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BIBLIOGRAPHY
OF
CANNABIS INDICA

by

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SCHOOL OF PHARMACY

A Thesis Submitted for the Degree of
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INTRODUCTION

From time almost immemorial, man has sought to alleviate his pain and suffering, or to produce temporary surcease from his sorrows, by the use of drugs. It became known at an early date that *Cannabis indica* was a drug capable of producing such effects.

A. Dardanne¹ states that the earliest mention of the use of cannabis occurs about six centuries before the Christian era. The scribes of Iran praised cannabis or "çadaneh" in their book, the "Zend-Avesta", mentioning the leaves and the resin of the plant. The priests of India, authors of the Vedas, or sacred poems, attributed a divine origin to cannabis.

From Iran, the use of cannabis was propagated, from north to south, into India, in which country the name "kashmir" or "kaçmira" was given to the drug.²

In India, at least, the textile properties of cannabis do not appear to have been known until 1,000 or 1,200 years later, which tends to confirm the belief that the earliest use of the drug was limited to religious practices, and possibly to several therapeutic uses.³

1 A. Dardanne, *Travaux du Lab. de Mat. Méd. de la Faculté de Pharm. de Paris*, 15, quatrième partie, p. 21.

2 Ibid., p. 22.

3 Ibid., p. 22.

Herodotus, the early Greek historian, reports that (Ca. 450 B.C.) the Scythians were accustomed to intoxicating themselves by breathing, in a sort of little hut, the vapors of the fruits of cannabis, which were placed on glowing charcoal, or roasted over white-hot stones. They would then become delirious with joy, and dance about in a circle; certainly this constituted a typical symptom of cerebral excitation. Herodotus found the plant in both the wild and cultivated states; he also reports that in Thrace, the people made clothing which had an appearance analagous to linen cloth.⁴

Diodorus of Sicily reports that the women of Egypt dissipated their anger and their sorrow by consuming a beverage of which cannabis was the base.⁵

Dioscorides states that the tops of the plant acted as an anaphrodisiac. Much later, Hesichius (fifth century of our era) taught that the fumes of cannabis, inhaled according to the method of the Scythians, diminished the sexual power.⁶

Dioscorides also mentions the emollient properties of the seeds, while Galen regards them as carminitive and aphrodisiac.⁷

4 Dardanne, p. 22.

5 Ibid., p. 23.

6 Ibid., p. 23.

7 Ibid., p. 23.

Stanislas Julien reports that about the year 220, the Chinese physician Hoa-Tho used, under the names of "Ma-yo" or of "Mafo-san", a preparation of cannabis to produce insensibility and to permit thus the practice of certain important surgical operations.⁸

But it was at the time of the Arabic invasion that the use of the drug spread. The Indian prince Biraztam, converted to the faith of Islam, taught the Persians to use cannabis, about the year 640 of our era; the use of the drug spread as quickly as the faith of Islam itself.⁹

The Arabs introduced the plant into Syria, into northern Africa, and then into Spain; from the ninth to the twelfth centuries, the celebrated physicians Ebn-Djezla, Ibn-Al-Awan and Ibn-El-Beythar, utilized the drug frequently and wrote of its virtues.¹⁰

There is a legend concerning the Arab Hassan Ibn-Sabbah-Homafri, surnamed "Scheik-el-Djebel" and also the "Great Saint" by his followers, and the "Old Man of the Mountain" by the Crusaders. This chieftain, born in Persia about 1056, was affiliated with the sect of the Ishmaelites or Nazarenes. From them he had learned the secret of various beverages, which, by the union of ruse and violence, permitted him to conquer, in 1090, the forti-

8 Dardanne, p. 24.

9 Ibid., p. 24.

10 Ibid., p. 24.

fied place of Alamut, and later the principle fortified castles situated between Syria and Persia, and to exercise absolute authority over the entire region.¹¹

Marco Polo, the celebrated Venetian traveler, relates in his book (about 1310) that this "Old Man of the Mountain" assured himself of warriors by addicting the young boys of Islam to the use of cannabis; having tasted of celestial joys while under the influence of the drug, they were unalterably devoted to him, and would brave death for him, as they believed they would then enter that same celestial paradise.¹²

Later, those who were intoxicated by the use of the drug received the name of "hachichins" (eaters of the herb), from which the Europeans coined the words "assassini" and "assassins."¹³

Occasionally the seeds of cannabis were used medically in Europe; it is thus that one finds them mentioned in the composition of a German remedy of the eighth century, and in a formulary of Zurich of the eleventh century.¹⁴

Sainte-Hildegarde (1098-1179) mentions cannabis in her "Hortus sanitatis", and prescribes it for dressing ulcers and wounds.¹⁵

11 Dardanne, p. 25.

12 Ibid., p. 26.

13 Ibid., p. 26.

14 Ibid., p. 26.

15 Ibid., p. 26.

Garzia da Orta, in 1563, called attention to the use of cannabis in the East Indies, while Prosper Alpinus, who traveled in Egypt from 1580 to 1584, states that he observed two preparations which contained cannabis as a base, called "assis" and "bers" in common use among both high and low classes.¹⁶

M. de Meuve, physician in ordinary to the French king, writes in 1689 that the leaves are useful for a burn, while the distilled juice placed in the ear cures the pain caused by an obstruction. The seeds are useful for jaundice, for treating coughs, and for a vermicide, declares this writer.¹⁷

Berlu, in his "Treasury of Drugs" (1690) characterizes cannabis as "of an infatuating quality and pernicious use."¹⁸

Presently the Brahmins themselves were made anxious to see with what enthusiasm the faithful were imbibing the beverages of cannabis, and authorized the use of these only on the occasion of great religious solemnities. Dr. Buchanan estimates that in 1806 there were 225,000 religious pilgrims present at the festivals of the Indian goddess Kali, and 20,000 of these met death by throwing themselves under the feet of the sacred elephants, or under the sharp wheels of the chariot of their divinity,

16 Dardanne, p. 27.

17 de Meuve, M., Dictionnaire Pharmaceutique ou Apparat de Medicine, Pharmacie et Chymie, 2 ed., p. 138.

18 A. Dardanne, Travaux du Lab. de Mat. Méd. de la Faculté de Pharm. de Paris, 15, quatrième partie, p.21.

while many more horribly mutilated themselves to please
this deity.¹⁹

Dr. W. B. O'Shaughnessy is credited with having acquainted the Western world with more accurate knowledge of the production, chemistry, and therapeutics than any previous investigator. While engaged in practice in India, he had opportunity to become well acquainted with the drug, and in his book "The Bengal Dispensatory" (1842) he discourses at considerable length on its use by him in cases of rheumatism, hydrophobia, tetanus, cholera, and infantile convulsions.²⁰

Since this time, the chemistry, botany, therapeutics, and pharmacology of cannabis have been under investigation in several countries. There is conflicting opinion on the relative merits of the pharmacological activity of the drug from different geographical sources, on the effect of aging, and on the identity of the active principle and its chemistry. On the other hand, most botanists concur in considering *Cannabis sativa* the botanical source, *Cannabis indica* being considered a variety of the former. Opinion as to the therapeutics of the drug appears to be in agreement. It likewise appears to be almost universally accepted that the activity of the drug can be estimated only by means of a physiological assay.

