫生部药典委员会委员。还担任中华医学会常务理事，微生物学和免疫学分科学会付主任委员；中国微生物学会第三、四届常务理事兼医学微生物学及免疫学专业委员会主任委员和北京市微生物学会理事长等职。他也是中华微生物学和免疫学杂志的创建人之一。

陈教授从事微生物和免疫学研究以及生物制品的研制和检定等工作50余年。为我国的卫生防疫事业作出了卓越贡献。1942年他被派去湖南常德参加对日本帝国主义使用鼠疫杆菌在华实施细菌战的调查和防治工作，验证了日本细菌战犯进行的这一滔天罪行。1943年春他被派入印度孟买哈佛金研究所进修鼠疫。1947年开始从事卡介苗预防结核病的工作，当年11月他和另二位中国学者——上海生物制品研究所魏锡华和天津市结核病院的朱宗尧教授。被世界卫生组织派往丹麦国立血清研究所学习卡介苗的制造，检定及使用，半年后到瑞典、挪威、瑞士、意大利、法国、英国和美国调查卡介苗的制造和使用情况于1948年10月返回北平。在北平中央防疫处处长汤飞凡教授的领导下建立起第一个国立的卡介苗制造室。他在当时极其艰苦的条件下用 煤油灯培育箱保住了卡介苗的菌种，因而在北平和平解放后很快制出了卡介苗，并开始在国内使用。1949年卫生部成立卡介苗推广委员会，他任副主任，共举办了三期卡介苗培训班，培养出一定数量的专业人员，使卡介苗预防工作很快推广到全国各地。陈教授乃是我国开创和推广卡介苗事业的先驱者之一，为在我国预防结核病做出了巨大贡献。据统计，我国结核病病死率1949年为296/10万，1965降到1.1/10万，而1973年15岁以下儿童中无人因结核病死亡，证明接种卡介苗后结核病死亡率明显下降了。

陈教授还领导科室研究人员致力于活菌苗的冷冻干燥，为这些菌苗的保存，运输和应用创造更好的条件。在他指导下选育出的百日咳优良菌株其抗原性和稳定性均较好，至今仍被全国各生物制品研究所应用于生产。他领导A群脑膜炎球菌提纯菌苗和多糖菌苗的研究，并与九省市卫生防疫站协作肯定了此项菌苗的效果，现已大量推广使用，对预防流行性脑脊髓膜炎起到了重要作用。

1961年，副霍乱出现在我国，他受卫生部委派去广东、新疆、山东等地进行现场调查和实验室鉴定工作，作出了正确诊断，为防治该病做出了贡献。1966年赴捷克进行生物制品访问一个月，1973年派往阿尔巴尼亚协助预防霍乱，并在阿举办了二期霍乱实验室工作人员的培训班，深得好评。

从1972年起领导全国疟疾免疫的专题研究，进行了红内期疟原虫体外培养，结合国内条件已能对人恶性疟原虫在体外连续传代培养，为疟疾疫苗的制造创造条件。

1978年起他成为世界卫生组织扩大免疫规划全球性顾问小组的临时顾问，1981年—1982年转为正式顾问。每年开会一次。他曾参加在日内瓦、新德里、华盛顿和布达柴维尔等地的会议。

几十年来，陈教授深入生产科研第一线，亲自动手，领导科室研究人员在传染病的预防研究上不断有所创新。他发表了学术论文20余篇。综述5篇。由他负责主编的《免疫预防传染病》一书于1985年出版，深受广大基层防疫人员和医学生的欢迎。

1956年陈教授当选为北京市崇文区人民代表，1960年为朝阳区人民代表，1978年为北京市第七届人民代表。他是"九三学社"社员，曾任九三学社北京生研所小组负责人。为了发展我国的文教卫生事业曾提出过不少宝贵意见。

陈正仁教授患病期间还参加了伤寒Vi多糖菌苗协作会，并提出一些建设性意见。陈教授五十余年来为国家为人民的卫生保健事业呕心沥血，受到广大同仁和群众的尊敬和爱戴。他对科学无私的奉献精神以及他在预防医学领域中所取得的成就将永远激励着后辈奋发图强，开拓前进。

卫生部北京生物制品研究所
一九九二年八月二十九日

A Biography of Professor Chen Zheng-ren(1914-1992)

Professor Chen Zheng-ren, former Director and later Honorary Director of National Vaccine and Serum Institute, Beijing (NVSI), was a noted microbiologist and Immunologist in our country. He died of lung cancer on August 25th, 1992 in Beijing at the age of 78.

