

1979

Senate History, Sixtieth Session

171

May 3—Read third time. Passed. Title approved. To Senate.
May 4—In Senate. To enrollment
May 8—Enrolled and delivered to Governor.
May 9—Approved by the Governor. Chapter 304.
Effective May 9, 1979.

S. B. 469—Committee on Government Affairs, Apr. 16.

Summary—Allows fire departments to recover costs of fighting fires on state-owned property. (BDR 42-1868) Fiscal Note: Effect on Local Government: No. Effect on the State or on Industrial Insurance: Yes.

Apr. 16—Read first time. Referred to Committee on Finance. To printer.

Apr. 17—From printer. To committee.

May 21—From committee: Amend, and do pass as amended. Declared an emergency measure under the Constitution.

May 22—Read third time. Amended. To printer.

May 23—From printer. To re-engrossment. Re-engrossed. First reprint.

May 24—Read third time. Passed, as amended. Title approved, as amended. To Assembly.

May 25—In Assembly. Read first time. Referred to Committee on Government Affairs. To committee.

May 26—From committee: Do pass. Placed on Second Reading File. Declared an emergency measure under the Constitution. Read third time. Passed. Title approved. To Senate. In Senate. To enrollment.

May 28—Enrolled and delivered to Governor. Approved by the Governor. Chapter 581.

Section 4 effective 12:01 a.m., July 1, 1979.

Balance effective July 1, 1979.

S. B. 470—Committee on Human Resources and Facilities, Apr. 16.

Summary—Establishes program to research therapeutic effects of marijuana on certain cancer and glaucoma patients. (BDR 40-977) Fiscal Note: Effect on Local Government: No. Effect on the State or on Industrial Insurance: No

Apr. 16—Read first time. Referred to Committee on Human Resources and Facilities. To printer.

Apr. 17—From printer. To committee.

May 7—From committee: Amend, and re-refer to Committee on Finance.

✓ May 8—Read second time. Amended. Re-referred to Committee on Finance. To printer

May 9—From printer. To engrossment. Engrossed. First reprint. To committee.

May 21—From committee: Do pass, as amended and re-refer to Committee on Human Resources and Facilities. Re-referred to Committee on Human Resources and Facilities. To committee. From committee: Do pass, as amended.

May 22—Read third time. Passed, as amended. Title approved. To Assembly.

May 23—In Assembly. Read first time. Referred to Committee on Health and Welfare. To committee.

May 25—From committee: Do pass. Placed on Second Reading File. Read second time.

May 26—Read third time. Passed. Title approved. To Senate. In Senate. To enrollment.

May 31—Enrolled and delivered to Governor.

June 2—Approved by the Governor. Chapter 610.

Effective June 2, 1979.

SENATE BILL NO. 470—COMMITTEE ON HUMAN
RESOURCES AND FACILITIES

APRIL 16, 1979

Referred to Committee on Human Resources and Facilities

SUMMARY—Establishes program to research therapeutic effects of marihuana on certain cancer and glaucoma patients. (BDR 40-977)

FISCAL NOTE: Effect on Local Government: No.
Effect on the State or on Industrial Insurance: No.

EXPLANATION—Matter in *italics* is new; matter in brackets [] is material to be omitted.

AN ACT relating to controlled substances; establishing a program to research the therapeutic effects of marihuana on certain patients; establishing a board of review for the program; requiring the state board of health to adopt regulations for the program; establishing requirements for admission into the program; authorizing the health division to contract to receive marihuana; and providing other matters properly relating thereto.

*The People of the State of Nevada, represented in Senate and Assembly,
do enact as follows:*

1 SECTION 1. Chapter 453 of NRS is hereby amended by adding
2 thereto the provisions set forth as sections 2 to 9, inclusive, of this act.

3 SEC. 2. *As used in sections 3 to 9, inclusive, of this act, unless the*
4 *context requires otherwise:*

5 1. "Board" means the board of review for patients.

6 2. "Marihuana" means:

7 (a) The plant of the genus *Cannabis*;

8 (b) Tetrahydrocannabinols,

9 and any of their derivatives.

10 3. "Program" means the program to research the therapeutic effects
11 of marihuana.

12 SEC. 3. 1. The board of review for patients, consisting of three mem-
13 bers who are physicians licensed to practice in this state, is hereby cre-
14 ated.

15 2. The state board of pharmacy shall appoint:

16 (a) One member who has been certified by the American Board of
17 Ophthalmology.

18 (b) One member who has been certified by the American Board of
19 Internal Medicine both regularly and in the subspecialty of medical
20 oncology.

1 (c) One member who has been certified by the American Board of
2 Psychiatry and Neurology.

3 One of the members must be engaged in practice in Clark County and
4 one in Washoe County.

5 3. Each member of the board is entitled to receive \$40 for each day's
6 attendance at a meeting of the board and the per diem allowances and
7 travel expenses provided by law.

8 SEC. 4. 1. There is hereby created a program to research the thera-
9 peutic effects of marihuana to be administered by the health division of
10 the department of human resources. The program must be designed pur-
11 suant to regulations adopted by the state board of health to study the
12 therapeutic effects of marihuana when administered to persons suffering
13 from cancer and undergoing chemotherapy, to persons suffering from
14 glaucoma, and to any class of persons included in the program under
15 subsection 3. The program must be conducted according to a strict
16 research format designated by the state board of health. The program
17 must be financed by direct legislative appropriation from the state general
18 fund. Money for the program may be expended only for the purposes of
19 sections 2 to 9, inclusive, of this act, on claims approved by the health
20 division and paid as other claims against the state are paid.

21 2. The state board of health shall adopt regulations necessary to carry
22 out the provisions of sections 2 to 9, inclusive, of this act.

23 3. The state board of health may by regulation include in the pro-
24 gram a class of persons who are not suffering from cancer or glaucoma if,
25 after the presentation of medical information to the state board of health
26 by a physician, it determines that such a class of persons would benefit
27 from participation in the program.

28 SEC. 5. 1. Any person who is suffering from cancer or glaucoma, or
29 is in the class of persons included in the program under regulations of
30 the state board of health, may apply to the board for admittance into the
31 program.

32 2. Application must be made on forms prescribed by the state board
33 of health. A statement from the person's physician certifying the person
34 is suffering from cancer or glaucoma, or some other affliction specified by
35 regulation of the state board of health, and is not responding to conven-
36 tional medications or is experiencing severe side effects from conventional
37 medication, must accompany the application.

38 SEC. 6. The board shall:

39 1. Review applications for admittance to the program to determine
40 who will be admitted.

41 2. Establish a list of physicians and pharmacists it has certified to
42 prescribe and fill prescriptions, respectively, for marihuana under the pro-
43 gram.

44 SEC. 7. 1. The health division shall submit an application to the
45 National Institute on Drug Abuse to contract to receive marihuana pur-
46 suant to regulations of the National Institute on Drug Abuse, the Food
47 and Drug Administration and the Drug Enforcement Administration.

48 2. The health division shall transfer to pharmacies certified pursuant
49 to section 6 of this act all marihuana received pursuant to any contract
50 entered into under subsection 1.

1 SEC. 8. *A pharmacy may fill a prescription for marihuana only pur-*
2 *suant to a written prescription by a physician certified pursuant to section*
3 *6 of this act.*

4 SEC. 9. *A physician certified pursuant to section 6 of this act is*
5 *entitled to prescribe marihuana only for persons admitted to the program.*

6 SEC. 10. NRS 453.251 is hereby amended to read as follows:

7 453.251 **[Controlled]** *Except as provided in sections 2 to 9, inclu-*
8 *sive, of this act, controlled substances listed in schedules I and II [shall]*
9 *may be distributed by a registrant to another registrant only pursuant to*
10 *an order form and may be received by a registrant only pursuant to an*
11 *order form. Compliance with the provisions of federal law respecting*
12 *order forms shall be deemed compliance with this section.*

13 SEC. 11. NRS 453.331 is hereby amended to read as follows:

14 453.331 1. It is unlawful for any person knowingly or intentionally
15 to:

16 (a) Distribute as a registrant a controlled substance classified in
17 schedule I or II, except pursuant to an order form as required by NRS
18 453.251 **[;]** *or pursuant to the provisions of sections 2 to 9, inclusive, of*
19 *this act;*

20 (b) Use in the course of the manufacture or distribution of a controlled
21 substance a registration number which is fictitious, revoked, suspended or
22 issued to another person;

23 (c) Falsely assume the title of or represent himself as a registrant or
24 other person authorized to possess controlled substances;

25 (d) Acquire or obtain or attempt to acquire or obtain possession of a
26 controlled substance by misrepresentation, fraud, forgery, deception, sub-
27 terfuge, or alteration;

28 (e) Furnish false or fraudulent material information in, or omit any
29 material information from, any application, report or other document
30 required to be kept or filed under the provisions of NRS 453.011 to 453.-
31 551, inclusive, or any record required to be kept by **[such]** *those sec-*
32 *tions;*

33 (f) Sign the name of a fictitious person or of another person on any
34 prescription for a controlled substance or falsely make, alter, forge, utter,
35 publish or pass, as genuine, any prescription for a controlled substance; or

36 (g) Make, distribute or possess any punch, die, plate, stone or other
37 thing designed to print, imprint or reproduce the trade-mark, trade name
38 or other identifying mark, imprint or device of another or any likeness of
39 any of the foregoing upon any drug or container or labeling thereof so as
40 to render the drug a counterfeit substance.

41 2. Any person who violates this section shall be punished by
42 imprisonment in the state prison for not less than 1 year nor more than 6
43 years, and may be further punished by a fine of not more than \$2,000.

44 SEC. 12. This act shall become effective upon passage and approval.

2
4/27/79

Committee in Session at 8:38 A.M. on Friday, April 27, 1979.

Senator Keith Ashworth in the Chair.

PRESENT: Chairman Keith Ashworth
Vice-Chairman Joe Neal
Senator Wilbur Faiss
Senator Rick Blakemore
Senator Clifton Young
Senator Jim Kosinski

GUESTS: Mr. Rick Pugh, Executive Director, Nevada State
Medical Association
Judge Keith Hayes, Clark County
Mr. Russ McDonald, State Board of Pharmacy
Mr. Paul Cohen, Administrative Officer, State Division
of Health
Ms. Candy Lusich, Private Citizen, Reno, Nevada
Mr. Gary Sheerin, Attorney, Harvey's Wagon Wheel
Mr. John J. McCuen, Attorney Association, General
Contractors of Northern Nevada
Mr. Steve Balkenbush, Attorney General's Office, Environ-
mental Protection
Mr. Dave Young, Representative for Local 3
Mr. Gil Buck, Nevada Association of Realtors
Mr. Bob Sullivan, Carson River Basin
Mr. Dwight Milliard, Home Builders of Nevada
Mr. Merlin Anderson, Nevada Commission on Postsecondary
Institutional Authorization

Chairman Ashworth opened the hearing on S.B. 470.

Mr. Rick Pugh, Executive Director, Nevada State Medical Association, stated that Dr. Neil Swissman, President, Nevada Medical Association had a last minute emergency and could not attend the committee meeting. Mr. Pugh presented Dr. Swissman's written testimony, Exhibit "A".

Mr. Russ McDonald, State Board of Pharmacy, stated the State Board of Pharmacy is not in opposition to this bill. He suggested that on Page 1, Line 15 should be directed to the Board of Medical Examiners. Judge Hayes concurred that it should be the State Board of Health. Mr. McDonald further stated in Sections 7 and 8 with the so-called pharmacies, that marihuana be stocked or delivered to the individual pharmacies who could respond to prescriptions by certified physicians from those stocks. He stated that maybe the health division would make disbursements to the doctors. Judge Hayes responded by stating that the federal government would not permit these substances to be distributed by private pharmacies, but would require that it go to a state operated agency to be dispensed by the state operated agency.

Date: April 27, 1979

Page: 2

3

Mr. Paul Cohen, Administrative Officer, State Division of Health, stated there are satellite clinics for the dispensing of Methadone, which can be set up in hospital pseudo-pharmacies. If this bill passes, he stated, it would be on the same principle as Methadone. There would be involvement with the Drug Enforcement Administration and the Food and Drug Administration and a program licensing of pseudo pharmacy would be established. Judge Hayes stated there would be no objection, and would be concerned that there were strict controls on the agencies, persons or businesses having any hand at all in this. Senator Young questioned if this would change Section 7. Judge Hayes stated that it says a "certified pharmacy". He further stated that it is his understanding that the federal government would not allow its being dispensed under any controls except as has been observed in the Methadone situation. Chairman Ashworth questioned if an amendment were needed to Section 7 or Section 8 of S.B. 470. Mr. McDonald stated that he felt one was necessary. He further stated that three or four of the sections should be reexamined because it does point to the authorized delivery to the individual licensed pharmacy to respond.

