Mémoire, Maladie d'Alzheimer, acupuncture & MTC

bibliographie

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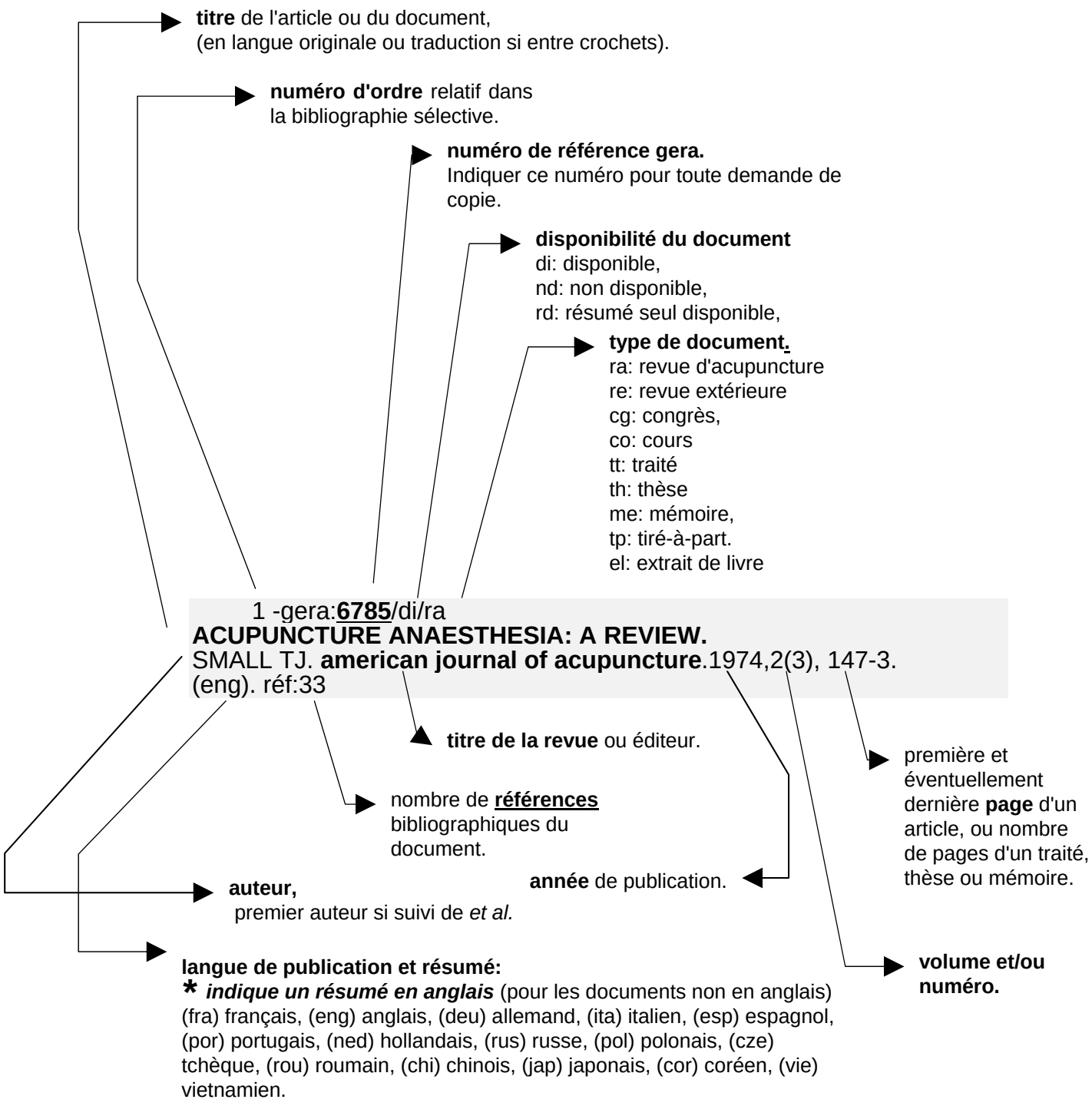

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3- gera: 12895/di/ra
[LA MALADIE D'ALZHEIMER (DEMENCE DEGENERATIVE)]. KHOE WH. **khoe newsletter.** 1983;3(12): (eng).