Professor Chen was born of a worker's family in Changsha, Hunan Province, in 1914. He graduated from Xiang-ya Medical College (Yale-in-China) in 1940, and had devoted himself to health-epidemic prevention work and to the development of biological products ever since. At first he worked at the Hunan Provincial Health Bureau and the Hunan Provincial Public Health Laboratory, and he was once the head of Changde County Health Center; later he was transferred to Kunming and worked at the Kuming Epidemic Prevention Bureau. In 1945 he came to Beijing (then Beiping), and served as a Technical Expert at the National Epidemic Prevention Bureau, Beiping. After liberation, the institute was renamed as "National Vaccine and Serum Institute" (NVSI), also called "Beijing Institute of Biological Products of the Ministry of Public Health, P. R. C.". In this institute Professor Chen had served successively as Chief of Quality Control Department, Chief of Vaccine Department, Vice Director, Director and Honorary Director. For many years he was the Vice-chairman of the Committee of Biological Products and a Member of the Chinese Pharmacopeia Commission of the Ministry of Public Health, P. R. C.

Aside from his official work, Professor Chen was also very active in working with his professional association, i. e., the Chinese Medical Association. He was a Member of the

Standing Committee of the Chinese Medical Association, Vice-chairman of the Society for Microbiology and Immunology, a Member of the Standing Committee of Chinese Association for Microbiology, and the Chairman of the Expert Committee on Medical Microbiology and Immunology and the Chairman of Beijing Association for Microbiology. He was also one of the founders of Chinese Journal of Microbiology and Immunology.

Professor Chen had been engaged in research work in microbiology and immunology and in the development of biological products for more than 50 years, making outstanding contributions to the epidemic prevention service for the people. In 1941 he was sent to investigate and verified the bacterial (plague) warfare launched by the Japanese imperialists in China at Changde, Hunan Province. In 1943 he was sent to Haffkines Institute in Bombay, India, to study plague. From 1947 onwards he became engaged in BCG vaccination as an immunologic preventive measure against tuberculosis. In November 1947, with WHO-sponsored fellowships, Professor Chen and two other Chinese scholars, Professor Wei Xi-hua of National Vaccine and Serum Institute, Shanghai, and Professor Zhu Zong-yao of Tianjin Anti-tuberculosis Hospital, Tianjinm, were sent to the State Serum Institite of Denmark to study BCG preparation, standardization and application. After that they went on a study tour to Sweden, Norway, Switzerland, Italy, France, England and the United States of America to investigate the production and use of BCG vaccine in their anti-tuberculosis programs. Professor Chen came back to Beiping in October 1948, and he, under the direction of the late professor Tang Feifan, then the Director of the Beiping National Epidemic Prevention Bureau, set up the first national BCG laboratory in China. At that time, laboratory facilities were very poor, so Professor Chen had to maintain the BCG strains with kerosene-lamp-heated incubator. Thus soon after the peaceful liberation of Beiping, he and his colleagues were able to produce BCG vaccine and to use it in our country. In 1949 a BCG Propagation Committee was organized by the Ministry of Public Health, and he was appointed vice chairman. Three training courses for BCG vaccination personnel were organized, and a substantial number of technical personnel was trained so that BCG vaccination could soon be popularized throughout the whole country. Professor Chen was one of the pioneers in the development of BCG vaccine and in the popularization of BCG vaccination in our country, making great contributions to the prevention of tuberculosis. According to statistics, mortality rate of tuberculosis was 296/100000 in 1949, and it dropped to 1. 1/100000 in 1965, while in 1973 none died of tuberculosis in the age group below 15 years, indicating marked reduction of mortality from tuberculosis after mass BCG vaccination.