Judge Hayes stated he endorses what has been said by the previous witnesses. He stated there was possibly a change needed on Page 2, Line 3 to read: "At least one member from each county of a population in excess of 100 thousand", rather than specify any designated county. He stated that 30 or 40 additional letters of endorsement, unsolicited, were delivered to his office, some by people in law enforcement in Clark County, Exhibit "B". Chairman Ashworth added the telephone messages as well, since the bill was introduced. Chairman Ashworth asked if we are passing a bill allowing the smoking of pot. Judge Hayes stated this "medicine" is a derivative of marihuana which would be available in tablet form. He stated that if the patient could not obtain the derivative, the patient would actually smoke the marihuana. Chairman Ashworth stated that in the pill or capsule form it accomplishes the relief of pain in the taking of chemotherapy. Judge Hayes stated that was correct. He stated it was his understanding that the derivative acts more as a calmativ agent rather than giving the patient the "high" that is perhaps the criticism of marihuana. Senator Neal questioned the "whys" of the bill by stating that the only chemical property identified in the drug is tetra-hysrocannabinols which is the gas or smoke that makes the "high" and relieves pressure. He stated another aspect of marihuana being used for cancer patients is the lessening of vomiting and nausea when taking chemotherapy. He questioned if this were the only value. Judge Hayes stated, "That is the only value it has, at the present time, with regard to cancer patients." He said there is medical support for that as well as for relief for the glaucoma patients. He stated that if that was the only value that it has, it certainly is worthwhile. He further stated the effect of chemotherapy on the cancer patient has a devastating effect, and if there is any agent or substance that can relieve these people of the suffering they go through in taking cancer chemotherapy, it is certainly worthwhile. He stated it would be a merciful thing to pass this bill and give the relief to those people.

Senator Neal questioned if there is any other substitute that would probably do the same thing. Judge Hayes stated that there was none at the present time that is known. This is the one that the medical people, through their research, feel is the best thing for the cancer patient at this time. Compazine is another agent but is not that attractive, he added. Senator Neal stated that from a news report that the marihuana plant has more tar properties than the ordinary cigarette. He further stated that this would be a cancer causing agent, and this point worries him. Judge Hayes stated he was aware that marihuana had tar that is even more cancer producing than tobacco, however the reality is that the people who would be using the marihuana already have cancer and it becomes a chance that they would take with the use of marihuana. He said the chemotherapy agents that people take for one kind of cancer also over a period of time can induce leukemia. He stated marihuana can become a relief from the effects of chemotherapy.

Senator Kosinski questioned how many people might be eligible for this kind of program. Judge Hayes stated that he did not know, he said it would be entirely up to the board to select those patients, who in their opinion, would be relieved in their chemotherapy. This would also include the glaucoma patient where this agent is also very important. Senator Faiss asked how these programs have worked out in the other 18 states that have them. Judge Hayes said it is his understanding that 4 other states have passed it, they are New Mexico, Florida, Illinois and Louisiana. He stated it has very beneficial effects on cancer chemotherapy patients. The bill is pending in 18 other states, but has already passed in 4 states, as of January of this year. Senator Young questioned opening up this program to other patients and asked if federal guidelines covered expansion. Judge Hayes stated this is an open door in the bill, that in the event federal agencies authorize the use of this agent for any other diseases, or conditions, it would give them the opportunity to use it without having to go back through legislation for an amendment. He said the use of it would be strictly controlled by the federal government and their dispensing agencies. Senator Young asked what a price mechanism is. Judge Hayes stated the state would control, store and dispense to the doctor who was authorized as a specialist, to dispense it directly to the patient. He further stated that after the passage of the bill it would take them at least a year to process an application with the federal government. He urged that the Senate pass the bill so they can get into moving it along.

Mr. Paul Cohen, Administrative Officer, State Division of Health, stated in making application to the National Institute of Drug Abuse, the regulations in garnering any controlled substance would comply with the Food and Drug Commission and the Drug Enforcement Administration as with Methadone. They do not implement any type of pharmaceutical dispensing situation in a hospital for Methadone unless they involve the two aforementioned federal agencies.

Date: April 27, 1979

Page: 4

5

Mr. Cohen stated that there is no fiscal note attached to this bill. He stated the chemical would have to be determined how it was to be taken, whether smoked, orally, internally or it could even be ingested in food. He stated they are not against the bill but wish to bring to attention that there are some financial impacts related to it, there are other agencies that have to be dealt with. Senator Faiss questioned if he felt this bill would then require a fiscal note. Mr. Cohen stated he definitely did feel it would require a fiscal note. Senator Young asked him to trace the flow of the marihuana, where it would come from, where it would be stored, etc. Mr. Cohen said in terms of the legal implications there are no negotiations with Drug Enforcement and Food/Drug Administration when you accept a controlled substance under Chapter 453 NRS. Methadone, he stated, is one of those controlled substances. He further said you must have a specific type of safe, a certain amount of safety controls, have it monitored periodically, you must follow their regulations to the letter of law. He stated, in terms of the costs, as far as charging the clients depends on whether or not it is in the application. An application to the institute, Drug Abuse, must show financial implications whether or not you are just asking for the chemical; and the controls to be through the Food Drug Administration, Drug Enforcement Administration and the institute; or you are asking for the funds for the research itself. He said if you want to charge your clients, then you have to develop this into your rules and regulations as you must do through open hearings. Chairman Ashworth asked what the initial cost of furnishing the 40 dollar per diem to the board for travel expenses would be. Mr. Cohen did not have a figure to give him. Mr. Cohen stated he does not have any disagreement after having lost four members of his family to cancer in the past 23 months, he is for anything that would benefit the cancer patients. He said he would like to meet with Judge Hayes and Mr Pugh from the Medical Society to project a "start of cost" in staff time and travel.

Chairman Ashworth asked Mr. Cohen if he would be willing to meet with Judge Hayes and the division, if the committee was amenable to process this bill, to come up with a fiscal note and recommended amendments necessary to process this bill. Mr. Cohen stated he would be willing to do so. Senator Kosinski asked how soon he could get the information back to the committee. Mr. Cohen stated that as soon as he could get together with Mr. Bennett, Mr. Hamm and Judge Hayes to find out what their parameters are. He stated that Dr. Carr is the State Health Officer and will be back Monday, he is one of the food and drug commissioners in the state and is quite extensively read in this area so he could talk with research-medical knowledge. Senator Neal felt the "kids" would interpret the passing of this bill as saying it is all right for them to smoke "pot". Mr. Cohen agreed with Senator Neal and stated it is the emotion of the association of the compound, and psychologically we are telling people that this is a good thing. Chairman Ashworth suggested changing the name to Tetrahydrocannabinols, Mr. Paul Cohen said that most of the people know that compound. Mr. Cohen asked, in terms of direction, what was specifically wanted of him.

Chairman Ashworth stated that after further testimony a consensus of the committee would be taken and he would direct him after that.

Ms. Candy Lusich, Private Citizen, Reno, Nevada, stated she is a diabetic, which started 14 years ago. She started having eye problems approximately two years ago from diabetes, the second stage is glaucoma which she also has. She was placed on drugs and lost a considerable amount of weight, as the medication made her sick to her stomach and she could not eat. She started smoking marihuana because she heard it was being used for glaucoma treatment. She stated she has a hard time obtaining marihuana and it is very expensive and hard to locate. During the smoking of marihuana she said her glaucoma disappeared and when she stopped smoking it the glaucoma reappeared, she has been smoking it for about two years daily. Senator Neal asked what the effect was other than relief of the eye pressure. Ms. Lusich responded that it gave her an appetite, made her feel good because of the relief of the eye pressure and nausea. She stated she does not get "high" on it any more. She stated she had been going to the Stanford Hospital, last year 11 times, for the laser treatment. Chairman Ashworth asked if her doctor has prescribed smoking marihuana to which Ms. Lusich replied "no, he did not". Senator Faiss questioned side effects from the use of marihuana. Ms. Lusich stated she had no bad side effects.

Chairman Ashworth stated in order to process this bill an amendment would have to be added, it would also need a fiscal report and be referred to the Finance Committee. Senator Kosinski suggested the legalization of marihuana. Chairman Ashworth took the consensus of the committee with five in favor of processing the bill. Mr. Cohen was directed to meet with Judge Hayes, Mr. Edmundson, with the recommendations of Russ McDonald and the people of the Pharmacy to come up with an amendment and next week get the testimony of Dr. Carr for the record. Senator Neal felt more testimony was necessary but was not against it.

Chairman Ashworth closed the hearing on S.B. 470.

Chairman Ashworth opened the hearing on S.B. 499.

Mr. Gary Sheerin, Attorney, Harvey's Wagon Wheel, spoke in support of S.B. 499. He stated particularly in the Lake Tahoe area people have been bringing suits to prohibit construction of various facilities. He stated the intent of this legislation is to cause someone who wants to enforce the laws and stop construction, to require them to put up a bond on injunctive relief. He said the bill drafter went to Chapter 445 of NRS in order to accomplish this wording in S.B. 499. He stated NRS 445 is the general law pertaining to water pollution and basically concerns the state regulating water permits. He said there was no objection to amend the bill so that the state does not have to put up a bond; but aim legislation more toward the private groups or individuals who want to get involved in stopping construction projects. Chairman Ashworth questioned, if this bill were passed, could it extend to other sections of the law other than polluting water

NEVADA
STATE
MEDICAL
ASSOCIATION

3660 Baker Lane • Reno, Nevada 89509 • (702) 825-6788

April 26, 1979

TO: Senate Human Resources Committee

FROM: Neil Swissman, M.D.

SUBJ: Testimony for S.B. 470

In 1979 two thousand one hundred Nevadans will be diagnosed as having cancer. One out of four of us will develop a cancer sometime in our lifetime, and two out of three families in Nevada will be touched by this dreaded disease. These are indeed devastating statistics. The picture, however, is not without hope because with early diagnosis and treatment medical science can now effect a cure in 50% of all cancer cases.

The bill you are hearing today, S.B. 470, concerns itself not with cancer cures but with a relief of the symptoms of therapy and rapid return to useful life for cancer patients.

Organized medicine in Nevada strongly supports the passage of S.B. 470. This is not quackery or the illegal use of an agent. This bill conforms to federal regulation allowing tetrahydrocannabinol to be used for the treatment of cancer and glaucoma patients under very strict federal guidelines. It has passed in at least 18 states.

This passage of S.B. 470 is humane, medically appropriate and scientifically sound.

APR 26 1979

SENATOR KEITH ASHWORTH
State Senate
Carson City, Nevada

Dear Senator Ashworth:

I understand that at the present time there is a bill being proposed which would legalize marijuana for use in cancer patients in the state of Nevada. As I understand it, this bill is quite similar to that in other states where marijuana has already been legalized for this use.

I would like to take this opportunity to state that I would be strongly in favor of such a bill providing the drug be restricted to use in cancer patients and that the distribution be strictly controlled. I understand that this drug can be used effectively in cancer patients to control nausea and vomiting induced by chemotherapy, to possibly decrease pain, and to improve the well being of patients with advanced malignancy.

Thank you for your continuing interest in the problem.

Sincerely yours,

Maria Alexander

*anyone who has suffered with
chemo-therapy should definitely have this
pill available for them*

709-A 8th St., S.E.
Washington, DC 20002
April 19, 1979

APR 24 1979

Senator Keith Ashworth, Chairman
Senate Human Resources Committee
State Capitol
Carson City, NV 89201

Dear Senator Ashworth:

Although I am not a citizen of Nevada, I am writing you in support of pending legislation which would permit marijuana's therapeutic use by glaucoma patients, and by individuals afflicted with cancer who are undergoing chemotherapy treatments.

Since 1976, I have enjoyed legal access to federal stocks of marijuana for therapeutic use in the treatment of glaucoma, a blinding eye disease. The medically supervised use of marijuana of a known potency has made the difference between retaining my vision and going blind. Thus, my interest in this question is far from abstract, but instead grows from a long experience both with the problems faced by patients confronting the Hobson's choice between medical relief and criminality, and the federal policies which seriously complicate discussion and resolution of the question.