19 Dardanne, p. 30.

20 O'Shaughnessy, W. B., op. cit., pp. 579-604.

Farmacopea Nacional Argentina

	1898	1928
	+	+
	1898	1928
Herb	+	+
Extract		+
Fluidextract	+	
Tincture	+	+

Pharmacopoea Austriaca

1780	'90	1812	'14	'20	'34	'52	'55	'69	'89	1906
+	+	*	+	*	*	+	+	+	+	+

* not available Not included in 4 ed., emended, 1836.

	1780	'90	1814	'52	'55	'69	'89	1906
Herb				+	+	+	+	+
Seed		+	+	+				
Oil			+					
Extract						+	+	+
Tincture				+				

Pharmacopoea Belgica

	1823	1854	1885	1906	1930	
	+	+	+	+	+	
		1823	'54	'85	1906	'30
Herb		+		+	+	+
Seed		+	+			
Extract				+	+	+
Tincture				+		+

Pharmacopoea Borussica

	1808	'27	'29	'46	'62
*					
*					

* not available. 1813, ed. 3 emended: not included.

The seeds are official in 3 ed.-7 ed. incl.

British Pharmacopoeia 1864-1832 incl.

Cannabis Indica. Indian Hemp.

1864	1867	1885	1898	1914	1932
+	+	+	+	+	

1874. Addition to ed. 1867 - not included.

1890. Addition to ed. 1886 - not included.

1936. Addendum to ed. 1932 - not included.

Part Official and Official Preparations

	1864	'67	'85	'98	1914
Flowering Tops	+	+	+	+	+
Extract	+	+	+	+	+
Tincture	+	+	+	+	+

Pharmacopoea Danica

1772	'86	1805	'30	'40	'50	'68	'93	1907	'33
+	+	+	*	*	*	+	+		+

* not available.

Part official: the seed.

Farmacopea Oficial Española

1794	'98	1803	'17	'65	'84	1905	'30
*				*	+		+

* not available.

Part Official and Official Preparations

	1884	1930
Herb	+	+
Extract		+
Tincture		+

Pharmacopoea Fennica

1 ed.	2ed.	3 ed.	4 ed.	5 ed.
*	*	*	1885	1914

* not available.

Pharmacopée Française

1818	'26	'37	'39	'44	'66	'84	1908	'20
*	+	+	+	*	+	+		

* not available.

Supplement, 1895: not included.

Supplement, 1926: +

Part Official and Official Preparations

	1826	'37	'39	'66	'84	1926
Seed	+	+	+		+	
Hachisch				+	+	
Flowering Tops					+	+
Extract						+
Tincture						+

Pharmacopoeia Germanica
Herba Cannabis Indicae

1865	'72	'82	'90	1900	1910	1926
+	+	+				

The 1884 ed., being the 2 ed. to replace the 1 ed. of 1882, also contains the drug.

Part Official and Official Preparations

	1865	'72	'82	'84
Herb	+	+	+	+
Seed	+	+		
Extract	+	+	+	+
Tincture	+	+	+	+

Pharmacopoeia Helvetica

1865	'72	'76	'93	1907	'33
		+	+	+	+

Part Official and Official Preparations

	1876	'93	1907	'33
Herb		+	+	+
Extract	+	+	+	+
Tincture	+	+	+	+

Pharmacopoea Hungarica

1871	1888	1909	1934
+	+	+	

Part Official and Official Preparations

	1871	1888	1909
Herb	+	+	+
Extract	+	+	+
Tincture		+	+

Farmacopea Ufficiale del Regno d'Italia

1892	1902	1909	1920	1929
	+	+	+	+

Part Official and Official Preparations

	1902	1909	1920	1929
Herb	+	+	+	+
Extract	+	+	+	+
Tincture	+	+	+	+

Pharmacopoeia Japonica

		1907	1922
*	*	+	+

* not available.

Part Official and Official Preparations

	1907	1922
Herb	+	+
Extract	+	+
Tincture	+	+

Pharmacopoeia Jugoslavica

1933

+

Part Official: the herb.

Official Preparation: the extract.

Farmacopea Mexicana

1874	1884	1890	1904
+	+	*	+

* not available.

Part Official and Official Preparations

	1874	1884	1904
Herb	+	+	+
Extract			+
Tincture			+

Pharmacopoea Nederlandica

1826	1851	1871	1889	1905	1926
+	+	+	+	+	+

3 ed., second printing, 1894 +

Supplement, 1902 +

Part Official and Official Preparations

	1826	'51	'71	'89	'94	1902	'05	'26
Herb					+		+	+
Seed	+	+	+	+		+		
Extract					+		+	+
Tincture						+		

Pharmacopoea Norvegica

1854	1870	1879	1895	1913
	+	+	+	+

Part Official and Official Preparation

	1870	1879	1895	1913
Seed	+	+	+	+
Extract	+	+		

Pharmacopœa Portugueza

1825	1838	1876
*	*	+

* not available.

Part Official and Official Preparations

Seed, Extract, Tincture.

Pharmacopea Romana

	1874	1926
	+	+

Part Official and Official Preparations

	1874	1926
Herb	+	+
Extract	+	+
Tincture		+

Pharmacopea Russica

	1866	1891	1906	1910	1925	1929
	*	*	+	+	+	+

*not available.

Part Official and Official Preparations

	1906	1910	1925	1929
Herb	+	+	+	+
Seed	+	+	+	+
Extract	+	+	+	+
Tincture	+	+	+	+

Pharmacopoea Suecica

1779	'84	1869	'71	'79	'88	1901	'08	'26
		+	+	+	+	+	+	

Part Official and Official Preparations

	1869	'71	'79	'88	1901	'08
Herb	+	+	+	+		
Seed	+	+	+	+	+	+
Extract	+	+	+	+		

Cannabis indica

United States Pharmacopoeia 1820-1930 incl.

1820	'30 _A	'30 _B	'40	'50	'60	'70	'80	'90	1900	'10	'20	'30
						+	+	+	+	+	+	+

Cannabis

United States Pharmacopoeia 1820-1930 incl.