Professor Chen also led his professional staff in the research of lyophilized live vaccines, such as the lyophilized live plague vaccine, live brucella vaccine and BCG vaccine, enabling these preparations to be of better preservation and safer transportation. Under his direction, a better pertussis bacillus strain carefully selected showed strong antigenicity and good stability and the strain has been still in use for the production of pertussis vaccine by all of the Vaccine and Serum Institrtes in our country. He had also led the research in the preparation of Group A meningococcal purified vaccine and polysaccharide vaccine. Through collaboration

with nine provincial and municipal Health and Epidemic Prevention Stations the efficacy of these vaccines has been unequivocally confirmed and mass application has been launched, resulting in profound effect on the prevention of meningococcal meningitis.

In 1961 when paracholera occurred in our country, Professor Chen was sent by the Ministry of Public Health to Guangdong, Xinjiang and Shandong to conduct on the spot investigation and carry out laboratory identification. He finally made the correct diagnosis, thus facilitating the institution of appropriate measures for control.

In 1966 he went to Czechoslovakia to make investigations regarding biological products. In 1973 he was sent to Albania to help control cholera. There he also gave two training courses to train personnel for the laboratory diagnosis of cholera. His work was highly appreciated.

From 1972 onwards he began to lead the National Malaria Immunoprophylaxis Research Project. In his laboratory he proceeded with the cultivation of erythrocytic stage of plasmodium in vitro, and in conformity with the local condition of our country, succeeded in the continuous passage cultivation of human P. falciparum in vitro, thus providing a technical basis for further investigation into the development of a workable malaria vaccine.

From 1978-1982 he had been appointed a Member of Global Advisory Group of Expanded Program on Immunization of the world Health Organization. The members met once a year, reviewing the work done in the various countries and regions of the world in the past year and discussing strategies for the coming year. He had attended meetings twice in Geneva, and once each in New Dalhi, Washington, D. C. and Brazzaville.

During all these years, Professor Chen personally participated in various production and research programs tirelessly, doing much hard work by his own hands, and led his staff step by step ahead, paving the way for the popularization of immunoprophylaxis of infectious diseaeses. He wrote more than twenty original scientific papers and five reviews. The book "Immunoprophylaxis of Infectious Diseases", with him being the editor-in-chief, was published in 1985 and has been widely read and used by the health workers and medical students.

Professor Chen was elected Beijing Chongwen District People's Representative for Chinese People's Congress in 1956, and Beijing Chaoyiang District People's Representative in 1960, and the 7th Beijing Municipal People's Representative in 1978. He was a member of Jiusan Xueshe (a democratic party) and once the head of its branch in NVSI. On such occasions he often made many constructive suggestions or proposals for the advancement of educational, cultural and health work of our country.

In 1991 when Professor Chen was sick in hospital, he still concerned himself with the collaborative work of typhoid Vi polysaccharide vaccine and made several valuable suggestions. His noble spirit of devoting his whole life selflessly to medical science and his achievements in the field of preventive medicine and for the health of the people shall long stimulate the younger generation to work hard and progress ahead.