Marijuana's utility as a therapeutic agent, both in glaucoma and as an anti-emetic for chemotherapy, was found by accident. Many thousands of patients are able to recognize these benefits absent medical expertise. For a glaucoma patient, marijuana offers lowered intraocular pressures and potentially prolonged vision. (Left to conventional therapies, for example, I would now be blind, yet the use of marijuana, in combination with conventional agents, has added four years of sight I might otherwise not have enjoyed.) In cancer chemotherapy patients, suffering from the nausea and vomiting which follow chemotherapy and radiation treatments, marijuana's action is readily apparent.

The question is not if these patients will or will not use marijuana. American Medical News (AMA) reports "thousands -- perhaps tens of thousands -- of glaucoma and cancer patients across the country" are smoking marijuana for medical relief. The question becomes under what conditions patients will be permitted to receive marijuana. Without reforms, like those proposed in Nevada, federal law and the sheer complexity of federal regulations will force these patients into the streets -- into an illegal, unregulated black market -- for relief. With reform along those lines adopted in New Mexico, patients unable to obtain relief through conventional drugs have the legal alternative to try marijuana under medically ethical conditions of supervision and guidance.

In my understanding, the proposed Nevada law seeks to extend compassionate medical relief to glaucoma patients and cancer patients receiving chemotherapy who are not responsive to conventional drugs. In the process of extending this relief, the Nevada law also hopes to advance the collection of information

regarding marijuana's various therapeutic utilities. I think this approach, stressing the compassionate, humane and medically ethical import of patient care over the less therapeutically advantageous regimen of manipulative research environments, is excellent and well advised.

The only flaw in the approach is, I think, in the proposed legislation's neglect of organic cannabis preparations in favor of synthetic marijuana-like substances. Of the seven states which have thus far adopted therapeutic use measures, only Florida has passed a similar exclusionary clause.

I cannot emphasize enough the dangers which reliance on synthetic cannabis poses. For example, in my own situation synthetic forms of marijuana, notably Delta-9-THC, have proven ineffective. Smoked doses of cannabis, available in highly controlled potencies from federal agencies, however, continue to offer me the beneficial reduction in ocular tensions required for the medical control of my disease.

Delta-9-THC, the preparation of synthetic marijuana now available, was developed for abuse oriented research. It is not marijuana's most therapeutically active substance, but merely its most psycho-active. Delta-9-THC, in short, is what makes people feel "high." When researchers discovered that glaucoma and cancer patients were smoking marijuana for medical relief, federal agencies shifted Delta-9-THC into programs of therapeutic study.

Evidence suggests Delta-9-THC is effective in some cases. This is true for both glaucoma control and as an anti-emetic. Yet the evidence also indicates that the oral preparations of Delta-9-THC are inferior to marijuana in smoked form. In a recent study conducted by the National Cancer Institute fifteen cancer chemotherapy patients were tested. Initially, all were placed on oral Delta-9-THC. At the conclusion of the study, however, all patients had been transferred to smoked marijuana. In effect, Delta-9-THC became ineffective while the federally developed, dose controlled cigarettes continued to offer relief. Perhaps the most surprising finding in this study was that smoked marijuana placed almost twice as much active cannabis agents in the bloodstream as did the Delta-9-THC pill.

In the final analysis, of course, it is the quality of relief received by the patient which should remain uppermost. Since the THC vs. marijuana discussion too often begins to appear a contest, I have enclosed a memorandum issued by the National Cancer Institute in May, 1978, discussing the issue. Doctor Monroe Wall, responsible for producing both the cannabis cigarette and Delta-9-THC, offers opinions which should guide the committee in its deliberations.

My interest also lies with the relief patients may receive. The choice to employ cannabis or synthetic THC or the ability to employ both agents at different times, permits physicians and patients to elect among options. Nothing is more vital to meaningful medical care than the close and intimate communion between an individual and his doctor. It is in this protected, sensitive environment that final

Senator Ashworth
Page three
April 19, 1979

decisions on the use of marijuana and/or its synthetic agents should be made. I hope the Nevada legislature seeks to accept and protect this ability to elect by including federally grown marijuana.

There are many additional issues within the general question of marijuana's therapeutic use which might be discussed. But, because I am not a citizen of Nevada, I feel I should leave you to your good judgements. The spirit and impulse, clear among the many states, to provide patients like myself with medically competent access to marijuana under legal sanctions is a compassionate, humane and direct legislative response to evident problems in the current, too generalized prohibition.

If I may be of any help to you, your committee or the legislature in understanding the technicalities of such legislative approaches, I would be happy to assist in whatever way possible. With appreciation for this opportunity to comment, I remain,

Sincerely yours,



Robert Randall

RCR:pes
Enclosure: NCI Memo 5-15-78

A STUDY OF MARIJUANA'S THERAPEUTIC POTENTIAL

Prepared by:

The Hawaiian School of Public Health

Marijuana Task Force

October 26, 1977

Reprinted by:

The Center for the Study of Non-Medical Drug Use

2317 M Street, N.W.
Washington, DC 20037
Price: \$10

TABLE OF CONTENTS

	<u>Page</u>
Foreword	i
Introduction	ii
✓ Section I -- Ophthalmic	1
Glaucoma	1
Bibliography	3
Section II -- Mental Functioning.	6
A. Sedative-Hypnotic	7
B. Hypnotizability	7
C. Anti-Depressant	7
D. Coping Behavior	8
Bibliography	8
Section III -- Pulmonary and Pre-Anesthetic	13
A. Bronchodilation.	13
Bibliography	14
B. Pre-Anesthetic	19
Bibliography	20
Section IV -- Anticonvulsant	22
Bibliography	23
Section V -- Analgesic	26
Bibliography	26
Section VI -- Cancer.	28
Bibliography	29
Section VII -- Anti-Bacterial	32
Bibliography	32
Section VIII -- Conclusions and Recommendations	34
Glossary	37

I. Glaucoma

At present, glaucoma is responsible for 14% of all new cases of blindness and is the second leading cause of blindness in the United States. While different types of glaucoma exist, a common characteristic among all varieties is an abnormally high intraocular pressure (IOP) which eventually damages the optic nerve and results in blindness. According to Dr. R.S. Hepler of the Jules Stein Eye Institute at U.C.L.A. School of Medicine, there is no clear understanding as to how an elevated IOP affects the optic nerve, however, it is believed that an elevated IOP interferes with the blood supply to the optic nerve thus causing the latter to atrophy. Peripheral vision is initially lost and later the loss of central vision also occurs. "Vision once lost to glaucomatous optic atrophy can never be regained." (Emphasis added.) (Hepler, Petrus, 1976).

Currently, glaucoma, which is incurable, is controlled through the use of conventional medications. However, many glaucoma patients experience little or no relief and others experience potentially serious side effects from conventional medications.* Surgical therapy, another alternative for controlling glaucoma, is generally looked to as a last resort as there is both a high incidence of cases where surgery fails to control glaucoma and a significant amount of risk involved. Serious complications may occur as a result of surgery. (Hepler, Petrus, 1976).

The possibility of using marijuana as a means of controlling open-angle glaucoma first came to light in 1971 when Hepler and Frank discovered that smoking marijuana reduced intraocular pressure. A series of studies testing the effects of marijuana and its derivatives on IOP have since followed. All have indicated that the active ingredient of marijuana, delta-9-THC, and other marijuana derivatives do indeed reduce IOP. Green and Podos (1974) and Purnell and Gregg (1975) among others have confirmed the IOP reducing effects of cannabinoids.

*The following medications have been conventionally used for the treatment of glaucoma and may have the following side effects:

- 1) Miotics: Can cause blurred vision during the day and impaired vision at night. They are suspected of contributing to the development of cataracts, and may pre-dispose a patient to uveitis and retinal detachment.
- 2) Epinephrine: Causes local ocular irritation and chronic redness of the eyes. May create cardiac arrhythmias and hypertension.
- 3) Carbonic Anhydrase Inhibitors: Causes electrolyte imbalance, fatigue, anorexia, weight loss and renal stones. (Hepler, Petrus, 1976).

Dr. Hepler, in a study conducted in 1974, tested for the ocular effects of smoking marijuana, and concluded that there are "no indications of any deleterious effects of smoking marijuana on visual function or ocular structure." (Hepler, et al., 1972). More specifically, while reducing IOP on an average of 4-5 hours (in the Hepler, Frank and Petrus study), marijuana had no cumulative effects on visual function and ocular structures. Further study by Hepler, Frank and Ungerleider indicated that while the pupils actually constricted (rather than dilating as is commonly believed) after smoking marijuana, normal responsiveness to light was not affected. Other visual function tests concluded that visual acuity, refraction, peripheral visual fields, binocular fusion and color vision were not altered significantly. Dr. Hepler concludes that marijuana may be more useful than other conventional medications and furthermore may reduce IOP in a way that conventional medications do not, thus making marijuana a potential additive. (Hepler, et al., 1972.)

Cooler and Gregg, while noting the effects of IOP reduction by the administration of marijuana to glaucoma patients, conducted studies to further describe the effects of marijuana administered intravenously to subjects with normal IOP. They discovered an average reduction in IOP of 37% and 29% among subjects receiving approximately 3.0 mg. and 1.5 mg. respectively. They also observed that there were no statistically significant changes in respiration or blood pressure and no appreciable analgesic properties. There was a significant increase in anxiety among subjects receiving both dosages of delta-9-THC. (Cooler, Gregg, 1976.)

The remaining obstacles to overcome where the use of marijuana for controlling glaucoma is concerned appear to be in the manner in which the drug is administered and in determining dosage. The National Institute of Drug Abuse (NIDA) is currently experimenting with administering delta-9-THC in oral tablet form, and studies using marijuana in eyedrop form have successfully been conducted on rabbits.

It should be noted that in November, 1976, the Washington, DC, Superior Court handed down an unprecedented decision allowing Robert Randall to smoke marijuana as a means of controlling his glaucoma. Mr. Randall's condition was first treated in 1972 with conventional medications which eventually became ineffective as he developed a tolerance to these drugs. By 1974, he had suffered complete loss of vision in his right eye and vision in his left eye was severely impaired. Mr. Randall sought relief for his glaucoma condition by smoking marijuana. His subsequent arrest for possession of the drug led to his participation in experimental studies which indicated that smoking marijuana did indeed normalize Mr. Randall's IOP and lessened visual distortion. Mr. Randall was eventually acquitted by reason of medical necessity. For fourteen months, Mr. Randall participated in another research program at Howard University in Washington, DC. Following termination of that program in January, 1978, the federal government denied Mr. Randall access to marijuana for nearly five months. After filing suit in federal court, Mr. Randall once again received medical supplies of marijuana, this time in a conventional physician-patient-pharmacy relationship.

BibliographyGlaucoma

1. Cooler, P.; Gregg, J.M. The Effect of Delta-9-Tetrahydrocannabinol on Intraocular Pressure in Humans. The Therapeutic Potentials of Marijuana. S. Cohen and R.C. Stillman (eds.). New York, Plenum Medical Book (1976).

Purpose of study: to describe further the effects of intravenous delta-9-THC on IOP in subjects with normal IOP.

Study population: 10 males, 20-30 years old. Double blind study using:

- 1) Delta-9-THC average 3.0 mg. total dosage
- 2) Delta-9-THC average 1.5 mg. total dosage
- 3) Diazepam sodium (valium) avg. 10 mg. total dosage
- 4) Placebo: human serum albumin

Delta-9-THC solubilized and administered intravenously. Results:

- 1) At higher dosage of delta-9-THC, IOP reduced in all nine subjects receiving higher dose average 37% reduction.
- 2) At lower dosage, delta-9-THC, 9 of 10 subjects IOP reduced average 29% reduction.
- 3) Valium reduced IOP in 6 of 10 subjects average 10% reduction.
- 4) Placebo reduced IOP in 3 of 10 subjects average 2% reduction.

Other observations:

- 1) No statistically significant change in respiration or blood pressure.
- 2) No appreciable analgesic properties with either cutaneous or periosteal stimulation.
- 3) Anxiety levels increased markedly in subjects receiving both levels of delta-9-THC and only slightly in subjects receiving placebo and valium.

2. Hepler, R.S.; Petreus, R. Ocular Effects of Marijuana Smoking. Pharmacology of Marijuana. Vol. II, pp. 815-828 (1976).

Purpose of study: to determine the effects of smoking marijuana on the eye. The study population included normal human studies, glaucoma patients and rabbits. A double-blind study was conducted using:

- 1) natural marijuana with standard delta-9-THC content.
- 2) synthetic delta-9-THC blended into placebo marijuana material (THC spiked placebo).
- 3) oral THC — synthetic delta-9-THC dissolved in sesame oil and administered in capsules.
- 4) placebo — marijuana without THC.