	1820	'30	'40	'50	'60	'70	'80	'90	1900	'10	'20	'30	
Cannabis										LE	LE	LE	
Cannabis Indica						L	L	L	L	S			
Cannabis indica herbae												PI	
Indian Cannabis							E	E	E				
Indian Hemp						E	S	S					
Gauza											S		
Ganjah											S		
Cannab.											A	A	A

L = Latin title

E = English title

S = Synonym

A = Official abbreviation

PI = International Protocol

Extractum Cannabis

United States Pharmacopoeia 1820-1930 incl.

	1820	'30	'40	'50	'60	'70	'80	'90	1900	'10	'20	'30
Extractum Cannabis				L	L					L	L	L
Extractum Cannabis Indicae						L	L	L	L	S		
Extractum Cannabis indicae												PI
Extract of Indian Cannabis						E	E	E	E			
Extract of Hemp				E	E							
Extract of Cannabis										E	E	E
Ext. Cannab.										A	A	A

Fluidextractum Cannabis

United States Pharmacopoeia 1820-1930 incl.

	1820	'30	'40	'50	'60	'70	'80	'90	1900	'10	'20	'30
Fluidextractum Cannabis										L	L	L
Fluidextract of Cannabis										E	E	E
Fluidextractum Cannabis Indicae									L	S		
Fluidextract of Indian Cannabis									E			
Extractum Cannabis Indicae Fluidum							L	L	S			
Fluid Extract of Indian Cannabis							E	E				
Fluid Extract of Cannabis										S		
Flidext. Cannab.										A	A	A

The United States Dispensatory

1ed.	2ed.	3ed.	4ed.	5ed.	6ed.	7ed.	8ed.	9ed.	10ed.	11ed.
	1834	'36	'39	'43	'45	'47	'49	'51	'54	'58
*	+	+	+	+	+	+	+	+	+	+

12ed.	13ed.	14ed.	15ed.	16ed.	17ed.	18ed.	19ed.	20ed.
'65	'71	'79	'83	'88	'94	'99	1907	'18
+	+	+	+	+	+	+	+	+

21ed.	22ed.	
'26	'37	* not available.
+	+	

ed. 1-14 incl., Wood, G. B. and Bache, F.

ed. 15-19 incl., revised by Wood, H. C., Remington, J.P.,
and Sadtler, S.P.

ed. 20., Remington, J.P. and Wood, H. C.

ed. 21 and 22, Wood, H. C. and La Wall, C. H.

The National Dispensatory

1 ed.	2 ed.	3 ed.	4 ed.	5 ed.
	'79	'84		'94
*	+	+	*	+

* not available.

Stille, A. and Maisch, J.

5 ed. Stille, A., Maisch, J., Caspari, C., and Maisch, H.

de Meuve, M.

1689

Cannabis huj. abis ou Canapus. Chanvre.

Dictionnaire Pharmaceutique ou Apparat de Medicine,
Pharmacie et Chymie, 2 ed., p. 138.

The author states that the plant is almost unknown.
He mentions several therapeutic uses.

Geiger, P.

1829

Cannabis (Hanf).

Handbuch der Pharm., p. 1720.

The author gives a botanical description of the plant,
and discusses the physical appearance of the seeds and oil.

(Editor).

1841

Notice of the Hachisch.

Jour. de Pharm.; through (Am. Jour. Pharm., 13, p. 75.)

A report is made of the observations of Aubert on
Arabian hachisch as to botanical characteristics and to
therapeutic effects as determined by a subjective experiment.

O'Shaughnessy, W.

1842

Cannabis.

The Bengal Dispensatory, pp. 579-604.

The author describes the plant from a botanical standpoint, and the production; he states its chemical and therapeutic properties, and relates in detail several cases in which the drug was employed.

Duhamel, A.

1843

Some Account of Gunjah, or Indian Hemp and Its Preparations.

Am. Jour. Pharm., 15, p. 252.

The author gives a botanical description of the drug, its mode of collection, and its preparations. A distinction is made between the Indian and European hemp, and between the Indian and American.

Landerer, M.

1844

On the Hadshy of the Turks.

Buch. Rep.; through (London Chem. Gaz.); through (Am. Jour. Pharm., 16, p. 147.)

The author describes hadshy as a beverage derived from Cannabis sativa, and gives a report of a chemical investigation of the material.

Smith, T. and H.

1847

Process for Preparing Cannabine(?) or
Hemp Resin.

Pharm. Jour. and Trans., 6, p. 171.

The authors describe a method for the preparation of hemp resin, and report on the action of the resin on the human system.

Christison, R.

1852

Cannabis Indica, as a Substitute for Ergot.

Edinburgh Jour. Med. Sci. (Aug.); through (Charleston Med. Jour., Jan. 1852; Am. Jour. Pharm., 24, p. 173.)

The author suggests the use of Cannabis indica to increase the force of uterine contraction during labor.

Muller, C.

1854

Preparations from Cannabis sativa in India.

Pharm. Jour. and Trans., 14, p. 165.

The author describes two varieties of cannabis sativa commercially available, and mentions that only the plants bearing female flowers are used.

Laneau, M.

1856

Remarques sur la haschiscine et ses applications pharmaceutiques.

Rép. de Pharm., (1), 12, p. 311.

The author describes a process for the preparation of haschiscine from cannabis, and presents several prescriptions in which it is an ingredient.

(Editor.)

1857

Sur l'action des préparations obtenues avec le chanvre.

Jour. de Chim. Med. de Pharm. et de Toxicol., (4), 3, p.755.

The author reports the use of the drug by the Arabs, and describes its pharmacological action.

Robiquet, M.

1857

Rapport sur le concours relatif à l'analyse du chanvre, présenté au nom de la Société de Pharmacie.

Jour. de Pharm. et de Chim., 64, p. 46.

The author reports the investigation of cannabis by
Personne.

Procter, Jr., Wm.

1864

On a Test for the Resin of Cannabis Indica.

Proc. A. Ph. A., 12, p. 244.

The author reviews the methods of several investigators for preparing the resin, and reports several tests developed by him for identifying true hemp resin extract.

Waring, E.

1868

Cannabis sativa, Linn.

Pharmacopoeia of India, p. 216.

The author presents a monograph embracing official Latin and English titles, habitat, officinal part, synonyms, characters, active principle, properties, therapeutic uses, preparations, and dose.

(Editor).

1869

Cannabis Indica in Strychnia Poisoning.

Humb. Med. Arch., Jan., 1869; through (Am. Jour. Pharm., 41, p. 125.)

A case in which tincture of cannabis indica was used as an antidote for strychnia is described.

(Editor)

1873

Haschisch.

Canad. Pharm. Jour., Nov., 1873; through (Am. Jour. Pharm., 46, p. 34.)

The author describes the occurrence of haschisch in northern Africa and in Turkey, and its manner of use by the natives.

Jackson, J.

1873

Churrus.

Pharm. Jour. and Trans., 32, p. 764.