National Vaccine and Serum Institute, Beijing

Aug. 29th, 1992

防疫工作一定要加强

——访北京生物制品研究所名誉所长陈正仁

一间狭长而简朴的会客室，一本狭长而雅致的照相簿。我们采访卫生部北京生物制品研究所名誉所长陈正仁教授的谈话，就从这本相集开始。这是年初他应邀去美国檀香山，在夏威夷大学寄生虫教研室考察疟原虫体外培养技术期间，美国朋友拍下来送给他的。陈教授指着一幅新式方盒试验设备的照片，颇为感慨地说："在疟原虫体外培养的技术领域，我们和国外差距并不大。可是，人家在开足马力快速发展，扩大培养容器，而我们这里虽已初见端倪，却限于种种复杂的人事关系，正濒临夭折的危险……这可是周总理亲自布署的科研项目啊！"

陈教授有些黯然神伤了。这是可以理解的。从1940年在湘雅医学院毕业起，将近半个世纪以来，他的生命是与细菌学和免疫学的科研工作分不开的，成了国内外颇有声誉的应用免疫学专家。解放以前，他积极引进预防结核病的卡介苗，并在简陋条件下，采土洋结合的办法，筹建了卡介苗试验室；解放初期，他主持"卡介苗人员进修班"为全国各地培养了一大批结核病防治战线的骨干力量。随后又多次深入发病区，对流脑、伤寒、疟疾等严重危害人民生命健康的流行性传染病的病原菌进行研究，寻求相应的免疫预防接种措施，做出了不同程度的贡献。如今，他已七十高龄，还在从事流脑多糖体菌苗制备、百日咳菌苗提纯、新型佐剂应用等的研究。陈教授以踏实严谨的科研作风和对人民健康高度负责的精神，赢得学术界的赞誉。从1954年中国微生物学会创建起，他一直担任常务理事。1978年至1982年，他连续被世界卫生组织的"扩大免疫规划处"聘请为临时顾问和正式顾问，常常提出切实可行的意见，对世界范围内消灭和控制传染病起到一定的作用。凭着丰富的国内外阅历，陈教授对我国卫生防疫工作令人不安的现状，感到切肤之痛，他语重心长的呼吁全国人民和医疗战线的领导干部、专业人员共同努力，端正认识，改进工作，把这项关系整个国民体质的大事认真抓好。

陈教授说，我们历来讲"预防为主"实际做得很不理想。近年来一个大问题是农村卫生防疫体制受到严重破坏，给防疫接种工作造成极大妨碍。过去上边一布置，赤脚医生马上照办；现在张口就要钱，给了钱还不愿干，不如去跑小买卖。这样一来，问题就大了。卡介苗推行了三十多年，1979年调查，还有32%的边远县市根本没有接种。世界卫生组织提出："到1990年要使全世界的儿童都能接种小儿麻痹、白百破、麻疹、卡介苗四种疫苗，以控制六种传染病。"实现这个目标，我国还要做很大的努力，不要说农村，就连北京、天津这样的大城市，据前年统计，全部接种上述四种疫苗的人数，也还不到三分之二。

除了健全和整顿组织，加强管理之外，还有一个对疫苗接种技术的认识问题。陈教授在谈话中很强调这一点。他说，预防接种是把减毒的活疫苗或死疫苗接种到人体内，借以增强人群的免疫力。接种期间当然反应越轻越好，但也不能要求一点反应都没有。由于疫苗提纯、减毒、保护剂种种技术问题很难一下子尽善尽美，还由于受体本身各种复杂生理情况偶尔出现发烧、异常反应之类，用不着大惊小怪，动摇接种的信念。在这，陈教授认为要加强宣传，向广大群众讲清科学道理。为此，他正主持编写一部有关科普书籍。

采访结束的时候，话题转 到研究所的科研工作。陈教授兴奋起来："我们的条件是满不错

的。我们有一支雄厚的技术力量，有比较先进的试验设备，包括最近国际儿童基金会捐赠的二百多万美元的设备。只要上下齐心协力，把人们积极性充分调动起来。把这些有利条件充分运用起来，我们的科研水平肯定会大大提高一步，以更新更好更多的预防制品，对全国人民的卫生保健事业做出更大贡献。”

记者　张忠文　（原载北京科技报，1983年9月16日，第414期，第一版）

我国肠道细菌学研究有新进展

——访北京生物制品所名誉所长陈正仁

8月27日到29日，日、中细菌学家聚集在上海科学会堂，交流学术经验。会议期间，我访问了卫生部北京生物制品研究所名誉所长陈正仁，请他谈谈近年来我国在肠道细菌方面的研究工作和进展情况。