Results: Humans with normal IOP

Pupils: There was a statistically non-significant constriction in the pupils at five minutes after drugs were administered in groups using the first three drugs.

IOP: There was a statistically significant reduction of intraocular pressure after smoking or ingesting marijuana or THC. IOP dropped on an average of 30% among those smoking natural marijuana and 2% THC. Those smoking the placebo also experienced an average 10% reduction in IOP indicating that marijuana without THC may contain other cannabinoids which may have caused the reduction.

Chronic and Cumulative Effects: Pupils showed no sign of chronic or cumulative effects resulting from marijuana. The reduction in IOP lasted four-five hours and showed no indication of cumulative effects.

Results: Glaucoma patient studies

Of eleven patients studied, seven experienced substantial drop in IOP averaging 30%.

Results: Animal studies

There were insufficient observations to draw statistical conclusions.

3. Hepler, R.S.; Petreus, R. Experiences with Administration of Marijuana to Glaucoma Patients. The Therapeutic Potential of Marijuana. S. Cohen and R.C. Stillman (eds.). New York, Plenum Medical Book. pp. 63-77 (1976).

Purpose of study: to determine what if any effects marijuana might have on glaucoma.

The patient population consisted of 12 persons with open-angle glaucoma. Those with mild or moderate glaucoma discontinued their customary medications 24-48 hours prior to receiving marijuana. Those with severe glaucoma continued using medications until their arrival at the research centers. The patients received marijuana either in smoked form or orally during three sessions. They were observed for four hours following the administering of marijuana and their intraocular pressure measured repeatedly.

Results: 10 of 12 patients experienced a reduction in IOP of 30% (on the average) and lasting 4-5 hours. There is no explanation for lack of effect on the remaining two patients.

Marijuana appears to be additive to the effects of conventional medications.

4. Hepler, R.S.; Frank, I.M.; Ungerleider, J.T. Pupillary Constriction After Marijuana Smoking. American Journal of Ophthalmology. pp. 1185-1190. December (1972).

Purpose of study: to determine ocular effects of marijuana especially with respects to pupillary effects.

Results: Indicated that the size of the pupils actually decrease after smoking marijuana while maintaining normal responsiveness to light. There were decreases in tear secretion, intraocular pressure, and conjunctival hyperemia. Tests measuring any change in visual function were applied, specifically, tests for visual acuity, refraction, peripheral visual fields, binocular fusion and color vision, and indicated no significant alteration in visual function.

5. Perez-Reyes, W.D.; Wall, M.D.; Davis, K.H. Intravenous Administration of Cannabinoids and Intraocular Pressure. Pharmacology of Marijuana. Vol. II, pp. 829-832.

Purpose of study: to determine whether cannabinoids other than delta-9-THC reduce intraocular pressure significantly and have less intense psychological and cardiovascular effects than delta-9-THC.

Six cannabinoids were intravenously administered into subjects with normal intraocular pressure. The six cannabinoids were: 1) delta-9-THC, 2) cannabinal, 3) cannabidiol, 4) 11-hydroxy-delta-9-THC, 5) delta-8-THC, 6) 8-hydroxy-delta-9-THC.

Results:

- 1) Delta-9-THC and 11-hydroxy-delta-9-THC decreased intraocular pressure but also resulted in intense psychological and cardiovascular effects although doses administered were moderate.
- 2) Delta-8-THC decreased intraocular pressure more than any of the other cannabinoids and produced only moderate psychological and cardiovascular effects.
- 3) The remaining drugs had only a moderate effect on intraocular pressure, and cannabidiol had a placebo effect.

Conclusion:

Delta-8-THC is the least expensive and most abundant synthetic cannabinoid. Its intraocular pressure reducing properties and the fact that it produces psychological and cardiovascular effects that are less intense than delta-9-THC may indicate that it is the most appropriate cannabinoid for treatment of glaucoma.

MEMORANDUM

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH
NATIONAL CANCER INSTITUTE

Distribution

DATE: May 15, 1978

19

EXHIBIT B

FROM : Special Assistant to the Director, DCT, NCI

SUBJECT: Minutes of the May 9, 1978 Meeting on the Current Status of Research with Tetrahydrocannabinol and Nabilone for the Control of Cancer Chemotherapy-Induced Vomiting

The meeting convened at 9 a.m. in Building 1, Wilson Hall. An introduction was given by Dr. Brian Lewis who described the increased level of interest in the study of Schedule I drugs for cancer patients and the need for the Division of Cancer Treatment to make a programmatic decision about further involvement and support of research in emesis control.

Dr. Monroe Wall of the Research Triangle Institute gave a brief overview of the preclinical research history of tetrahydrocannabinol. In addition to a review of the pharmacokinetics of THC and related compounds, he made the point that i.v. administration of THC was possible by combining the drug with commercially available human serum albumin. He noted that 40 to 50 percent of the active material in a cigarette can be ingested by trained smokers and re-emphasized the point that NIDA's THC-containing cigarette is now highly standardized and is a reliable and reproducible method of administering the drug. This point came up repeatedly during the meeting in response to comments about the erratic absorption which is seen with orally administered THC as well as the problems in giving an orally administered drug to patients who are vomiting.

Dr. Stephen Sallan spoke on the studies of THC which have taken place at the Sidney Farber Cancer Center. The first study, which was published in 1975, asked the question whether oral THC was an effective anti-emetic in the setting of patients receiving cancer chemotherapy. It was a randomized, placebo-controlled cross-over study in which patients were examined on three sequential days of chemotherapy and were randomized to receive either THC, placebo, and placebo, or THC, THC, and placebo. Their conclusion was that THC had anti-emetic properties and that it was better in preventing vomiting than in treating existing vomiting. The second study, which is still ongoing, was a comparison of THC vs. prochlorperazine.

Distribution

-2-

May 15, 1978

20

At the present time, 73 patients are on study and 22 are unevaluable. Of the 51 evaluable patients, 17 have completed single courses and 34 have completed the planned three courses. The majority of patients are adults with sarcoma with a median age of 32 years who are receiving either high-dose Cytosan + adriamycin + cis-platinum. Of the 17 patients who had only single courses of THC, 7 of 7 who had Compazine vomited while 7 of 10 who had THC vomited. The other 3 on THC vomited but reported being "too high." Thirty-four patients had three courses. Sixteen of 34 reported differences between the anti-emetics, and 13 of 34 had the same results with both drugs. Of the 16 patients who noted differences, 12 of 16 thought THC was better, and 4 of 16 thought Compazine was better. This difference had a p value of .12, but it should be noted that had the differences been 13 of 16 vs. 3 of 16, the p value would have been .04. Of the 12 patients who thought THC was better, 10 had a high and 2 had no high. Of the 4 patients who thought Compazine was better, 1 had a false high and three had no high. Of the 18 patients who noted no differences in the therapies, 5 of 18 had no vomiting, and 5 of 5 had a high with THC. Of the 13 of 16 who had some vomiting, 1 of 13 was high with THC and 12 of 13 had no high with THC. Interestingly, in the first study of THC vs. placebo, toxic psychological reactions were noted in older, naive patients, while in the second study, the reactions were seen in the more experienced users of THC. There was also question as to whether the 15 patients who received THC and had no high were non-absorbers of the drug.

The next speaker was Dr. William Regelson of the Medical College of Virginia. He presented an overview of his past studies which mainly aimed at examining THC as an anti-depressant and appetite stimulant in cancer patients. The study was really not set up to examine the question of THC's anti-emetic properties. He did feel there was some evidence that THC prevented the weight loss seen in an out-patient chemotherapy program, and he urged that any future studies include weighing of the patient before and after therapy with THC as a means of further examining this property.

Dr. John Laszlo of Duke University presented a chronicle of the correspondence and interactions involved with the regulatory agencies in his attempt to get approval for his study of THC. Basically, his study was designed to examine the effect of THC in patients who had failed the "standard" treatment of nausea and vomiting with agents such as the phenothiazines. 15 mg/M² of THC was given orally one hour before chemotherapy. This has so far been found to be a highly sedative dose in older patients. The drug was then continued every six hours for

Distribution

-3-

May 15, 1978

21

four doses in the original study, but it has since been modified to be continued until chemotherapy was completed. Six patients have been entered, and 3 of the patients have received two courses of therapy for a total of nine courses given so far. The results are summarized on the attached sheet. An unusual side effect noted was a high incidence of facial edema.

Dr. Stephen Frytak then reviewed the experience at Mayo Clinic. This study involves a comparison of oral THC vs. Compazine vs. placebo in GI cancer patients who are receiving 5-FU and methyl CCNU at a minimum + other chemotherapeutic agents. 15 mg of THC is given per dose. 10 mg of Compazine constitutes the other treatment arm. Therapy is given two hours before chemotherapy and then at two and eight hours after the initial dose of drug. Ninety-six patients have been entered on study, 23 have been taken off prematurely, 11 because of excessive nausea and vomiting and 12 because of toxicity. Four have had dizziness and 3 have had syncope. The results are still blinded, but they will be asking their statistician shortly to see whether there is any significant difference in the treatment arms and how many more patients will need to be accrued to finish out the study. They originally targeted around 150 patients, but they may be able to stop the study before this number has been reached.

Dr. Fred Chang of the Surgery Branch at NCI reviewed their study of THC vs. placebo in patients on high-dose chemotherapy. Part of their intent is to determine the absorption and effective serum concentrations of THC. The patients were receiving either high-dose methotrexate or adriamycin plus Cytosan. Patients were initially randomized to receive THC followed by placebo with a subsequent rerandomization to placebo followed by THC (or vice versa). Patients served as their own control, and after three paired trials, they were reclassified according to whether they were responders or nonresponders. Responders went on to enriched THC trials while nonresponders had an elevation of the THC dose and re-entered the original randomization scheme. 10 mg/M² of THC is started at 7 a.m. on the day of chemotherapy and given at three-hour intervals for a total of five doses. If patients vomit, they then smoke a THC (or placebo) cigarette containing 17 mg of THC (or placebo) for each dose in lieu of the capsule. To date, 8 patients ages 15 to 49 have been entered, 7 on high-dose methotrexate, and 1 on adriamycin and Cytosan. There has been a 95 percent compliance rate for THC, and a 90 percent compliance rate for placebo. Five of 8 have had excellent responses, and 3 of 8 have had marginal responses to THC. There appears to be some question of a late breakthrough of nausea and vomiting after prolonged use of THC in patients who initially responded, raising the

question of the development of tolerance. There has been some sedation, and the patients reported themselves to be subjectively more comfortable on THC. Dr. Chang anticipates that three to four more patients will need to be added to the study.

Dr. Solomon Garb of the American Cancer Research Center then reviewed a study which is only in its initial phase. The study compares THC plus a "standard" anti-emetic to the anti-emetic alone, and the patient is used as his own control. The study is randomized and double blind, and on the first course, the patient receives the standard therapy plus a dummy capsule, and on the other course standard therapy plus THC. 15 mg + 5 mg of THC is given one to two hours before chemotherapy and then continued q four hours. Dr. Garb noted that they have used a "double evaluation" system in determining the patients' responses since experienced physicians seem to elicit a different kind of history than that which is obtained by students. Apparently, the patients are more interested in pleasing the staff physicians and tend to report less adverse reactions to them, whereas they seem to be more frank with the students. Only one patient has been entered so far.

Dr. J. T. Ungerleider of UCLA next discussed the history of his difficulties in obtaining approval from the FDA and described his study as a comparison of THC vs. Compazine in a cross-over double blind design. 7.5 to 12.5 mg. of oral THC is being used. They anticipate accruing 200 patients, and so far 126 patients are on study. Forty-three patients have completed both phases, and another 10 are about half way through. The drug is given one-half hour before chemotherapy and then q 3 hours thereafter in both in-patients and out-patients on two days of chemotherapy. The study is blind, and there are yet no data to report.

Dr. Irwin Krakoff of the University of Vermont reviewed his history of involvement in THC research. He did an early Phase I study using marijuana cigarettes and was not convinced then that it was an effective anti-emetic. He next studied a small number of patients using THC vs. Compazine, and noted that about half the THC patients thought THC was Compazine, but no Compazine patients thought the drug was THC. Some patients refused further THC because they did not like the dysphoric effect produced while they were vomiting. They are now planning to start up a study of Nabilone.