The author states that the hemp plant yields three products, known as Gunja, Bhang, and Churrus, of which the latter is the most powerful. He discusses the therapeutics of *Cannabis sativa*.

(Editor)

1874

The Culture of Gunjah in Bengal.

Jour. Appl. Sci., Feb. 1, 1874; (through Am. Jour. Pharm., 46, p. 121.)

The author gives a detailed account of the culture of gunjah in Bengal.

(Editor)

1877

Hashish of Central Asia.

Pharm. Zeitschr. Russl., 1876, p. 705; through (Am. Jour. Pharm., 49, p. 371.)

The isolation by Preobraschensky of a volatile alkaloid corresponding with nicotine is reported.

Preobraschensky, --

1878

Nicotin, ein Bestandtheil des indischen Hanfes.

Petersb. med. Wochenschr.; through (Pharm. Central., 19, p. 494.)

The author reports that the chief active ingredient of Indian hemp is nicotine.

Schlosser, T.

1880

Antidote for Cannabis: Treat Like Morphia.

Zeitschr. d. Allg. Oest. Apoth. Ver., 18, p. 3; through (Am. Jour. Pharm., 52, p. 162.)

L. von Cotzhausen translates the original, in which the author recommends that cases of poisoning by cannabis be treated similarly to cases of poisoning by morphine.

Seezen, E.

1880

Prüfung des europäischen Hanfs auf
seinen Gehalt an Nicotin.

Pharm. Central., 21, p. 369.

The author reports that he did not find nicotine in a sample of a European-grown variety of *Cannabis sativa*.

(Editor)

1881

Cannabis Indica in Migraine.

Ohio Med. Jour., Sept.; through (Chi. Med. Jour. and Exam.; Am. Jour. Pharm., 53, p. 579.)

The use of cannabis in the treatment of migraine is recommended.

(Editor)

1881

Crystalline Albuminoids.

Chem. Ztg., No. 21; Jour. prakt. Chem., 23, 481; through (Am. Jour. Pharm., 53, p. 393.)

It is reported that H. Ritthausen has obtained a crystalline albuminoid from the press-cake of hemp seeds.

Siebold, L. and Bradbury, T. 1881

Note on the Alleged Presence of Nicotine
in Indian Hemp.

Pharm. Jour. and Trans., 41, p. 326.

The authors report that nicotine is not present in Cannabis Indica, and propose the name "cannabinine" for a volatile alkaloid which they isolated from the drug.

Siebold, L. and Bradbury, T. 1882

Cannabis Indica - Presence of a Volatile
Alkaloid.

Yrbk. of Pharm., 1881, p. 453; through (Proc. A. Ph. A.,
30, p. 251.)

The authors report the isolation from Cannabis indica of a volatile alkaloid, for which they propose the name Cannabinine.

Hay, M. 1883

A New Alkaloid in Cannabis Indica.

Pharm. Jour. and Trans., 42, p. 998.

The author reports the isolation of an alkaloid from Cannabis indica, for which he proposes the name tetano-cannabine.

Cook, A. B.

1884

Poisoning by Cannabis Indica.

Am. Practitioner, July, 1884; through (Am. Jour. Pharm., 56, p. 559.)

The author gives the history of a case of accidental poisoning by an overdose of extract of cannabis.

Aaronson, A.

1885

Cannabis Indica as Local Anaesthetic.

Pacif. Med. and Surg. Jour., April, 1885; through (Am. Jour. Pharm., 57, p. 305.)

The author recommends the use of diluted tincture of cannabis as a local anaesthetic in dentistry.

Jones, H. L.

1885

Cannabis Indica as a Hypnotic.

Am. Practitioner, 1885; through (Am. Jour. Pharm., 58, p. 156.)

The author recommends the use of Cannabis indica as a hypnotic in cases where sleeplessness is accompanied by delirium.

Warden, -- and Waddle, --

1885

The Active Principle of Indian Hemp.

Pharm. Jour. and Trans., Jan., 1885, p. 574; through
(Am. Jour. Pharm., 57, p. 264.)

The authors review the work of earlier investigators, and describe their investigation. They conclude that the principle which represents the full activity of the plant has not yet been isolated. A bibliography is given.

Kennedy, G.

1886

Cannabis Indica.

Am. Jour. Pharm., 58, p. 511.

The author reports the absence of nicotine in Cannabis indica.

1887

Choline in Indian Hemp.

Pharm. Jour., 46, p. 1049.

The author reviews briefly the work of earlier investigators, and calls attention to the report of Jahns on the isolation of choline from Indian hemp.

Jahns, E.

1887

Ueber das Alkaloid des indischen Hanfs.

Archiv d. Pharm., 225, p. 479.

The author reports the analysis of an alkaloid isolated from Indian hemp. An extensive bibliography is given.

Roux, J.

1887

Cannabis Indica.

Archiv d. Pharm., p. 1; through (Am. Jour. Pharm., 59, p. 342.)

The author reports the results of physiological experimentation with extracts of the drug obtained by alcohol, ether, and petroleum benzin.

Warnecke, H.

1887

The Ash of Some Pharmaceutically Important Seeds, Fruits, etc.

Pharm. Ztg., 31, p. 536; through (Am. Jour. Pharm., 59, p. 28.)

The author reports the ash of Fructus Cannabis to be 4.83 per cent.

Simmonds, P. L.

1890

The Medicinal Use of Leaves.

Am. Jour. Pharm., 62, p. 193.

The author describes the composition and use of Bhang.

Simmonds, P.

1891

The Medicinal and Other Useful Plants of
Algeria. Cannabinaceae.

Am. Jour. Pharm., 63, p. 79.

The author states that *Cannabis indica* is habitually smoked by Algerian natives; it is known by the name "kif."

Smith, H. F.

1891

Cannabis Indica. Does It Contain An Alkaloid?

Am. Jour. Pharm., 63, p. 387.

The author reviews the previous work on cannabis, and describes his investigation of the drug.

Frankfurt, S.

1894

Composition of Seeds and Etiolated Sprouts
of Hemp (*Cannabis Sativa*) and of Sunflower
(*Helianthus annuus*).

Landw. Versuchs-Stat., 43, p. 143; through (Jour. Chem. Soc., A., 2, p. 113.)

The author reports on a qualitative examination of hemp seeds.

(Editor)

1895

The Chemistry of Indian Hemp.

Pharm. Jour., 55, p. 519.

The work of T. and H. Smith, Preobraschensky, Siebold and Bradbury, M. Hay, Jahns, H. T. Smith, and F. Marino-Zuco and G. Vignolo on cannabis is briefly reviewed.

Maisch, H.

1895

Cannabis Indica.

A Manual of Organic Materia Medica, 6 ed., p. 285.

The author presents, in addition to material from the U.S.P., information on the habitat, constituents and properties of cannabis.