4- gera: 17138/co/ra
INFLUENCE OF MUSIC ON MEMORY AND EDUCATION, AND THE APPLICATION OF ITS UNDERLYING PRINCIPLES TO ACUPUNCTURE. SEKI H. **acupuncture and electrotherapeutics research.** 1983;1:1-16 (eng).

5- gera: 4516/di/ra
[RECHERCHE CLINIQUE SUR L'ACTION ANTI-SENILITE DES SAPONINES DE PANAX GINSENG DANS 327 CAS]. HUO YUSHU. **chinese journal of integrated traditional and western medicine.** 1984;4(10):593 (chi*).
Amélioration clinique de divers paramètres (mémoire, temps de reaction, glycémie, testostérone et oestradiol).

6- gera: 14752/di/ra
[EFFETS DE L'ACUPUNCTURE SUR L'AMNESIE POST-ANESTHESIQUE]. RUCCI FS ET AL. **agopunctura e tecniche di terapia antalgica.** 1984;2(1):21-32 (ita*).
Etude sur 45 patients soumis à une chirurgie gynécologique mineure. L'action de l'acupuncture sur l'amnesie antérograde induite par l'anesthésie aux barbituriques apparait inconstante.

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LA MALADIE D'ALZHEIMER : PROFIL DE LA MALADIE SELON LA MTC. LEVESQUE J. **mtc et acupuncture.** 1985;8(1):15-8 (fra).

8- gera: 20511/di/ra
EFFECTS OF STANDARDIZED GINSENG EXTRACT ON LEARNING, MEMORY AND PHYSICAL CAPABILITIES. PETKOV VD. **american journal of chinese medicine.** 1987;15(1-2):19-30 (eng).

9- gera: 20634/di/ra
[MEMORY FACILITATION INDUCED BY PANAX GINSENG AND PSEUDOGINSENG IN MICE]. ZHANG LEI ET AL. **chinese journal of integrated traditional and western medecine.** 1987;7(10):610 (chi*).

10- gera: 24760/di/el
INSOMNIA (APPENDIX : POOR MEMORY). CHENG XINNONG. **in chinese acupuncture and moxibustion, foreign languages press, *.** 1987;:416 (eng).

11- gera: 32779/di/ra
[OBSERVATION ON IMPROVING MEMORY WITH "THE CONSERVING-SOUND STYLE OF QI-GONG"]. HUA DING-BO. **breath exercise (an exercise for health and longevity).** 1987;8(2):51 (chi).

12- gera: 32789/di/ra
[PRELIMINARY STUDY ON QI GONG IMPROVING ATTENTION, MEMORY AND COORDINATION]. ZHU PEI-LI ET AL. **breath exercise (an exercise for health and longevity).** 1987;8(3):103 (chi).

13- gera: 41312/di/ra
[FACILITATION OF MEMORY BY RENSHEN AND SANQI IN MICE]. ZHANG LEI ET AL. **chinese journal of integrated traditional and western medicine.** 1987;7(10):610-12 (chi*).

14- gera: 41931/nd/re
[FACILITATION OF LEARNING AND MEMORY IN RATS BY 3 N BUTYLPHTHALIDE]. YU SHU REN ET AL. **acta pharmacologica sinica.** 1988;9(5):385-88 (chi*).

15- gera: 41958/nd/re
[EFFECTS OF HUPERZINES A AND B ON MEMORY IMPAIRMENT IN MICE]. ZHU XIAO DONG ET AL. **acta pharmacologica sinica.** 1988;9(6):492-97 (chi*).

16- gera: 42158/nd/re
[EFFECTS OF SHOUERKANG PREPARATIONS ON LEARNING AND MEMORY OF MICE]. WANG RUI ET AL. **chinese pharmaceutical bulletin.** 1988;23(9):532-35 (chi*).