Distribution

-5-

May 15, 1978

23

DISCUSSION OF THC

Following these presentations, there was a general discussion of the preceding talks. Dr. Tocus and Dr. Kartzinel of FDA fielded questions and comments about the difficulties which have pertained in the past in obtaining approval for studies with THC. It was pointed out that the policies at FDA and the ability to process applications have changed considerably, and investigators should find far less difficulty in the future. It was agreed that the studies to date have, by necessity, been quite diverse and have not utilized sufficiently comparable methodology or evaluation systems. Each investigator designed his study and obtained the permission to proceed with his trial independently of the others, and clearly for the future, more effort needs to be directed to the design of complementary and comparative studies and to agreeing upon a common terminology and rating system for measuring the impact of the drugs upon nausea and vomiting. The oral absorption of THC is erratic, and the current formulation of THC was felt by Mr. Davignon to not be acceptable. There was also some concern about using the standard NIDA cigarette in non-experienced smokers, but it was noted that all in all the cigarette may be the best means of administering the drug. The drug distribution system of DCT was reviewed, and it was pointed out that even if DCT did become involved in the distribution of THC and in the support and review of further studies, the distribution of the drug would still be quite tightly controlled. To wit, it would be available at most to investigators supported by the DCT through contracts or grants to do clinical trials research and possibly through the cancer center directors.

NABILONE

Dr. Robert Schulman of Eli Lilly & Company lead off the afternoon session by discussing the background of Nabilone. It is available in an oral form as a crystalline substance, and it differs from THC in having a ketone at the 9 position instead of a hydroxyl group and in having a different side chain. It cannot be derived from THC and represents a totally synthetic compound. It is well absorbed orally, its metabolites are detectable for 20 hours after administration of a dose, and its side effects include euphoria and hypotension. To date, 110 patients have received Nabilone in anti-emetic studies, and the next trials which Lilly anticipates will be placebo-controlled double blind cross-over studies. They anticipate being able to file for an NDA in the first quarter of 1979.

Distribution

-7-

May 15, 1978 24

be noted that even with Compazine on days 2, 3, 4, and 5 of chemotherapy, the vomiting decreased. Overall, 38 patients had less emesis with Nabilone, i.e., 81%, and 7 patients had less emesis with Compazine, 15%. In their results with open label use of Nabilone, 79% of patients had continued relief, while 21% had loss of the anti-emetic effect. Side effects included orthostatic hypotension, euphoria, dysphoria, and lethargy. Nine of 47 patients on Compazine and 21 of 47 patients on Nabilone had blood pressure drops of at least 30 mm of mercury. In sum, patients received significant relief from nausea and vomiting with Nabilone compared to Compazine, and Dr. Einhorn felt there was no doubt about the decrease in protection by Nabilone from nausea and vomiting over time in testicular cancer patients. The 15 pound weight loss which these patients had averaged in the past during platinum therapy was now no longer present with Nabilone. Future studies will include determination of serum levels, further studies of premedication, and comparison of Nabilone to placebo.

Dr. Terence Harman of the University of Arizona reviewed two studies with Nabilone. Protocol No. 1 was a dose-seeking study on hospitalized patients who were on a stable regimen of chemotherapy and had exhibited refractoriness to standard agents for the control of nausea and vomiting. The first 6 patients received 1 mg po q 8 hours x 5 days and the second 7 patients received 2 mg po q 8 hours x 5 days. Two doses were given prior to chemotherapy, and in retrospectively analyzing the study, the authors divided the patients into two dose ranges when the doses were normalized to body surface area. The high-dose group had a significantly better degree of protection from nausea and vomiting than low-dose patients, and the orthostatic blood pressure changes did not seem to be dose-related. Only 3 of 13 patients felt a high, 100 percent had somnolence, 92 percent had dry mouth, and 85 percent had dizziness. Nabilone also produced a marked increase in appetite.

The second study was a double blind cross-over. In course 1, patients received either Nabilone 2 mg po q 8 hours or Compazine 10 mg po q 8 hours. For course 2, they were crossed over to the other drug. Thereafter, they blindly continued on the drug of their choice. These were out-patients who had a history of severe nausea and vomiting and were evaluated by a questionnaire. Thirty-one of 37 were evaluable, 13 had Hodgkin's disease, 7 had non-Hodgkin's lymphoma, 3 had breast cancer, and 2 had sarcoma. Twenty-six patients reported more vomiting with Compazine, 15 patients reported more vomiting with Nabilone, and 17 patients noted no difference between drugs. Twenty-four patients preferred Nabilone, 1 preferred Compazine, and 6 preferred neither. Dry mouth, somnolence, and dizziness occurred in 91 percent, 87 percent

Distribution

-8-

May 15, 1978

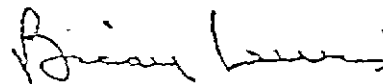
25

and 71 percent of patients on Nabilone, while with Compazine these same set of symptoms occurred but with a lesser degree of frequency, i.e., 35 percent, 43 percent, and 29 percent, respectively. Seventy percent of patients on Nabilone noted a decreased level of coordination.

DISCUSSION OF NABILONE AND OVERVIEW OF ANTI-EMETIC RESEARCH

In the discussion that followed, several points emerged:

1. Both Nabilone and THC appear to have promising anti-emetic properties in patients receiving cancer chemotherapy, but the numbers and kinds of studies and the number of patients studied to date do not provide definitive answers. There was general agreement that the field would benefit from more coordination and that it deserves a high priority because of the significant degree of morbidity and of noncompliance with therapy caused by chemotherapy-induced nausea and vomiting.
2. Nabilone had a relative advantage over THC in that it was free of the red tape and societal stigma associated with THC. It also had the sponsorship of a private drug company which was well along in the pre-NDA stage of development. Dr. Paul Stark of Eli Lilly felt that his company would be more than willing to cooperate with the CTEP in working with the DCT grantees and contractors who are involved in clinical trials research.
3. It was felt that this working group had been valuable by bringing together for the first time the investigators studying the control of emesis in cancer chemotherapy patients, that it or some part of it should serve as an advisory group in helping to plan further studies, and that this should be only the first in what should be continued as a recurring series of meetings.
4. It was agreed that the DCT staff would circulate the names and addresses of participants in the meeting so that they could cross-communicate and that the DCT would disseminate the results of its policy decision.



Brian J. Lewis, M.D.

APR 21 1979

26

April 18, 1979

Honorable Keith Ashworth
Nevada State Senate
Capitol Complex
Carson City, Nevada 89710

Dear Senator:

I wholeheartedly support S.B.470, to allow use of some constituent ingredients of marijuana by persons undergoing cancer therapy. I know from firsthand observation of friends and acquaintances that chemotherapy is a devastating process that no one would undertake were the alternative not, bluntly, death. Anything to relieve the suffering that these people must undergo in an attempt to stay alive can only be beneficial.

As one charged with enforcing the laws of this state, I firmly believe that there is no danger whatever that improper or "recreational" use of marijuana would be encouraged by this bill.

Sincerely,



L. J. O'Neale
Deputy District Attorney

LAS VEGAS

LJO:lg

P.S. Please note that these are my personal views and do not necessarily represent those of my office.

Committee in Session at 8:41 A.M. on Thursday, May 3, 1979.

Senator Keith Ashworth in the Chair.

PRESENT: Chairman Keith Ashworth
Senator Clifton Young
Senator Wilbur Faiss
Senator Jim Kosinski

ABSENT: Vice-Chairman Joe Neal
Senator Rick Blakemore

GUESTS: Dr. John H. Carr, State Health Division
Mr. Clinton Wooster, Attorney, University of Nevada,
Reno, Nevada
Ms. Peggy Westall, Assemblyman, Washoe District 31
Mr. Tod Medrosian, Assemblyman, North West Reno, Nevada
Mr. Ernie Gregory, Administrator, Environmental
Protection Agency
Ms. Jean Stoess, Washoe County Commission
Mr. Russ McDonald, Washoe County Representative
Ms. Debbie Shelter, Washoe County property owners groups
Mr. Charles Zobell, City of Las Vegas

Chairman Ashworth opened the hearing on S.B. 470.

Dr. John H. Carr, State Health Division, presented Fiscal Note on S.B. 470, Exhibit "A". He stated in the bill on Page 1, Line 15 "state board of pharmacy" has been changed to "state board of health", on Page 2, Lines 3 and 4 have been deleted. Chairman Ashworth stated that the committee has questions as to the fiscal note, requested statement from Dr. Carr as to his opinion of the bill and to give a viable approach to the problems that need to be addressed. Dr. Carr stated that they can administer it and it is a viable approach to the problems of the bill and in his opinion it is needed. Chairman Ashworth stated that Mr. Cohen was to present some amendments and the committee has not as yet received them. He stated the amendments should be presented before processing of this bill. Dr. Carr stated he has the bill with the changes marked that had previously been agreed upon. Mr. Cohen was to meet with Dr. Thomas, Judge Hayes and Dick Hamm and submit recommendations for an amendment to this committee. Chairman Ashworth stated that we need Mr. Cohen to come back to testify and present the amendment and directed Dr. Carr to contact him to return.

Senator Young questioned if this bill was for research and therapy under the guise of research. Dr. Carr stated that it was for both, that basically it is for research, if it can be determined that certain people can be benefitted then it will be therapy also. Chairman Ashworth stated if this bill is to be processed, it would have to be presented to the Finance Committee. Dr. Carr stated the 31 thousand dollars is for two years with two-thirds being spent the first year and one-third the second year. He stated they would like to have any money left over to be carried over to the next year, if this bill goes through. He further stated that the

Date: May 3, 1979

Page: 2

28

state Health Division would have to develop their own protocol and study design regarding research and therapy.

Chairman Ashworth brought to the committee attention the letters and phone calls in favor of S.B. 470, (See minutes of 4/27/79 Exhibit "B"). Senator Faiss questioned whether letters had been received in opposition, to which the response was "no".

Senator Kosinski stated he could not identify the cost of the drug in the bill, there was question, when testimony was taken April 27th, as to whether the patient would pay for the drug or whether the state would pay for it. Senator Ashworth stated that testimony was that the patient should pay for it. Senator Kosinski stated it was not indicated in the bill. Dr. Carr stated that there are a lot of other costs that cannot be given until the board had adopted its rules and regulations. Senator Young asked who would handle the collation of the research of it; if it is for therapy then it should so state. Dr. Carr stated he felt that the personnel and resources of the state Health Division could absorb these things. Senator Faiss questioned if the program would be self-sustaining. Dr. Carr stated he did not have enough information on how much it would cost to maintain the program, and that it would depend upon whether the patient paid for the drug.

Chairman Ashworth closed the hearing on S.B. 470.

The hearing was opened on S.B. 527.

Mr. Clinton Wooster, Attorney, University of Nevada, Reno, stated no real agreements have been made with the additional discussions following Tuesday, May 1st testimony. He stated one of the most important points in S.B. 527 was to allow a cemetery authority to relocate a cemetery within a portion of the existing cemetery or in any other cemetery. If the Hillside Cemetery were relocated it would be very desirable to relocate it within a portion of the existing cemetery, according to the Muran family who had testified on Tuesday. Mr. Wooster went on to state that the provisions they are amending are general law and they do not want to get too specific with the Hillside Cemetery. He stated the Muran family wanted some specific safeguards regarding a memorial monument, which would be acceptable to the University. It is his feeling, along with the University, that the specific safeguards should be done in the city ordinance. He said, with some amendments to the general enabling law, the first step the University would have to do would be to get a city ordinance allowing relocation of this specific cemetery. He further stated that in the city ordinance some agreements could be made as to relocation and requirements for a memorial plaque. He stated the Muran family felt there should be some specific safeguards in the general law. Mr. Wooster said it was not appropriate to put things like that in the general law, but that it is appropriate for a city ordinance. Senator Young also stated he did not feel it was appropriate to put all that into the bill. He stated the Muran family should be protected if the University Board of Regents would give them a letter of intent or agreement that they will live up to certain provisions, such as perpetual care.

Fiscal note on S.B. 470 for development of regulations, security package, grant application, etc., relating to a program to research theraputic affects marijuana.