Marino-Zuco, F. and Vignolo, G.

1895

Sopra gli alcaloidi della cannabis indica
e della cannabis sativa.

Gaz. Chim. Ital., 25, pp. 262-268.

The authors describe their investigation of the chemistry and pharmacology of Cannabis indica and Cannabis sativa, concluding that the former contains an alkaloid pharmacologically more powerful than that from the latter. An extensive bibliography is given.

Dohme, A.

1896

The Histology and Pharmacognosy of Cannabis
Indica.

Drugg. Circ., 40, p. 275.

The author gives a histological description of the
leaf of Cannabis indica. (Illustration.)

(Editor)

1896

A Rare Preparation of Indian Hemp.

Rep. d. Pharm., p. 241; through (Pharm. Rev., 14, p. 208.)

The investigation by M. E. Lepinois of an Egyptian
preparation of Indian Hemp is reported.

(Editor)

1896

Cannabis Indica - Characters of Essential
Oil.

Pharm. Jour., Nov., p. 454; from Gaz. Chim. Ital.;
through (Proc. A. Ph. A., 44, p. 643.)

The observations of G. Vignolo on the physical and
chemical characteristics of the essential oil of Cannabis
indica are reported.

Lepinois, M.

1896

Sur une preparation peu connue de chanvre indien.

Rep. de Pharm., (3), 8, p. 241.

The author describes the plant, and gives the result of an investigation of the extractives of cannabis from Athens, Syria, Constantinople, and Egypt. (Illustration of cannabis.)

Smets, -, and Schreiber, C.

1896

The Potash and Phosphoric Acid required by Cultivated Plants.

Recherches sur les besoins potas. et phosphat. des plantes cult., Masseyk, 1894; Bied. Centr., 1895, 24, p. 805; through (Jour. Chem. Soc., 70, 2, p. 384.)

The authors state that the numbers 65 and 81 show the relative requirements for potash and phosphoric acid, respectively, of Cannabis sativa.

Wood, T., Spivey, W., and Easterfield, T.

1896

Charas. The Resin of Indian Hemp.

Jour. Chem. Soc., 69, p. 539.

The authors report on a chemical investigation of the resin of Cannabis indica.

(Editor)

1897

Notes and Formulas.

Am. Drugg. and Pharm. Record, 30, p. 45.

An error in the Chem. and Drugg. Diary, 1897, is mentioned, concerning the formula for "Bromidia", and the solubility of *Cannabis indica* in water.

(Editor)

1897

Hasheesh (Majoom) - Preparation in India.

India Agriculturist; through (West. Drugg., 19, p. 267.)

Asutosh Ghose describes the preparation of hasheesh in India.

Bonati, E.

1898

Notizen über persisches Opium und Haschisch.

Jour. d. Pharm. v. Els. Loth., 25, p. 25.

The author describes the method of preparing haschisch in Persia, and gives a note on the oil of *Cannabis indica*.

Dunstan, W. and Henry, T.

1898

Oxycannabin From Indian Hemp.

Pharm. Jour., 60, p. 213.

The authors report the production of oxycannabin by the oxidation of cannabinol.

Wood, T., Spivey, W., and Easterfield, J. 1898

On Cannabinol.

Pharm. Jour., 60, p. 318.

The authors report on the chemistry of cannabinol, and mention its oxidation product, oxycannabin.

Wherrell, O. 1898

Hemp Seed - Proximate Examination.

Bull. Pharm., 11, p. 340; through (Proc. A. Ph. A., 46, p. 872.)

The author calls attention to the fact of the many plants called hemp in various parts of the world, and then gives the results of an analysis of two samples of hemp seed.

Saxby, -- 1899

Poisoning by Cannabis Indica - Recovery.

British Med. Jour., Oct., 1898; Philadelphia Med. Jour., p. 946; through (Am. Jour. Pharm., 71, p. 147.)

The author describes the progress of a case of poisoning by Cannabis indica, and its successful treatment, with complete recovery of the patient.

Wood, T., Spivey, W., and Easterfield, T. 1899

Cannabinol.

Jour. Chem. Soc., 75, p. 20.

The authors report an investigation of cannabinol, and describe the preparation of several of its derivatives.

(Editor) 1900

The Materia Medica of the Pharmacopoeia.
Cannabis Indica.

Pharm. Jour., 64, p. 275.

A botanical description of Cannabis indica is given, and the histology is discussed. (Illustrations.)

Holmes, E. 1900

Cannabis Indica.

Pharm. Jour., 64, p. 522.

The author calls attention to the fact that a variety of Cannabis indica stronger than that official in the B.P. is imported into the country, and re-exported to the West Indies.

Mair, W.

1900

The Cultivation and Manufacture of the
Official Cannabis Indica.

Pharm. Jour., 65, p. 732.

The author describes the cultivation of Cannabis indica, B.P., and the method of preparation of the extract of the drug.

McWalter, J.

1900

Concerning Cannabis Indica Poisoning.

Pharm. Jour., 65, p. 498.

The author describes a case of acute poisoning by extract of cannabis.

(Editor)

1902

Cannabis Indica - Rapid Deterioration.

Proc. A. Ph. A., 50, p. 888.

The views of D. Train on the deterioration of Indian hemp are reported.

Humphrey, J.

1902

The Chemistry of Cannabis Indica.

Pharm. Jour., 68, p. 363.

The author reviews the chemistry of cannabis, discussing previous investigations of the alkaloidal matter, volatile oil, resin, and cannabinol.

Humphrey, J.

1902

The Chemistry of Cannabis Indica.

Pharm. Jour, 68, p. 392.

The author reports that Hooper has described the chief constituent of cannabis as a neutral resin, and discusses its physical and chemical properties.

Greenish, H. and Collin, E.

1902

Vegetable Powders and Their Diagnostic Characters.

Pharm. Jour., 68, p. 492.

The authors discuss the histology of various drugs, cannabis being among these. A drawing of the powdered drug accompanies the article.

Marshall, C.

1902

Cannabis Indica.

Pharm. Jour., 68, p. 362.

The author reports an investigation of the deterioration of cannabinal upon oxidation.

Marshall, C.

1902

A Review of Recent Work on Cannabis Indica.

Yrbk. Brit. Pharm. Conf., 1902, pp. 401-404.

The author reports on the examination of several substances submitted to him by Wood, Spivey, and Easterfield, and mentions investigations of the chemistry of cannabinal.

Merson, G.

1902

Extract and Tincture of Indian Hemp.

Pharm. Jour., 68, p. 234.

The author makes a suggestion for obtaining a more uniform Tincture of Cannabis Indica.

Holmes, E.

1903

Cannabis Indica - Distinction of the Drug
as Supplied Under Different Names.

Pharm. Jour., Aug. 1902, p. 129; through (Proc. A. Ph.A.,
51, p. 803.)