17- gera: 53483/di/ra
[RESEARCH IN MODIFIED KAIXIN PULVIS STRENGTHENING ONE'S MEMORY BY COMPUTER]. SHAO HONGQI ET AL. **shandong journal of traditional chinese medicine.** 1988;4:14-6 (chi).

18- gera: 34144/nd/re
[IMPROVABLE EFFECT OF CHINESE GINSENG STEM-LEAVES SAPONINS ON THE MEMORY OF MICE TREATED WITH ELECTROSHOCK]. YING-LIN C ET AL. **chinese traditional and herbal drugs.** 1989;20(7):18-20 (chi).

19- gera: 35523/di/ra
[IMPROVING MEMORY BY PRACTICING QIGONG]. SHI WEI-QING. **qi-gong (an exercice for health and longevity).** 1989;10(5):205-228 (chi).

20- gera: 42644/nd/re
[IMPROVEMENT OF ELECTROSHOCK MEMORY DISTURBANCES IN MICE BY GINSENOSIDES FROM GINSENG STEM AND LEAF]. CAO YING LIN ET AL. **chinese traditional and herbal drugs.** 1989;20(7):306-08 (chi*).

21- gera: 60666/di/ra
[PHARMACOLOGICAL EFFECT OF GINSENG ON LEARNING AND MEMORY]. MA TIAN CAI ET AL. **chinese traditional and herbal drugs.** 1990;21(7):38-43 (chi).

22- gera: 60818/di/ra
[SEXUAL ACTIVITY AND STUDYING MEMORY IN MALE MICE WITH CHRONIC STRESS LOAD INFLUENCED BY HENGFA II]. XU SHIKAI ET AL. **acta medica sinica.** 1990;5(3):27-9 (chi).

23- gera: 61055/di/ra
[A SEARCH FOR TCM THERAPEUTIC METHOD OF SENILE AMNESIA]. LIN CHEN. **journal of beijing college of traditional chinese medicine.** 1990;3:30-4 (chi*).

24- gera: 81285/di/ra
THE INVESTIGATION OF ANTIEPILEPTIC ACTION OF QINGYANGSHEN (QYS). INFLUENCES OF QYS ON THE DEVELOPMENT OF RAT BRAIN AND MEMORY BEHAVIOUR. LANG SENYANG ET AL. **journal of tcm.** 1990;10(3):213-18 (eng).
The effects of QYS on the functions of central GABAergic system in mice brain were investigated by determining the release and uptake of label GABA and Glu in the brain slice and extractive synaptic membrane. The dramatic actions of QYS in the oral group were showed by the increasing releases of 3H-GABA and 3H-Glu after high K+ stimulation in the anterior part of hemispheres slices. However, the GAD activity in the hippocampus slice of QYS- treated group was not influenced as the PTZ-treated group. No effect of QYS on the uptake of 3H-GABA and 3H- Glu in the extractive synaptic membrane was found in the intraperitoneal group. These results suggested that QYS does influence the functions of central GABAergic system due to the increasing releases of GABA and Glu in the anterior part of hemispheres, which may play an important role in the anticonvulsant action of QYS.

25- gera: 64156/di/ra
[DEEP MEMORY OF PROFESSOR AI MINKANG. (abstract)]. GUAN XINMING. **acupuncture research.** 1991;16(3-4):289 (chi).

26- gera: 64681/di/ra
[STUDIES ON IMPROVEMENT OF MEMORY IN MICE BY EXTRACTS FROM LEAVES OF GINKGO BILOBA L]. CHEN CHANGXUN ET AL. **china journal of chinese materia medica.** 1991;16(11):681 (chi*).
The study has shown that the extracts from leaves of Ginkgo biloba can significantly improve the NaNO2 and scopolamine induced impaired memory in mice. The potency of the ethanolic extract is greater than that of the aqueous extract. The ethanolic extract acts favorably on the memory function of normal animals. Both extracts help to prolong the survival time of mice receiving 200 mg/kg(ip)NaNO2.