CAT

01	1.0 Technical Writer, grade 32.1 plus 8%, plus 16% fringe	- - - - -	\$16,714.73
02	Out of State Travel 1 east coast 3 days 3 San Francisco or Los Angeles or New Mexico (1.5 days each)	\$ 650.00 <u>450.00</u>	
	TOTAL	- - - - -	\$ 1,100.00
03	In State Travel For Tech. Writer Boards - 3 member 6 meetings peridium fees travel	\$ 2,100.00 540.00 720.00 <u>1,000.00</u>	
		\$ 2,260.00	
	* State Board of Health and State Baord of Pharmacy and Others (Dr. Carr, Al Edmundson)	\$ <u>1,600.00</u>	
	TOTAL	- - - - -	\$ 5,960.00
04	Office Supplies Communications - telephone post * Printing Contract: Steno Legal. Technical supplies Advertising and PR	\$ 600.00 1,000.00 500.00 1,000.00 1,000.00 1,500.00 200.00 <u>400.00</u>	
	TOTAL	- - - - -	\$ 6,200.00
05	Office Equipment Desk, chair, typewriter		\$ <u>1,650.00</u>
	TOTAL BUDGET		\$31,624.73

* Might vary higher.

Above budget does not include someone to take notes (tape record and retype) minutes of the Board Meetings.

Committee in Session at 10:06 am on Monday, May 4, 1979.

Senator Keith Ashworth in the Chair.

PRESENT: Chairman Keith Ashworth
Vice-Chairman Joe Neal
Senator Clifton Young
Senator Wilbur Faiss
Senator Jim Kosinski

ABSENT: Senator Rick Blakemore

GUESTS: Mr. Paul Cohen, Administrative Assistant, State
Health Division
Mr. Dave Halston, Clark County
Mr. Charles Zobell, City of Las Vegas
Mr. Robert Warren, Executive Secretary, Nevada Mining
Association
Mr. Russell McDonald, Nevada Association of County
Commissioners
Mr. Ernest Gregory, Administrator, Division of
Environmental Protection
Ms. Jean Stoess, Vice Chairman, Washoe County Board
of Commissioners
Ms. Debbie Shelter, Washoe County Property Owners
Groups

5-1

Chairman Ashworth opened the hearing on S.B. 470.

Chairman Ashworth stated Mr. Paul Cohen had submitted amendments to S.B. 470 (Exhibit "A"). He noted that there is also a Fiscal Note.

Mr. Paul Cohen, Administrative Assistant, State Health Division, presented the amendments to S.B. 470. He stated he spoke with Mr. Vern Calhoun, Administrator for the Agency on Narcotics Investigation, regarding Section 10 of Page 3 as to controlled substances; Mr. Calhoun and his staff felt there were no problems with the way the bill is written which was one of Mr. Cohen's concerns. He stated, regarding the Fiscal Note, that he had contacted Mr. Besterman, Deputy Director with the National Institute of Drug Abuse; regardless of what the State Board of Health does, before any controlled substance for research on therapeutic effect of Tetrahydrocannabinol will be allowed to enter this state by the Institute of Drug Abuse, Nevada has to have an approved protocol. He stated that protocol is basically what the State Board of Health would adopt in their rules and regulations. He said an agency, such as the State Board of Health, would have to receive an identification number from the Food and Drug Administration before they are allowed to release the controlled substance. He said the drug enforcement administration that will be coming to Nevada will now allow the chemical to be released or dispensed (continued on Page 2)

without a security clearance. He stated this was the method utilized when his agency went into the Methadone program in Las Vegas where they now have five programs.

Senator Young questioned the word "protocol." Mr. Cohen stated that it is a federal word; protocol is synonymous with anything that relates to research at the federal level. Senator Faiss questioned how the Methadone controls are working; if there are any problems now. Mr. Cohen stated that they have no problems now, but when they started out there were problems at that time. He said that every Methadone client has an Identification Card similar to those of the lobbyists. He stated their budget is based upon the fact that they do not have the staff to do the basic legwork. Senator Kosinski asked if this were the only budget they would need in the first biennium, to which Mr. Cohen stated that it was. He further stated that the Methadone programs in Las Vegas are self-supporting, paid for by the clients. It was his recommendation that the program proposed in S.B. 470 become self-supporting after two years. Senator Kosinski asked if he planned to implement the program in a manner which would enable it to become self-sufficient. Mr. Cohen stated they would in a similar fashion as the drug abuse; part of the protocol is that a controlled substance program be monitored no less than four times a year and that it is audited twice a year. He stated the existing staff of the Consumer Health Protection Services would be able to take on the responsibility of monitoring the program. He said this would not be an added burden because it would be under controlled substances; it would be through their normal operations.

S.B. 470 (Exhibit "B")

Senator Young made the motion to Amend and Do Pass and Rerefer to Finance.

Seconded by Senator Faiss.

Motion carried.

Yeas -- 5

Nays -- 0

There being no further testimony on S.B. 470, Chairman Ashworth closed the hearing.

Chairman Ashworth opened the hearing on A.B. 572, stating that there had been testimony from the Nevada Farm Bureau and they were not very amenable to this bill.

Mr. Dave Halston, Clark County, stated the amendments may not be as substantive as they appear, they generally do support the legislation from all point sources; they have already prepared a program, along with their water quality planning in Clark County, for implementation of non-point source controls. The changes they would like to see put into the bill are more definitional to get a clear understanding of what the legislation refers to. He stated that on Page 2, Line 2, "pollution control for all significant sources

JOHN H. CARR, M.D., M.P.H., F.A.A.P.
STATE HEALTH OFFICER
PHONE (702) 885-4740



EXHIBIT "A"

32

STATE OF NEVADA
DEPARTMENT OF HUMAN RESOURCES
DIVISION OF HEALTH
CAPITOL COMPLEX
CARSON CITY, NEVADA 89710

May 3, 1979

MEMORANDUM

TO: Senator Keith Ashworth, Chairman
Committee on Human Resources & Facilities

FROM: John H. Carr, M.D.
State Health Officer

SUBJECT: S.B. 470 Amendments

As discussed earlier, the Health Division's suggestions for amendments to this bill are:

Page 1, Line 15

Change "State Board of Pharmacy" to "State Board of Health."
This line would then read:

"2. The State Board of (Pharmacy) Health shall
appoint..."

Page 2, Lines 3 & 4

Delete both lines:

("One of the members must be engaged in practice in Clark County
and one in Washoe County.")

JHC/bws

cc: Ralph DiSibio, Ed.D.

1111

Committee on the Nevada State Constitution
 Senate Subcommittee on the State Constitution
 Date May 11, 1979.
 Page 1

Committee in session at 7:35 a.m. Senator Floyd R. Lamb was in the Chair.

PRESENT: Senator Floyd R. Lamb, Chairman
 Senator James I. Gibson, Vice Chairman (absent during part of)
 Senator Eugene V. Echols
 Senator Norman D. Glaser (absent during part of voting)
 Senator Thomas R.C. Wilson (absent during part of voting)
 Senator Lawrence E. Jacobsen
 Senator Clifford E. McCorkle

ABSENT: None

OTHERS: Ronald W. Sparks, Chief Fiscal Analyst
 Eugene Pieretti, Deputy Fiscal Analyst
 Howard Barrett, Budget Director
 Sam Mamet, lobbyist, Clark County Commissioners
 Russ McDonald, lobbyist-at-large
 John H. Carr, M.D., State Health Officer
 Paul Cohen, Administrative Health Services Officer
 Tom Danzinger, Nursing Student, UNR
 John Crossley, Legislative Auditor
 Jim Wittenberg, Chief, Personnel Division
 Donald Bailey, State Printer
 Ernest Gregory, Administrator, Environmental Protection
 Galen Flinn, Environmental Protection Division
 Bing Oberle, Ph.D., Assistant Administrator, Division
 of Mental Health and Mental Retardation
 Ted Reynolds, Business Manager, MH & MR
 Charles Wolff, Jr., Warden, Director, Dept. of Prisons
 Mike Medema, Chief Administrative Officer, Dept. of Prisons
 Leonard Winkelman, Chief, Administrative Services, DMV
 Cy Ryan, United Press
 John Rice Associated Press

SB 164 Provides state reimbursement of costs of hospital care for certain indigents injured in motor vehicle accidents. (Attachment A)

Russ McDonald introduced this bill, describing the impact on counties from medical expenses caused by accidents happening, largely, on Interstate 80.

Senator Lamb remarked that if this bill is passed, the hospitals will not even try to collect the money.

SB 470 Establishes program to research therapeutic effects of marijuana on certain cancer and glaucoma patients. (Attachment B)

Dr. John Carr, State Health Officer, and Paul Cohen, Administrative Health Services Officer testified in favor of SB 470.

Mr. Cohen stated that Nevada does not have to pass legislation for the State Board of Health to submit a protocol package for the research of therapeutic effects of marijuana on cancer and glaucoma patients. He said there are 35 states presently involved in legislative activities and/or activities towards this. He said the model for SB 470 came from New Mexico. Mr. Cohen also described a fiscal note he had prepared. (Attachment C)

Senator McCorkle asked if the purpose of this program is to treat glaucoma; or to do research, along with 35 other states. Mr. Cohen replied that, specifically, the intent of the bill is to do research on cancer and glaucoma patients.

Senator McCorkle questioned whether Nevada should duplicate the efforts of 35 other states. Mr. Cohen stated there are 8 states doing research now, and 35 looking at doing additional research. He said Nevadans cannot go out of state for research purposes. Mr. Cohen thinks that is the reason for the bill in the first place; to try to get the research in-state for Nevadans to use.

of the Nevada State Legislature

Senate Committee on Finance

Date May 11, 1979

Page 2

(SB 470 - continued)

Senator Echols asked if marijuana has been used successfully as a medicine. Dr. Carr said it has provided help to people with terminal cancer in helping to control pain and undesirable symptoms associated with chemotherapy. It is also successful in the treatment of glaucoma patients. Dr. Carr said marijuana definitely benefits some patients.

Senator Echols and Mr. Cohen discussed the moral issue of using marijuana as a medicine, when it is legally banned to the public.

Senator Gibson asked the program will be carried out; will it be free to participants? Mr. Cohen answered yes, the federal government, by law, cannot charge for the chemical compound during the research. Mr. Bennett from the State Board of Pharmacy said they have no problem with additional staff requirements in terms of controlling the distribution of it. Mr. Cohen quoted Mr. Bennett further in that his office has no problem with the amount of time involved in insuring that regulations are being followed. Later on the program will have to be self-supporting. The request is for start-up costs to get the program going.

Senator McCorkle said on page 2, lines 20 through 25, of the bill, the language is loose. Mr. Cohen replied that because they would be working with a controlled substance, they are quite restricted. He said each person in the program must satisfy federal requirements.

Senator Jacobsen asked if it is necessary to have another separate board. Mr. Cohen said it is not a separate board.

Tom Danzinger, Nursing Student, UNR, testified in favor of SB 470. He said he has been personally associated with patients who have benefited from marijuana. In answer to Senator Jacobsen's question, Mr. Danzinger replied that marijuana is not addictive.

SB 569 Requires that fees collected for issuance of drivers' licenses be deposited in state general fund.
(Attachment D)

John Crossley, Legislative Auditor and Leonard Winkelman, Chief, Administrative Services, DMV, described the proposed amendments to SB 569. (Attachment E) Mr. Crossley stated that, with the passage of this bill, the accounting would be "cleaner".

SB 573 Allows travel and moving expenses to certain state employees recruited from outside the state.
(Attachment F)

Jim Wittenberg, Chief, Personnel Division, testified for SB 573. He said they found in some cases that for some positions, for example a chief engineer, moving expenses were a critical issue. He proposed that moving expenses be limited to difficult-to-recruit positions such as public service commission auditor. Mr. Wittenberg said there is no fiscal note because there will be a vacancy while they are recruiting, which will pay for expenses.

Senator Lamb added that providing these expenses is not unusual in the private sector.

Senator McCorkle asked if a regulation would be put in the bill that, if an employee quits in a certain length time, all or part of the moving expenses will be reimbursed. Mr. Wittenberg said he felt certain that this will be done.

AB 6 Requires repayment of costs of modernizing state printing plant, makes appropriation and extends time of reversion of previous appropriation. (Attachment G)

Donald Bailey, State Printer, State Printing Officer, described and testified for AB 6.

FISCAL NOTE ON SENATE BILL 470

ATTACHMENT C

Fiscal note on S.B. 470 for development of regulations, security package, grant application, etc., relating to a program to research therapeutic affects marijuana.