The author presents descriptions of the various types
of the drug as they are known in commerce, being supplied
under various names.

Maben, T.

1903

Cannabis Indica - Not Poisonous in the
Ordinary Sense.

Trans. Brit. Pharm. Conf., 1902, p. 401; through (Proc.
A. Ph. A., 51, p. 804.)

The author presents the views of H. Hamilton on the
physiological action of Cannabis indica.

Marshall, C.

1903

Cannabis Indica - Review of Recent
Observations Concerning Its Consti-
tuents and Their Activity.

Trans. Brit. Pharm. Conf., 1902, p. 399; through (Proc.
A. Ph. A., 51, p. 804.)

The author reviews the recent pharmacological work on
Cannabis indica, and describes an investigation of canna-
binol.

Fraenkel, S.

1904

Cannabinol - Preparation.

Arch. Exp. Pathol., 49, p. 266; through (Proc. A. Ph. A., 52, p. 953.)

The author reports the preparation of cannabinol in what he believes to be a pure state.

Holmes, E.

1905

Note on Cannabis Indica.

Pharm. Jour., 74, p. 505.

The author presents the report of W. Dixon on the medicinal value of Cannabis indica grown in Uganda and in northern France, compared to the Indian drug.

Hooper, D.

1905

Majum - An East Indian Confection
Containing Indian Hemp.

Proc. A. Ph. A., 53, p. 683.

The author describes and gives the composition as ascertained by him of a large number of varieties of "majum."

Houghton, E. and Hamilton, H.

1907

A Pharmacological Study of Cannabis
Americana.

Am. Jour. Pharm., 79, p. 496.

The authors find that Houghton's method for the assay of Cannabis is reliable, and state that Cannabis sativa grown in various localities of the United States and Mexico is found to be fully as active as the best of the Indian grown drug.

Houghton, E. and Hamilton, H.

1908

A Pharmacological Study of Cannabis
Americana.

Am. Jour. Pharm., 80, p. 16.

The authors describe a physiologically assay of Cannabis upon dogs.

Czerkis, M.

1909

Cannabinol.

Pharm. Ztg., 54, p. 767; through (Am. Jour. Pharm., 81, p. 590.)

The author reports on an investigation to determine its composition.

Holmes, E.

1909

Note on Cannabis Indica.

Pharm. Jour., 83, p. 132.

The author reports on the amount of alcoholic extract obtained from a number of commercial samples examined by C. Sage, comparing this yield with that reported by C. Bennett four years previously.

Martin, W.

1909

Experiences in the Testing of Drugs by
Biochemical Methods, With Special Refer-
ence to Digitalis, Squill, and Strophanthus.

Am. Jour. Pharm., 81, p. 487.

The author states that the main cause of deterioration of extract of cannabis is oxidation of the active constituent.

True, R. and Klugh, G.

1909

American Grown Cannabis Indica.

Proc. A. Ph. A., 57, p. 843.

The authors state that prolonged tests on dogs showed domestic grown hemp to be equal in efficiency to the imported article.

(Editor)

1910

Cannabis Indica.

Bull. A. Ph. A., 5, p. 537.

Comment is made upon the recent paper of W. Pearson, and the suggestion is made that the U.S.P. requirements for Cannabis be altered.

Ball, M.

1911

The Effects of Haschisch Not Due to Cannabis Indica.

Therap. Gaz., Nov. 1910; through (Pharm. Jour. and Pharm., 85, p. 699.)

The author states that the peculiar symptoms associated with Cannabis indica are not produced by the pure extract of the drug, but are caused by such drugs as opium, cantharides, stramonium, or hyoscyamus, which are often included with the native preparations of haschisch.

Deane, H.

1911

Extract of Indian Hemp.

Yrbk. Brit. Pharm. Conf., 1911, pp. 402-406.

The author reports the determination of the amount of alcohol-soluble and water-soluble extractive from various samples of Indian hemp.

Marshall, C. and Wigner, J.

1911

Standardisation of Preparations of Indian Hemp. The Value of the "Iodine Number."

Pharm. Jour. and Pharm., 86, p. 739.

The authors conclude from an investigation that the iodine number is of no certain value in estimating the pharmacological activity of cannabis preparations.

Pearson, W.

1911

Cannabis Indica - U.S.P. Requirements.

Am. Drugg., Oct. 24, 1910, p. 235; through (Proc. A. Ph. A., 59, p. 261.)

The author discusses the pharmacopoeial requirements for Cannabis indica.

Rosenthaler, L.

1911

Indian Hemp - Production in Greece.

Apoth. Ztg., 26, No. 65, p. 678; through (Proc. A. Ph. A., 59, p. 262.)

The author reports the result of a chemical comparison of Grecian Cannabis indica with Indian hemp produced in India. He describes a method for the determination of Cannabinol.

Borneman, J.

1912

Cultivation of Medicinal Plants.

Am. Jour. Pharm., 84, p. 546.

The author states that *Cannabis sativa* and *Cannabis indica* can be readily cultivated in the United States, and gives directions for raising the plant from the seed.

Eckler, C. and Miller, F.

1912

A Study of American Grown Cannabis in Comparison With Samples From Various Other Sources.

Am. Jour. Pharm., 84, p. 488.

The authors conclude that American grown cannabis is inferior to good grades of the imported Indian drug.

Hamilton, H.

1912

The Pharmacopoeial Requirements for Cannabis Sativa.

Jour. A. Ph. A., 1, p. 200.

The author reviews briefly the recent work on the drug, and recommends certain standards for *Cannabis sativa*.

Marshall, C. and Wood, J.

1912

Uselessness of Acetylation for the
Standardisation of Indian Hemp.

Brit. Med. Jour., 1, p. 1234; through (Pharm. Jour. and
Pharm., 89, p. 201.)

The authors report that there appears to be no definite relation between the pharmacological activity and the acetyl value of hemp preparations.

Patch, E.

1912

Cannabine Tannate, Merck.

Jour. A. Ph. A., 1, p. 374.

The author describes the physical and chemical properties of Merck's cannabine tannate.

Hamilton, H., Lescohier, A., and Perkins, R.

1913

The Physiological Activity of Cannabis
sativa.

Jour. A. Ph. A., 2, p. 22.

The authors report the results of four experiments upon themselves to compare the physiological activity of Indian and American grown Cannabis sativa.

Haskell, C. and Eckler, C.

1913

Tentative Standards for Some Biologically
Standardized Drugs.

Jour. A. Ph. A., 2, p. 151.

The authors present the results of pharmacological testing of several drugs, cannabis being tested on dogs.

Rusby, H.

1913

Cannabis Indica.

Jour. A. Ph. A., 2, p. 1088.

The author states that very little commercially available Cannabis indica is seen, the African, which he regards as inferior, having replaced it.