27- gera: 65008/di/ra
[IN MEMORY OF PROF. LI TAO, A FORERUNNER IN THE STUDY AND TEACHING OF HISTORY OF MEDICINE IN CHINA]. MA KAN-WEN. **chinese journal of medical history.** 1991;21(4):199 (chi*).
As a student and later a colleague of the late Professor Li Tao, the author summarizes Professor Li Tao's pioneering work in, and contributions to the field of medical history in China, including research and teaching of the history of medicine, the founding of the China Medical History Society and the Chinese Journal of Medical History. The author also discusses his personal knowledge of Professor Li Tao.

28- gera: 65212/di/ra
[EXPLORATION OF EARLY PREVENTION AND TREATMENT OF ALZHEIMER'S DEMENTIA BASED ON THE THEORY OF MARROW DEFICIENCY AND STASIS]. ZHANG JUEREN. **liaoning journal of traditional chinese medicine.** 1991;18(10):21 (chi).

29- gera: 66370/di/ra
[EFFECT OF QI-BENEFITING AND HEARING AIDING DECOCTION ON ACTIVITY OF MEMORY IN AGED PATIENTS WITH CEREBRAL ARTERIOSCLEROSIS]. ZHANG MING ET AL. **shanghai journal of traditional chinese medicine.** 1991;5:41 (chi).

30- gera: 36003/di/ra
EFFECT OF PUNCTURING BAIHUI ON SHORT-TERM MEMORY OF STUDENTS AND ITS ASSOCIATION WITH SERUM CYCLO-NUCLEOTIDES. KANG HUI ET AL. **international journal of clinical acupuncture.** 1992;3(3):249-54 (eng).
Memory, function of the human brain, is the objective hallmark of intelligence. Research into this function is a very important subject in modern academic circles. The comprehensive multi-disciplinary explorations of memory which have been undertaken include those in physical psychology, neurophysiology, and neuropharmacology. Not much work has been done in clinical research, however, and even less in the effect of acupuncture on memory.

31- gera: 37409/nd/re
[REFLEXOTHERAPY AND CARBON DIOXIDE BATHS IN THE COMPLEX TREATMENT OF PATIENTS WITH CIRCULATORY ENCEPHALOPATHY OF ARTERIOSCLEROTIC ETIOLOGY]. MANUCHARIAN GG ET AL. **zh nevropatol psikhiatr.** 1992;92(1):60-3 (rus*).
Overall 106 patients with atherosclerotic circulatory encephalopathy (DE) were examined for changes in the EEG, REG and in certain psychological parameters (attention, memory, "associative" thinking) before and after acupuncture and carbon dioxide baths. In patients with stage I and stage II DE (in 93 and 80%, respectively), the clinical improvement was accompanied by positive changes such as a rise of alpha-activity, decrease of pathological waves and frequencies on the EEG, decline of the vascular tone and improvement of the blood content on the REG in addition to the shortening of the time required for the search for numbers according to Schulte's tables, a decrease of errors made during calculation, an increase of words and the family of words in the memorization and "associative" thinking tests. The data obtained may attest to the amelioration of cerebral function and hemodynamics because of the rehabilitation treatment.

32- gera: 39152/di/ra
[IN MEMORY OF BEIJING JOURNAL OF TRADITIONAL CHINESE MEDICINE HAVING BEEN FOUNDED FOR TEN YEARS]. SHE JING. **beijing journal of traditional chinese medicine.** 1992;1:3 (chi).

33- gera: 39885/di/ra
[MEMORY OF CHIROPRACTIC SPECIALIST FENG QUANFU]. WU DONG. **beijing journal of traditional chinese medicine.** 1992;2:9 (chi).