CAT

01	1.0 Technical Writer, grade 32.1 plus 8%, plus 16% fringe	- - - - -	\$16,714.73
02	Out of State Travel 1 east coast 3 days 3 San Francisco or Los Angeles or New Mexico (1.5 days each)	\$ 650.00 <u>450.00</u>	
	TOTAL	- - - - -	\$ 1,100.00
03	In State Travel For Tech. Writer Boards - 3 member 6 meetings peridium fees travel	\$ 2,100.00 540.00 720.00 <u>1,000.00</u> \$ 2,260.00	
	* State Board of Health and State Board of Pharmacy and Others (Dr. Carr, Al Edmundson)	\$ <u>1,600.00</u>	
	TOTAL	- - - - -	\$ 5,960.00
04	Office Supplies Communications - telephone post * Printing Contract: Steno Legal Technical supplies Advertising and PR	\$ 600.00 1,000.00 500.00 1,000.00 1,000.00 1,500.00 200.00 <u>400.00</u>	
	TOTAL	- - - - -	\$ 6,200.00
05	Office Equipment Desk, chair, typewriter		\$ <u>1,650.00</u>
	TOTAL BUDGET		\$31,624.73

* Might vary higher.

Above budget does not include someone to take notes (tape record and retype) minutes of the Board Meetings.

of the Nevada State Legislature
 Senate Committee on Finance
 Date: May 19, 1979
 Page: 1

SB 243 Adds two judges to second judicial district.
Attachment L)

Senator Glaser suggested adding 1 judge in the north and 1 in the south. Senator McCorkle agreed.

Senator Jacobsen moved to Amend SB 243 by adding one judge to the south.

Senator Lamb said he is opposed to adding a judge to the south.

Senator Jacobsen withdrew his motion.

Senator Gibson moved to keep the bill as it is.

Seconded by Senator Echols.

Motion carried.

Senator Wilson absent.

AB 444 Changing amount of and eligibility to state
employees for sick leave not taken. (Attachment M)

Senator Echols moved "Do Pass" AB 444.

Seconded by Senator Jacobsen.

Senator McCorkle voted no.

Motion carried.

Senator Wilson absent.

SB 470 Establishes program to research therapeutic
effects of marijuana. (Attachment N)

Senator Echols moved to Indefinitely Postpone SB 470.

Senator McCorkle said there are 2 issues involved: 1) moral and 2) duplicating research done in other states. He said, even though the bill is supposed to be for research, the intent of the bill is to treat patients and there is evidence that treatment is effective. Senator McCorkle said on this basis, he supports the bill (but not the research issue). Senator Echols said he would support amending the bill to focus on treatment rather than research.

Senator Lamb read a message from Mr. Cohen, Administrative Health Services Officer, State Health Division, which stated that Nevada does not have to pass legislation to make application to research the therapeutic effects of marijuana.

Senator McCorkle suggested amending the bill and leaving out the appropriation. Senator Lamb said if there is no appropriation the Finance Committee should not act on the bill. He recommended sending the bill to the Senate floor.

Senator Echols moved to send SB 470 to the Senate floor.

Seconded by Senator Jacobsen.

Motion carried.

Senator Wilson absent.

SB 306 Creates department of museums and history and places
Nevada state museum and Nevada historical society
within department. (Attachment F, 3rd reprint)

Senator Lamb read the amendments to the Committee.

Senator Gibson moved to concur with Assembly amendment.

Seconded by Senator Jacobsen.

Motion carried.

Senator Wilson absent.

(REPRINTED WITH ADOPTED AMENDMENTS)

FIRST REPRINT

S. B. 470

SENATE BILL NO. 470—COMMITTEE ON HUMAN
RESOURCES AND FACILITIES

APRIL 16, 1979

Referred to Committee on Human Resources and Facilities

SUMMARY—Establishes program to research therapeutic effects of marihuana on certain cancer and glaucoma patients. (BDR 40-977)

FISCAL NOTE: Effect on Local Government: No.
Effect on the State or on Industrial Insurance: No.



EXPLANATION—Matter in *italics* is new; matter in brackets [] is material to be omitted.

AN ACT relating to controlled substances; establishing a program to research the therapeutic effects of marihuana on certain patients; establishing a board of review for the program; requiring the state board of health to adopt regulations for the program; establishing requirements for admission into the program; authorizing the health division to contract to receive marihuana; and providing other matters properly relating thereto.

*The People of the State of Nevada, represented in Senate and Assembly,
do enact as follows:*

- 1 SECTION 1. Chapter 453 of NRS is hereby amended by adding
2 thereto the provisions set forth as sections 2 to 9, inclusive, of this act.
3 SEC. 2. *As used in sections 3 to 9, inclusive, of this act, unless the*
4 *context requires otherwise:*
5 1. *"Board" means the board of review for patients.*
6 2. *"Marihuana" means:*
7 *(a) The plant of the genus Cannabis;*
8 *(b) Tetrahydrocannabinols,*
9 *and any of their derivatives.*
10 3. *"Program" means the program to research the therapeutic effects*
11 *of marihuana.*
12 SEC. 3. 1. *The board of review for patients, consisting of three mem-*
13 *bers who are physicians licensed to practice in this state, is hereby cre-*
14 *ated.*
15 2. *The state board of health shall appoint:*
16 *(a) One member who has been certified by the American Board of*
17 *Ophthalmology.*
18 *(b) One member who has been certified by the American Board of*
19 *Internal Medicine both regularly and in the subspecialty of medical*
20 *oncology.*

1 (c) One member who has been certified by the American Board of
2 Psychiatry and Neurology.

3 3. Each member of the board is entitled to receive \$40 for each day's
4 attendance at a meeting of the board and the per diem allowances and
5 travel expenses provided by law.

6 SEC. 4. 1. There is hereby created a program to research the thera-
7 peutic effects of marihuana to be administered by the health division of
8 the department of human resources. The program must be designed pur-
9 suant to regulations adopted by the state board of health to study the
10 therapeutic effects of marihuana when administered to persons suffering
11 from cancer and undergoing chemotherapy, to persons suffering from
12 glaucoma, and to any class of persons included in the program under
13 subsection 3. The program must be conducted according to a strict
14 research format designated by the state board of health. The program
15 must be financed by direct legislative appropriation from the state general
16 fund. Money for the program may be expended only for the purposes of
17 sections 2 to 9, inclusive, of this act, on claims approved by the health
18 division and paid as other claims against the state are paid.

19 2. The state board of health shall adopt regulations necessary to carry
20 out the provisions of sections 2 to 9, inclusive, of this act.

21 3. The state board of health may by regulation include in the pro-
22 gram a class of persons who are not suffering from cancer or glaucoma if,
23 after the presentation of medical information to the state board of health
24 by a physician, it determines that such a class of persons would benefit
25 from participation in the program.

26 SEC. 5. 1. Any person who is suffering from cancer or glaucoma, or
27 is in the class of persons included in the program under regulations of
28 the state board of health, may apply to the board for admittance into the
29 program.

30 2. Application must be made on forms prescribed by the state board
31 of health. A statement from the person's physician certifying the person
32 is suffering from cancer or glaucoma, or some other affliction specified by
33 regulation of the state board of health, and is not responding to conven-
34 tional medications or is experiencing severe side effects from conventional
35 medication, must accompany the application.

36 SEC. 6. The board shall:

37 1. Review applications for admittance to the program to determine
38 who will be admitted.

39 2. Establish a list of physicians and pharmacists it has certified to
40 prescribe and fill prescriptions, respectively, for marihuana under the pro-
41 gram.

42 SEC. 7. 1. The health division shall submit an application to the
43 National Institute on Drug Abuse to contract to receive marihuana pur-
44 suant to regulations of the National Institute on Drug Abuse, the Food
45 and Drug Administration and the Drug Enforcement Administration.

46 2. The health division shall transfer to pharmacies certified pursuant
47 to section 6 of this act all marihuana received pursuant to any contract
48 entered into under subsection 1.

1 SEC. 8. *A pharmacy may fill a prescription for marihuana only pur-*
2 *suant to a written prescription by a physician certified pursuant to section*
3 *6 of this act.*

4 SEC. 9. *A physician certified pursuant to section 6 of this act is*
5 *entitled to prescribe marihuana only for persons admitted to the program.*

6 SEC. 10. NRS 453.251 is hereby amended to read as follows:
7 453.251 **【Controlled】** *Except as provided in sections 2 to 9, inclu-*
8 *sive, of this act, controlled substances listed in schedules I and II 【shall】*
9 *may be distributed by a registrant to another registrant only pursuant to*
10 *an order form and may be received by a registrant only pursuant to an*
11 *order form. Compliance with the provisions of federal law respecting*
12 *order forms shall be deemed compliance with this section.*

13 SEC. 11. NRS 453.331 is hereby amended to read as follows:

14 453.331 1. It is unlawful for any person knowingly or intentionally
15 to:

16 (a) Distribute as a registrant a controlled substance classified in
17 schedule I or II, except pursuant to an order form as required by NRS
18 453.251 **【;】** *or pursuant to the provisions of sections 2 to 9, inclusive, of*
19 *this act;*

20 (b) Use in the course of the manufacture or distribution of a controlled
21 substance a registration number which is fictitious, revoked, suspended or
22 issued to another person;

23 (c) Falsely assume the title of or represent himself as a registrant or
24 other person authorized to possess controlled substances;

25 (d) Acquire or obtain or attempt to acquire or obtain possession of a
26 controlled substance by misrepresentation, fraud, forgery, deception, sub-
27 terfuge, or alteration;

28 (e) Furnish false or fraudulent material information in, or omit any
29 material information from, any application, report or other document
30 required to be kept or filed under the provisions of NRS 453.011 to 453.-
31 551, inclusive, or any record required to be kept by **【such】** *those sec-*
32 *tions;*

33 (f) Sign the name of a fictitious person or of another person on any
34 prescription for a controlled substance or falsely make, alter, forge, utter,
35 publish or pass, as genuine, any prescription for a controlled substance; or

36 (g) Make, distribute or possess any punch, die, plate, stone or other
37 thing designed to print, imprint or reproduce the trade-mark, trade name
38 or other identifying mark, imprint or device of another or any likeness of
39 any of the foregoing upon any drug or container or labeling thereof so as
40 to render the drug a counterfeit substance.

41 2. Any person who violates this section shall be punished by
42 imprisonment in the state prison for not less than 1 year nor more than 6
43 years, and may be further punished by a fine of not more than \$2,000.

44 SEC. 12. This act shall become effective upon passage and approval.

Senate Daily Journal - May 22, 1979
S-1210

Sec. 5. Section 4 of this act shall become effective at 12:01 a.m. on July 1, 1979."

Amend the title of the bill on the second line by inserting after "recover" the word "certain".

Senator Gibson moved the adoption of the amendment.

Amendment adopted.

Bill ordered reprinted, re-engrossed and to third reading.

Senate Bill No. 470.

Bill read third time.

Roll call on Senate Bill No. 470:

YEAS—19.

NAYS—None.

Absent—Glaser.

Senate Bill No. 470 having received a constitutional majority, Mr. President declared it passed, as amended.

Bill ordered transmitted to the Assembly.

Senate Bill No. 576.

Bill read third time.

Roll call on Senate Bill No. 576:

YEAS—18.

NAYS—None.

Absent—Glaser.

Not voting—Sloan.

Senate Bill No. 576 having received a constitutional majority, Mr. President declared it passed, as amended.

Bill ordered transmitted to the Assembly.

Assembly Bill No. 16.

Bill read third time.

Roll call on Assembly Bill No. 16:

YEAS—19.

NAYS—None.

Absent—Glaser.

Assembly Bill No. 16 having received a constitutional majority, Mr. President declared it passed.

Bill ordered transmitted to the Assembly.

Assembly Bill No. 75.

Bill read third time.

Roll call on Assembly Bill No. 75:

YEAS—19.

NAYS—None.

Absent—Glaser.

Assembly Bill No. 75 having received a constitutional majority, Mr. President declared it passed, as amended.

Bill ordered transmitted to the Assembly.

MOTIONS, RESOLUTIONS AND NOTICES

Senator Blakemore moved that Assembly Bill No. 108 be taken from the General File and be placed on the Secretary's desk.

38

Remarks by Sen
Motion carried.

G

Assembly Bill N

Bill read third t

Roll call on Ass

YEAS—19.

NAYS—None.

Absent—Glaser.

Assembly Bill N

President

Bill ord

Assem

Bill read third

Remarks by Sen

Roll call on Ass

YEAS—9

NAYS—Don Ashw

Sloan, Wilson—10.

Absent—Glaser.

Assembly Bill
majority, Mr. Pre

Mr

Senator Hernst
would move to re
this day refused p

G

Assembly Bill N

Bill read third t

Remarks by Sen

Roll call on Ass

YEAS—20.

NAYS—None.