Ballard, C.

1915

Notes on the Histology of an American
Cannabis.

Jour. A. Ph. A., 4, p. 1299.

The author enumerates the histological characters of foreign grown cannabis, and gives a tabular summary for comparison of the American and foreign drugs. Illustrations of cross sections of the leaves of both varieties accompany the article.

Beam, W.

1915

Tests for Hashish.

Wellcome Tropical Research Bull. No. 3; through (Pharm. Era, 48, p. 478.)

The author gives a color reaction, to which he claims all preparations of hashish and Cannabis indica respond.

Doerschuk, A.

1915

Cannabis in Liquid Combinations.

Pharm. Era, 48, p. 9.

The author suggests the use of a physiologically standardized acetic fluidextract of cannabis indica, containing only 37 per cent. alcohol.

Hamilton, H.

1915

Cannabis Sativa: Is the Medicinal Value Found Only in the Indian Grown Drug?

Jour. A. Ph. A., 4, p. 448.

The author quotes various investigators, but does not attempt to reach a definite conclusion.

Sayre, L.

1915

The Cultivation of Medicinal Plants
With Observations Concerning Cannabis.

Jour. A. Ph. A., 4, p. 1303.

The author presents the results of an investigation on the physiological assay of various drugs, including cannabis, to show the percentage variation. He also gives a table comparing both chemical and physiological assays of Cannabis Indica, Cannabis Africana, and Cannabis Americana.

Pearson, W.

1916

The Physiological Standardization of
Cannabis.

Jour. A. Ph. A., 5, p. 1194.

The author relates his experiences in the physiological assay of cannabis upon dogs, and suggests a standard for the drug should be prepared by mixing various lots from several sources, all of which are to be of supposedly official strength.

Eckler, C. and Miller, F.

1917

On the Deterioration of Crude Indian
Cannabis.

Jour. A. Ph. A., 6, p. 872.

The authors report the results of an investigation of the storage under various conditions of Indian cannabis.

Hubbard, W. and Lyons, A. 1917

Resolution Anent Standard for Cannabis.

Jour. A. Ph. A., 6, p. 877.

The authors present a resolution which urges a modification of the official test and a change, from obligatory to optional, of the biological assay for cannabis.

Pearson, W. 1917

Standard Cannabis.

Jour. A. Ph. A., 6, p. 876.

The author reports the preparation of a standard Fluidextract of Cannabis.

(Editor) 1918

American Cannabis Indica.

Chem. and Drugg., 90, p. 530.

Comment is made upon the appearance on the London market of cannabis indica grown in the United States. Its appearance is compared with that of the Indian and African grown drug.

Fuller, H.

1918

The Possibility of Substituting
Cannabis for Opium.

Jour. A. Ph. A., 7, p. 431.

The author calls attention to the possibility of the substitution of preparations of Cannabis indica for those of opium. He quotes several authors of texts on therapeutics.

Hamilton, H.

1918

The Stability of Cannabis Sativa and Its
Extracts.

Jour. A. Ph. A., 7, p. 333.

The author concludes from physiological assays of Cannabis sativa of various ages, and stored under various conditions, that the deterioration of the drug and its preparations is slight enough to be ignored for practical purposes.

(Editor)

1919

Cultivation of Hashish.

Chem. and Drugg., 91, p. 594.

It is stated that the Greek government is to prohibit the cultivation of Cannabis indica.

Hamilton, H.

1919

Pharmacological Assaying. Historical
and Descriptive.

Jour. A. Ph. A., 8, p. 50.

The author gives a historical note on the drug, and then quotes various authors on the subject of a suitable animal for the physiological assay of cannabis.

Colson, Jr., H.

1920

Cannabis.

Jour. A. Ph. A., 9, p. 302.

The author presents several suggestions regarding the pharmacopoeial monographs on cannabis and its preparations.

(Committee)

1920

Report of the Committee on Physiological
Assaying of the A. Ph. A., 1920.

Jour. A. Ph. A., 9, p. 615.

The report recommends changes in the monograph on Cannabis, U.S.P. IX, p. 605.

Newcomb, E., Smythe, C, and Hobel, E. 1921

Notes on the Ash Yield of Cannabis.

Jour. A. Ph. A., 10, p. 695.

The authors report the results of an investigation of the yield of ash from various domestic lots of cannabis. A compilation of data of other investigators on the same subject is appended.

Reutter de Rosemont, L. 1921

Cannabis - Ancient Use as a Sensorial Drug.

Schweiz. Apoth. Ztg., 59, p. 601; through (Yrbk. A. Ph. A., 10, p. 218.)

The author describes the use of cannabis as an intoxicant by the ancients.

Youngken, H. 1921

Cannabis.

A Textbook of Pharmacognosy, 1 ed., p. 138.

The author presents, in addition to material from the U.S.P., several synonyms, and the constituents. (Illustration of plant, p. 139, and of powder, p. 140.)

Azadian, A.

1922

Hashish.

Jour. pharm. Belg., 4, pp. 489-492, pp. 505-507; through
(Yrbk. A. Ph. A., 11, p. 132.)

The author describes the preparation of hashish, and its appearance in commerce. He adds a note concerning Beam's reaction, and proposes to work out a colorimetric assay method on this basis.

Dott, D.

1922

Examination of Extract of Indian Hemp.

Pharm. Jour., 108, p. 63.

The author describes a method for the chemical examination of extract of cannabis.

(Editor)

1922

Dangerous Drugs in Egypt.

Chem. and Drugg., 97, p. 238.

It is announced that a royal decree has been issued in Egypt prohibiting the importation, and also the exportation, except to holders of a license granted by the Minister of the Interior, of certain drugs, including preparations containing over 0.1 per cent. of Cannabis indica and all its preparations in whatever form.

Schneider, A.

1922

The Effect of Large Doses of Cannabis Indica.

Jour. A. Ph. A., 11, p. 757.

The author states that the tests made would indicate that large doses of extract of cannabis have a profound effect upon the imaginative faculties.

Suppan, L.

1922

Hashish.

Nat. Drugg., 52, p. 508.

The author discusses the habitat of cannabis; cannabis as a drug; its pharmacology; its history; its use as an intoxicant, and the various forms of the intoxicant; and illusions regarding hashish.

Schneider, A.

1923

The Effects of Large Doses of Cannabis Indica. (Subjective Experiment.)

Jour. A. Ph. A., 12, p. 208.

The author reports the effects upon himself of doses of various sizes of Fluidextract of Cannabis consisting of lots from several sources.

Dardanne, A.

1924

Contribution à l'étude du Chanvre indien
et en particulier de son emploi comme
drogue sensorielle dans l'Afrique du Nord.

Trav. du Lab. de Mat. Méd. de la Faculté de Pharm. de Paris,
15, quatrième partie.