34- gera: 39973/di/ra
[EXPERIMENTAL OBSERVATIONS ON THE EFFECT OF "DU SHU" PILLS (THE ANCIENT PRESCRIPTION) ON IMPROVING MEMORY AT LEARNING]. LI YONGJIAN. **jiangsu journal of traditional chinese medicine.** 1992;13(5):42 (chi).

35- gera: 43123/di/ra
[MEMORY OF FAMOUS PEDIATRIST ZHANG SHIJIE]. YUAN CHEN. **beijing journal of traditional chinese medicine.** 1992;3:7 (chi).

36- gera: 43340/di/ra
[MEMORY OF FAMOUS PHYSICIAN SU ZHIXUAN IN BEIJING]. SU ZHAOTIAN ET AL. **beijing journal of traditional chinese medicine.** 1992;4:8 (chi).

37- gera: 43483/di/ra
[STUDY ON ACUPUNCTURE IN THE TREATMENT OF MULTIPLE INFARCTIONAL DEMENTIA (MID)]. HUANG WENCHUAN ET AL. **chinese acupuncture and moxibustion.** 1992;12(3):1 (chi*).
The authors investigated the acupuncture in treating 36 cases of multiple infarctional dementia and observed the relations between acupuncture and the patient's intelligence and memory. The result is that no matter medication alone or the combination of medication and acupuncture can notably heighten the patients' intelligence of which the improved ratio was 83.3 %. Besides, the combination of medicine and acupuncture is much more superior to medication alone in increasing the intelligence (P<0.01). Although there is certain difference between the two in the analysis of the memory, both can increase markedly the patients' association study, MQ, directional memory, and anamnesis of image character. The combination of the two is apparently better than medication alone in association study, free anamnesis of image and MQ (P<0.01).

38- gera: 44044/di/ra
[FACILITATORY EFFECT OF GRASSLEAF SWEETFLAG (ACORUS GRAMINEUS) ON LEARNING AND MEMORY IN MICE]. ZHOU DA-XING ET AL. **chinese traditional and herbal drugs.** 1992;23(8):417 (chi).

39- gera: 44286/di/ra
[EFFECT OF YIZHILING GRANULE ON EXPERIMENTAL PATHOLOGICAL MODEL OF ALZHEIMER'S DISEASE]. WU ZI-MING ET AL. **chinese journal of integrated traditional and western medicine.** 1992;12(10):622 (chi*).
Alzheimer's disease is an important problem of gerontology which manifested as serious loss of memory, especially of recent memory, decrease of brain weight. The pathological model of the disease in mice was made with administration of AICI3, and then Yizhiling Granule was given to treat it. Results : In the experiment of one trial passive avoidance response there were significant difference between the normal group and the model group (P<0.01) and significant difference between the treated group and the model group (P<0.05-0.01) ; as for fresh brain weight, the treated group was significantly different from the normal group (P<0.01) and model group (P<0.05). They indicate that Yizhiling Granule could improve memory and increase brain weight. This research

40- gera: 44509/di/ra
[MEMORY OF FAMOUS PHYSICIAN ZHANG JUREN IN BEIJING]. ZHANG QIGUI. **beijing journal of traditional chinese medicine.** 1992;6:7 (chi).

41- gera: 45898/di/ra
[EFFECT OF YIZHILING GRANULE ON EXPERIMENTAL PATHOLOGICAL MODEL OF ALZHEIMER'S DISEASE]. WI ZM ET AL. **chinese journal of integrated traditional and western medicine.** 1992;12(10):622-3, 5 (chi*).
Alzheimer's disease is an important problem of gerontology which manifested as serious loss of memory, especially of recent memory, decrease of brain weight. The pathological model of the disease in mice was made with administration of AICI3 and then Yizhiling Granule was given to treat it. Results: In the experiment of one trial passive avoidance response there were significant difference between the normal group and the model group (P < 0. 01) and significant difference between the treated group and the model group (P < 0. 05-0. 01); as for fresh brain weight, the treated group was significantly different from the normal group (P < 0. 01) and model group (P < 0. 05). They indicate that Yizhiling Granule could improve memory and increase brain weight. This research seems to provide experimental basis for treatment of the disease.