Assembly Bill N

President declared

Bill ordered tra

Assembly Bill N

Bill read third t

The following a

merce and Labor:

Amendment No

Amend section

ing:

"612.385 [An
week in which h
charged by his m

MEMBERS PRESENT: Chairman Bennett Mr. Brady
 Mr. Chaney Mr. Getto
 Mr. Craddock

MEMBERS ABSENT: Mr. Glover Mrs. Cavnar

GUESTS: Dr. John Carr, Health Division.

Chairman Bennett convened the meeting at 2:57 p.m.

SB 470

Dr. John Carr, Health Division, said the intent was to have the board of Health and the Health Division administer SB 470. The total fiscal impact for the biennium is \$31,624.73. (EXHIBIT # 1).

The proposed bill has been amended to change the Board of Pharmacy, page 1, line 15, to Board of Health; and to delete requirement that one of the physicians be from Clark County and one from Washoe County, lines 3 and 4, page 2. Dr. Carr continued there were a sizable number of cancer and glaucoma patients for which conventional treatment has proven relatively ineffective for the relief of pain. There has been considerable support for this measure from these patients.

If a person that has terminal cancer has trouble controlling pain, after making application and being reviewed by the Board, is determined to be a suitable candidate for the proposed program they would be enrolled. There were about 1070 deaths from cancer in Nevada in 1978. The discomforts that accompany terminal cancer and glaucoma are extreme. Persons who have used marihuana testify its use relieves pain. When medical treatment fails use of this drug could be an alternative. The program would develop statistics and guidelines; may determine who can and who cannot effectively use marihuana; and develop general medical and scientific data.

Mr. Brady asked if marihuana would be taken in capsule form and was informed that it would be. He was also informed that dispensation of the drug would be controlled; a doctor licensed to prescribe other narcotic type drugs could not prescribe at his own discretion for this program. The program, if instituted would have to comply to federal standards. The source of the drugs are a government licensed or government controlled manufacturing plant. Dr. Carr foresaw no illegal abuse of the program. There are about 12 on-going programs of this type in various states and they must all conform to federal guidelines as to packaging, security, etc.

The candidates would have to be approved by the Board established for implementation of this proposed program. Many of the persons receiving treatment would be in long-term care facilities or hospitals. Dr. Carr anticipated it would require about a year to implement the program.

Mr. Brady moved to Do Pass SB 470; Mr. Craddock seconded the motion. Motion carried unanimously.

Respectfully submitted:

M Robertson

MARJORIE D. ROBERTSON, Secretary (Committee Minutes)

Fiscal note on S.B. 470 for development of regulations, security package, grant application, etc., relating to a program to research therapeutic affects marijuana.

CAT

01	1.0 Technical Writer, grade 32.1 plus 8%, plus 16% fringe	- - - - -	\$16,714.73
02	Out of State Travel		
	1 east coast 3 days	\$ 650.00	
	3 San Francisco or Los Angeles or New Mexico (1.5 days each)	<u>450.00</u>	
	TOTAL	- - - - -	\$ 1,100.00
03	In State Travel		
	For Tech. Writer	\$ 2,100.00	
	Boards - 3 member		
	6 meetings peridium	540.00	
	fees	720.00	
	travel	<u>1,000.00</u>	
		\$ 2,260.00	
	* State Board of Health and State Baord of Pharmacy and Others (Dr. Carr, Al Edmundson)	\$ <u>1,600.00</u>	
	TOTAL	- - - - -	\$ 5,960.00
04	Office Supplies	\$ 600.00	
	Communications - telephone	1,000.00	
	post	500.00	
	* Printing	1,000.00	
	Contract: Steno	1,000.00	
	Legal	1,500.00	
	Technical supplies	200.00	
	Advertising and PR	<u>400.00</u>	
	TOTAL	- - - - -	\$ 6,200.00
05	Office Equipment		
	Desk, chair, typewriter		\$ <u>1,650.00</u>
	TOTAL BUDGET		\$31,624.73

* Might vary higher.

Above budget does not include someone to take notes (tape record and retype) minutes of the Board Meetings.

EXHIBIT # 1

Assembly Daily Journal - May 26, 1979

A-1547

Senate Bill No. 470:

Bill read third time.

Remarks by Assemblymen Getto, Craddock, Weise and Hayes.

Roll call on Senate Bill No. 470:

YEAS—38.

NAYS—None.

Absent—Bennett, Robinson—2.

Senate Bill No. 470 having received a constitutional majority, Mr. Speaker pro Tempore declared it passed.

Bill ordered transmitted to the Senate.

Assembly Bill No. 365.

Bill read third time.

Remarks by Assemblyman Coulter.

Roll call on Assembly Bill No. 365:

YEAS—36.

NAYS—Horn, Webb—2.

Absent—Bennett, Robinson—2.

Assembly Bill No. 365 having received a constitutional majority, Mr. Speaker pro Tempore declared it passed, as amended.

Bill ordered transmitted to the Senate.

MOTIONS, RESOLUTIONS AND NOTICES

Assemblyman Weise moved that Senate Bill No. 545 be taken from the Chief Clerk's desk and placed at the top of the General File.

Remarks by Assemblyman Weise.

Motion carried.

Assemblyman Price moved that Assembly Bill No. 268 be returned from enrollment.

Remarks by Assemblyman Price.

Motion carried.

Assemblyman Price moved that the vote whereby Assembly Bill No. 268 was passed be rescinded.

Motion carried.

Assemblyman Price moved that Assembly Bill No. 268 be taken from the General File and placed on the Chief Clerk's desk.

Remarks by Assemblyman Price.

Motion carried.

GENERAL FILE AND THIRD READING

Senate Bill No. 545.

Bill read third time.

The following amendment was proposed by Assemblyman Prengaman:

Amendment No. 1389.

Amend section 7, page 4, line 45, by deleting the period and inserting "[.] for any of the purposes listed in subsections 2 and 3."

Assemblyman Prengaman moved the adoption of the amendment.

Senate Bill No. 458—Committee on Commerce and Labor

CHAPTER 609

AN ACT relating to energy; authorizing the director of the department of energy to adopt regulations which prohibit the sale of appliances with standing pilot lights; exempting appliances contained in recreational vehicles; and providing other matters properly relating thereto.

[Approved June 2, 1979]

The People of the State of Nevada, represented in Senate and Assembly, do enact as follows:

SECTION 1. Chapter 523 of NRS is hereby amended by adding thereto a new section which shall read as follows:

The director may adopt regulations which prohibit the sale of new appliances which have standing pilot lights. The regulations must:

- 1. Clearly set forth the appliances which may not be sold with standing pilot lights; and*
- 2. Specify a period, which must be 6 months or more after the date on which the regulations are effective, during which new appliances which are subject to the regulations and which a retail dealer has in his inventory may be sold.*
- 3. The provisions of subsection 1 do not apply to appliances contained in any recreational vehicle.*

Senate Bill No. 470—Committee on Human Resources and Facilities

CHAPTER 610

AN ACT relating to controlled substances; establishing a program to research the therapeutic effects of marihuana on certain patients; establishing a board of review for the program; requiring the state board of health to adopt regulations for the program; establishing requirements for admission into the program; authorizing the health division to contract to receive marihuana; and providing other matters properly relating thereto.

[Approved June 2, 1979]

The People of the State of Nevada, represented in Senate and Assembly, do enact as follows:

SECTION 1. Chapter 453 of NRS is hereby amended by adding thereto the provisions set forth as sections 2 to 9, inclusive, of this act.

SEC. 2. *As used in sections 3 to 9, inclusive, of this act, unless the context requires otherwise:*

- 1. "Board" means the board of review for patients.*
- 2. "Marihuana" means:*
 - (a) The plant of the genus Cannabis;*
 - (b) Tetrahydrocannabinols,**and any of their derivatives.*
- 3. "Program" means the program to research the therapeutic effects of marihuana.*

SEC. 3. 1. The board of review for patients, consisting of three members who are physicians licensed to practice in this state, is hereby created.

2. The state board of health shall appoint:

(a) One member who has been certified by the American Board of Ophthalmology.

(b) One member who has been certified by the American Board of Internal Medicine both regularly and in the subspecialty of medical oncology.

(c) One member who has been certified by the American Board of Psychiatry and Neurology.

3. Each member of the board is entitled to receive \$40 for each day's attendance at a meeting of the board and the per diem allowances and travel expenses provided by law.

SEC. 4. 1. There is hereby created a program to research the therapeutic effects of marihuana to be administered by the health division of the department of human resources. The program must be designed pursuant to regulations adopted by the state board of health to study the therapeutic effects of marihuana when administered to persons suffering from cancer and undergoing chemotherapy, to persons suffering from glaucoma, and to any class of persons included in the program under subsection 3. The program must be conducted according to a strict research format designated by the state board of health. The program must be financed by direct legislative appropriation from the state general fund. Money for the program may be expended only for the purposes of sections 2 to 9, inclusive, of this act, on claims approved by the health division and paid as other claims against the state are paid.

2. The state board of health shall adopt regulations necessary to carry out the provisions of sections 2 to 9, inclusive, of this act.

3. The state board of health may by regulation include in the program a class of persons who are not suffering from cancer or glaucoma if, after the presentation of medical information to the state board of health by a physician, it determines that such a class of persons would benefit from participation in the program.

SEC. 5. 1. Any person who is suffering from cancer or glaucoma, or is in the class of persons included in the program under regulations of the state board of health, may apply to the board for admittance into the program.

2. Application must be made on forms prescribed by the state board of health. A statement from the person's physician certifying the person is suffering from cancer or glaucoma, or some other affliction specified by regulation of the state board of health, and is not responding to conventional medications or is experiencing severe side effects from conventional medication, must accompany the application.

SEC. 6. The board shall:

1. Review applications for admittance to the program to determine who will be admitted.

2. Establish a list of physicians and pharmacists it has certified to prescribe and fill prescriptions, respectively, for marihuana under the program.

SEC. 7. 1. The health division shall submit an application to the

National Institute on Drug Abuse to contract to receive marihuana pursuant to regulations of the National Institute on Drug Abuse, the Food and Drug Administration and the Drug Enforcement Administration.

2. *The health division shall transfer to pharmacies certified pursuant to section 6 of this act all marihuana received pursuant to any contract entered into under subsection 1.*

SEC. 8. *A pharmacy may fill a prescription for marihuana only pursuant to a written prescription by a physician certified pursuant to section 6 of this act.*

SEC. 9. *A physician certified pursuant to section 6 of this act is entitled to prescribe marihuana only for persons admitted to the program.*

SEC. 10. NRS 453.251 is hereby amended to read as follows:

453.251 **[Controlled]** *Except as provided in sections 2 to 9, inclusive, of this act, controlled substances listed in schedules I and II [shall] may be distributed by a registrant to another registrant only pursuant to an order form and may be received by a registrant only pursuant to an order form. Compliance with the provisions of federal law respecting order forms shall be deemed compliance with this section.*

SEC. 11. NRS 453.331 is hereby amended to read as follows:

453.331 1. It is unlawful for any person knowingly or intentionally to:

(a) Distribute as a registrant a controlled substance classified in schedule I or II, except pursuant to an order form as required by NRS 453.251 **[;]** *or pursuant to the provisions of sections 2 to 9, inclusive, of this act;*

(b) Use in the course of the manufacture or distribution of a controlled substance a registration number which is fictitious, revoked, suspended or issued to another person;

(c) Falsely assume the title of or represent himself as a registrant or other person authorized to possess controlled substances;

(d) Acquire or obtain or attempt to acquire or obtain possession of a controlled substance by misrepresentation, fraud, forgery, deception, subterfuge, or alteration;

(e) Furnish false or fraudulent material information in, or omit any material information from, any application, report or other document required to be kept or filed under the provisions of NRS 453.011 to 453.551, inclusive, or any record required to be kept by **[such]** *those sections;*

(f) Sign the name of a fictitious person or of another person on any prescription for a controlled substance or falsely make, alter, forge, utter, publish or pass, as genuine, any prescription for a controlled substance; or

(g) Make, distribute or possess any punch, die, plate, stone or other thing designed to print, imprint or reproduce the trade-mark, trade name or other identifying mark, imprint or device of another or any likeness of any of the foregoing upon any drug or container or labeling thereof so as to render the drug a counterfeit substance.

2. Any person who violates this section shall be punished by imprisonment in the state prison for not less than 1 year nor more than 6 years, and may be further punished by a fine of not more than \$2,000.

SEC. 12. This act shall become effective upon passage and approval.