The author presents an exhaustive treatise on cannabis: its morphology and anatomy, its use as a drug affecting the sensory system, its chemistry and pharmacology, its preparations, and the results of his chemical and microscopical investigation. A large bibliography is given. (Illustrations.)

Perrot, E. and Weitz, R.

1924

Le Chanvre indien. Culture et essai.

Bull. de la Soc. de Thérapeut.; through (Trav. du Lab. de Mat. Méd. de la Faculté de Pharm. de Paris, 15, cinquième partie.)

The authors discuss the culture of cannabis in various parts of the world, and comment on the physiological assay and on the Beam reaction.

Weitz, R. and Dardanne, A.

1924

A propos de l'essai chimique du Chanvre indien et de ses préparations.

Bull. des Sci. Pharmacol., 31, p. 321; through (Travaux du Lab. de Mat. Méd. de la Faculté de Pharm. de Paris, 15, cinquième partie.)

The authors discuss both official and non-official preparations of cannabis, and the chemistry of cannabinol.

Joel, E.

1925

Culture of Cannabis Not Necessary in Germany.

Schweiz. Apoth.-Ztg., 64, p. 214; through (Yrbk. A. Ph. A., 15, p. 89.)

The author opposes the culture of Indian hemp in Germany, holding that its therapeutic usefulness must be shown to outweigh its addictive properties.

Wiechowski, --

1926

Physiological Action of Hashish.

Chem. Ztg., 50, pp 790; through (Yrbk. A. Ph. A., 15, p.169).

The author states that the action of hashish may be determined with sufficient accuracy by ascertaining the minimum lethal dose when administered to white mice by intraperitoneal injection. He then describes the physiological action of hashish.

Baur, F.

1927

Pure Cannabinol.

Dissertation, Basel, 1927; through (Pharm. Jour., 119, p. 38.)

The author describes the physical and chemical properties of cannabinol.

Casparis, P.

1927

Cannabinol and Haschisch.

Pharm. Acta Helv., 1, p. 210; through (Pharm. Jour., 119, p. 39.)

The author describes the physical and chemical properties of cannabinol, which he isolated from haschisch.

Casparis, P. and Baur, F.

1927

The Formula of Cannabinol.

Pharm. Acta. Helvet., 2, p. 127; through (Yrbk. A. Ph. A., 16, p. 446.)

The authors report an investigation of the chemistry of cannabinol. The experimental details treat of: (a) acids; (b) test for double bonds; (c) catalytic hydrogenation, and (d) dihydrocannabinol.

Bergel, F.

1930

Einige Beiträge zur Konstitution des
Cannabinols, des wirksamen Prinzips
im Haschisch.

Ann. Chem., 482, pp. 55-74.

The author reports an investigation of cannabinol,
and suggests two structural formulas.

Cohn, R.

1930

Cannabis Indica Resin. Part I.
The Constitution of Nitrocannab-
inolactone (Oxycannabin).

Jour. Chem. Soc., 1930, p. 986.

The author reports an investigation of the structure
of nitrocannabinolactone, for which he presents two pos-
sible structural formulas, showing it to be a phthalide
derivative.

----- 1931

Cannabisol.

Deuts. Med. Wschr., 56, p. 2002; through (Yrbk. A. Ph. A.,
20, p. 86.)

A description of this trade-marked solution of
standardized cannabinol is given.

Cahn, R.

1931

Cannabis Indica Resin. Part II.

Jour. Chem. Soc., 1931, p. 630.

The author reports an investigation of the resin of Cannabis indica, and describes the preparation of several derivatives of cannabiniol.

Cahn, R.

1932

Cannabis Indica Resin. Part III.
The Constitution of Cannabiniol.

Jour. Chem. Soc., 1932, p. 1342.

The author reports an investigation of the structure of cannabiniol. The preparation of a number of derivatives, and their chemical properties, is described.

Rende, G.

1932

Beam's Reaction for Cannabis Indica.

Ann. Falsif., 25, p. 332; through (Yrbk. A. Ph. A., 22, p. 247.)

The author confirms Trollé's observation that Beam's reaction is not specific for Cannabis indica.

Cahn, R.

1933

Cannabis Indica Resin. Part IV.
The Synthesis of Some 2:2-Dimethyl-
dibenzopyrans, and Confirmation of
the Structure of Cannabinol.

Jour. Chem. Soc., 1933, p. 1400.

The author reports a preliminary study of 2:2-dimethyldibenzopyran and several of its derivatives, the former being the parent substance of cannabinol.

(Committee)

1933

The Smoking of Cannabis in Panama.

Military Surgeon, 73, p. 269; through (Yrbk. A. Ph. A., 22, p. 111.)

The report of case studies of 34 addicts to marihuana smoking is given.

Lucas, A.

1933

Beam's Color Test for Hashish.

Analyst, 58, p. 602; through (Yrbk. A. Ph. A., 22, p. 250.)

The author emphasizes that Beam has stated that his test is presumptive and not specific.

(Editor)

1934

Cannabis.

Jour. Can. Med. Assoc., 31, p. 544; through (Yrbk. A. Ph. A., 23, p. 121.)

The pharmacology of Cannabis indica is described, and it is stated that its importation into Canada is prohibited.

Trollé, H.

1934

Sur la découverte de la non-spécificité des réactions chimiques employées pour déceler la présence du chanvre indien ou hachich et dérivés.

Contribution à l'analyse des substances toxiques et des stupéfiants.

The author states that his investigations prove that Beam's color reaction for the presence of hashish or its derivatives is not specific for this drug.

Mercer, D., Robertson, A., and Cahn, R.

1935

α,α -Dimethylphthalide-4-carboxylic
Acid (Cannabinolactonic Acid.)

Jour. Chem. Soc., 1935, p. 998.

The authors describe the preparation of cannabinolactonic acid.

(Editor)

1936

Cannabis Habit Scheduled for Discussion
in Geneva.

Jour. A. Ph. A., 25, p. 373.

It is believed that the spread of addiction to the
use of cannabis will be much discussed.

LIST OF JOURNALS CONSULTED

- Am(eric)an Jour(nal of) Pharm(acy), v. 1-108, incl.,
1825-1936.
- Bull(etin of the) A(merican) Ph(armaceutical) A(ssociation),
v. 1-6, incl., 1906-1911.
- Jour(nal of the) A(merican) Ph(armaceutical) A(ssociation),
v. 1-25, incl., 1912-1936.
- Jour(nal of the) Chem(ical) Soc(iety), v. 23-129, incl.,
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- Pharm(aceutical) Jour(nal), v. 1-136, incl., 1841-1936.
- Proc(eedings) A(merican) Ph(armaceutical) A(ssociation),
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- Y(ea)r(boo)k A(merican) Ph(armaceutical) A(ssociation),
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