42- gera: 19748/nd/re
MEMORY EFFECTS OF STANDARDIZED EXTRACTS OF PANAX GINSENG (G115), GINGKO BILBOA (GK501) AND THEIR COMBINATION GINCOSAN (PHL-00701) . PETKOV VD ET AL. **planta med.** 1993;59(2):106-14 (eng).

43- gera: 37929/di/ra
[MEMORY OF MR CHEN XIYUAN]. YUAN LIREN. **beijing journal of traditional chinese medicine.** 1993;2:9 (chi).

44- gera: 38745/di/ra
[DEEPLY CHERISH THE MEMORY OF MAO ZEDONG IN COMMEMORATION OF THE CENTENARY OF HIS BIRTH]. LI JING-WEI ET AL. **chinese journal of medical history.** 1993;23(4):193 (chi).

45- gera: 38840/di/ra
THE TREATMENT OF MEMORY DISORDERS BY CHINESE MEDICINE. AUTEROCHE B. **journal of chinese medicine.** 1993;41:12-6 (eng).

46- gera: 45154/di/ra
[EFFECT OF IMPROVING MEMORY AND INHIBITING ACETYLCHOLINESTERASE ACTIVITY BY INVIGORATING-QI AND WARMING-YANG RECIPE]. LIU ZY ET AL. **chinese journal of integrated traditional and western medicine.** 1993;13(11):675-6, 6 (chi*).
Invigorating-Qi and Warming-Yang (IQWY) had a good curative effect to some senile diseases such as senile dementia, senile hypomnesia etc. This experiment was designed for probing into the therapeutical mechanism of IQWY recipe. BALB/C pure bred mice were divided into five groups. Group I was taken per os of invigorating Qi (IQ), Group II warming Yang (WY), Group III IQWY drugs, Group IV was dysmnesia model, and Group V blank control group injected with normal saline only. All groups except Group V were injected scopolamine (5mg/kg) intraperitoneally to induce dysmnesia model after medication. IQ drug consisted of Codonopsis pilosula, Astragalus membranaceus, Poria cocos, and Glycyrrhiza uralensis, WY drug of Cynomorium songoricum, Epimedium brevicornum and Cuscuta chinensis, while IQWY recipe consisted of both IQ and WY drugs. The results showed that IQ, WY and IQWY had an evident antagonistic action to

Scopolamine induced dysmnesia mice, and could improve their memory. The erroneous times of the animal's reaction in Group I, II and III were less than those in Group IV, P < 0. 05 or P < 0. 01. Acetylcholinesterase (AchE) activity in the mice could be inhibited by IQ, WY and IQWY also. The activity in Group I, II and III was less than that in Group IV and V, P < 0. 05 or P < 0. 01. The therapeutic mechanism of IQWY was in connection with its effect to M-cholinergic transmitters of central nervous system.

47- gera: 46580/di/ra
[CHERIF THE MEMORY OF TEACHER JIANG CHUN-HUA]. SHEN ZI-YIN. **chinese journal of integrated traditional and western medicine.** 1993;13(8):493 (chi).

48- gera: 47474/di/ra
[STUDY ON EFFECTS OF IMPROVING MEMORY AND INHIBITING ACETYLCHOLIN - ESTERASE ACTIVITY BY INVIGORATING-QI AND WARMING-YANG RECIPE]. LIU ZU-YI ET AL. **chinese journal of integrated traditional and western medicine.** 1993;13(11):675 (chi*).

49- gera: 47707/di/ra
[MEMORY ON MY LATE FATHER LIANG BAOHE]. LIANG ZONGHAN. **beijing journal of traditional chinese medicine.** 1993;4:7 (chi).

50- gera: 47728/di/ra
[MEMORY OF FAMOUS VETERAN PHYSICIAN-ZHANG BOYAN IN BEIJING SUBURB]. ZHANG SHAOYAN ET AL. **beijing journal of traditional chinese medicine.** 1993;3:11 (chi).