陈所长概括地介绍了今年六月份在庐山举行的全国肠道学术讨论会的情况。他说，这些年来经过调查，发现腹泻致病细菌以志贺氏菌属为主，占45.94%；其次是产肠毒素大肠杆菌及致病性大肠杆菌，分别为25%及7.42%，沙门氏菌占5.89%。一个新的现象是，产肠毒素大肠杆菌和空肠弯曲菌有上升的趋势。为了寻找有效的治疗方法，曾对一些菌株进行药物敏感性试验。卡那霉素、庆大霉素及中药石榴皮对志贺氏菌属有效，对红霉素及合霉素敏感株只占半数，对氯霉素、红霉素、四环素及土霉素的抗药性逐年增加。试验证明，这些与经常使用上面几种药物有关。

近些年来，对沙门氏菌分布情况做了较大量的调查工作，1976年至1980年在全国多数省市自治区开展了普查工作。从人群、猪和猪肉、污水以及其它动物的不同来源的标本中，共检出沙门氏菌27183株。经检查分布26个菌群和161个血清型（其中有90个系新分离的）。从中也可看出人群、猪和污水三者间关系密切，有相互传播和污染的情况。这项研究，为今后防治伤寒、副伤寒及其他沙门氏菌的发生和流行指明了方向。从1981年以来，我国开始对空肠弯曲菌和小肠结肠炎耶氏菌进行调查研究。证实这些菌在我国[illegible]，也是造成人畜腹泻的重要病因。

陈所长还很有兴味地介绍了一种治疗腹泻的新制剂——促菌生。它是一种腊样芽胞杆菌。这株菌是我国1979年从土壤中分离了出来的。它不但不致病，反而对婴幼儿腹泻、肠炎、痢疾等有一定的治疗效果和预防作用，对于兽医方面的羔羊痢、仔猪痢和鸡白痢等都有防治作用。这种菌对青霉素、磺胺嘧啶及红霉素等具有耐受性，与抗生素同时使用互不干扰，所以防治效果显著。由于这株菌容易生长，可制成胶囊。它不仅价格低廉，还能在常温下保存，便于推广，现已在一些地区使用。

记者　毛秀宝　（原载上海科技报，1984年9月8日，第542期，第一版）

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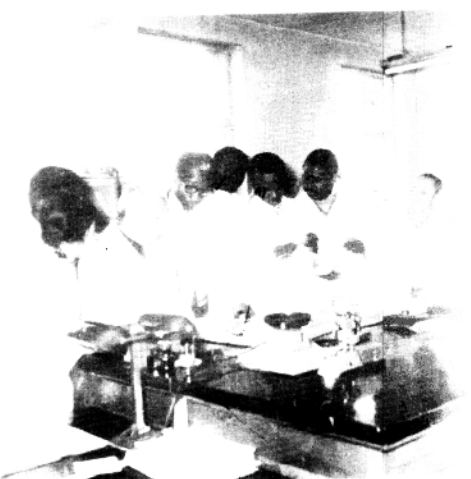

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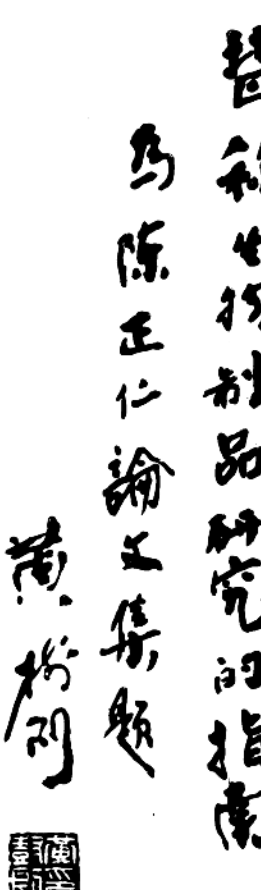

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