51- gera: 48137/di/ra
[CLINICAL AND EXPERIMENTAL STUDIES OF JIANYI ORAL LIQUID IN IMPROVING LEARNING AND MEMORY OF AGED]. CAI JING-GAO ET AL. **chinese journal of integrated traditional and western medicine.** 1994;14(4):203 (chi*).
The effect of Jianyi oral liquid (JYOL) in improving learning and memory of the aged was investigated in this study. The results showed that the learning and memory of the aged subjects and mice was improved after taking JYOL, the level of noradrenaline (NA), dopamine (DA), 5-hydroxytryptamine (5-HT), cyclic adenosine monophosphate (cAMP) in plasma of aged subjects and brain of aged mice and the content of superoxide dismutase (SOD) in red blood cells of both aged person and mice were significantly higher than those of premedication or control respectively. It was considered that the mechanism of the effect of JYOL in improving learning and memory might related to enhance the brain activity and the capability of clearing free radicals by

52- gera: 49374/di/ra
[A TCM STUDY OF PROGRESSIVE LATENT DEMENTIA (ALZHEIMER DEMENTIA)]. LIN SHUIMIAO ET AL. **shanghai journal of traditional chinese medicine.** 1994;10:9 (chi).

53- gera: 49890/nd/re
IMPROVING EFFECTS OF DX-9386, A TRADITIONAL CHINESE MEDICINAL PRESCRIPTION, ON THYMECTOMY- INDUCED IMPAIRMENT OF LEARNING BEHAVIORS IN MICE. ZHANG Y ET AL. **biol pharm bull.** 1994;17(9):1199-205 (eng).
The subject mice were thymectomized 4 weeks after birth. Ten months after the thymectomy, learning behaviors in passive and active avoidance performances and a spatial memory task, the contents of brain monoamines and brain choline acetyltransferase (ChAT) activity, as well as the immune response were evaluated. DX-9386, a traditional Chinese medicinal prescription consisting of ginseng, polygala, acorus and hoelen, was prepared in CE- 2 mouse food (1%, w/w) and given to the thymectomized mice after the operation until all the experiments were finished. DX-9386 treatment significantly ameliorated the learning and memory ability impaired by thymectomy in passive avoidance performances and in a spatial memory task, and the mice tended to improve in the active avoidance performance of a lever press test. However, DX-9386 treatment did not improve the thymectomy- reduced immune response. The contents of hypothalamic norepinephrine, 3,4-dihydroxyphenylacetic acid and homovanillic acid, and hypothalamic ChAT activity were significantly increased in thymectomized mice, and DX-9386 restored them to the control levels. These results suggested that DX-9386 mainly affected the cognitive process of the central nervous system to ameliorate the learning and memory deficit induced by thymectomy.

54- gera: 49891/nd/re
EFFECT OF HACHIMIJIOGAN, AN ORIENTAL HERBAL MEDICINAL MIXTURE, ON EXPERIMENTAL AMNESIA IN MICE. HIROKAWA S ET AL. **biol pharm bull.** 1994;17(9):1182-6 (eng).
The effect of Hachimijiogan on cognitive disturbance was investigated using step-through passive avoidance failure techniques: scopolamine-, cycloheximide- and cerebral ischemia-induced amnesia. Pre-acquisition trial administration of Hachimijiogan (0. 5 g/kg, p. o.) prolonged the step-through latency reduced by scopolamine and cycloheximide. Hachimijiogan (0. 5 and 1. 0 g/kg, p. o.) also ameliorated the cerebral ischemia-induced amnesia. Physostigmine (0. 1 mg/kg, i. p.) ameliorated all three amnesia models. The ameliorating effects of Hachimijiogan and physostigmine on cycloheximide-induced amnesia were diminished by the combination with scopolamine. These results suggest that Hachimijiogan possesses a wide-ranging pharmacological profile in anti- amnesic actions and that its anti-amnesic activities may be related to the cholinergic neuronal system.

55- gera: 49928/nd/re
REINFORCEMENT EFFECTS OF BOSCHNIAKIA ROSSICA ON DISCRIMINATION LEARNING IN CHOLINERGIC LESIONS OF RATS. . TUSDA T ET AL. **j ethnopharmacol.** 1994;44(2):67-71 (eng).
The dried herb or stem of Boschniakia rossica (Boschniakiae Herba) has been used as an antisenile agent in the Jilin Province of China. To elucidate the effects of Boschniakiae Herba on decreased learning ability and memory weakness, a 50% ethanol extract of Boschniakiae Herba was administered to rats whose nucleus basalis of Meynert had been destroyed by the injection of ibotenic acid. This administration showed a significant improvement in the decrease of the ratio of correct responses caused by destruction of the nucleus basalis of Meynert. These results suggest that B. rossica would be therapeutic in senility.

56- gera: 53695/di/ra

[STUDIES ON MEMORY-IMPROVING EFFECT OF AQUEOUS EXTRACT OF ASTRAGALUS MEMBRANACEUS (FISCH.) BGE]. HONG GENGXIN ET AL. **china journal of chinese materia medica.** 1994;19(11):687 (chi*).
The study shows that the aqueous extract of Astragulus membranaceus (AMWE) can improve the anisodine- induced impairment on memory acquisition as well as the alcohol-elicited deficit of memory retrieval (number of errors were reduced and latent period was prolonged) in step down, and can also prolong the gasping duration of mice after decapitation at doses of 50g/kg (ig) for 7 days.

57- gera: 53726/nd/re
EFFECTS OF DX-9386, A TRADITIONAL CHINESE PREPARATION, ON PASSIVE AND ACTIVE AVOIDANCE PERFORMANCES IN MICE. NISHIYAMA N ET AL. **biol pharm bull.** 1994;17(11):1472-6 (eng).
The acute effects of DX-9386, a traditional Chinese medicinal preparation (ginseng, polygala, acorus and hoelen), were studied on learning and memory performances in passive and active avoidance tests in normal, as well as in learning-impaired, mice. A single oral administration of the prescription had no effect on memory registration, consolidation or retrieval or on motor activity in normal mice. DX-9386 reduced the ethanol-induced impairment of memory registration in the step-down test and also tended to ameliorate the scopolamine-induced memory registration deficit in the same test. The preparation reduced the number of spontaneous responses in the active avoidance test. The preparation also prolonged the disappearance of righting reflex induced by pentobarbital. These results suggest that DX-9386 ameliorates the impairment effect of ethanol on learning and

58- gera: 53832/nd/re
BENEFICIAL EFFECTS OF DX-9386, A TRADITIONAL CHINESE PRESCRIPTION, ON MEMORY DISORDER PRODUCED BY LESIONING THE AMYGDALA IN MICE. NISHIYAMA N ET AL. **biol pharm bull.** 1994;17(12):1679-81 (eng).
The amygdala is one of the key areas of the brain involved in learning and memory. Bilateral lesions of the amygdala in 9-week-old mice induced impairment of memory acquisition and retention. DX-9386, a traditional Chinese medicinal prescription consisting of ginseng, polygala, acorus and hoelen, was orally administered to the lesioned mice after the operation until all the experiments were completed. From 15d after surgery, learning behavior in the step-down test was observed daily for 10 d. DX-9386 treatment ameliorated the memory acquisition deficit. The number of step-down events in the first testing trial was significantly decreased by administration of 250 mg/kg of the prescription to the lesioned group of mice. Choline acetyltransferase activity in the cerebral cortex of the lesioned mice was significantly decreased, while repeated administration of the prescription did not affect this biochemical parameter. These results indicate that the memory acquisition enhancing effect of DX-9386 may not be achieved by direct activation of cholinergic transmission in the brain but by some other mechanism(s).

59- gera: 79997/di/ra
[EFFECT OF DIAOXINFANG (RADIX POLYGALAE,RADIX GLYCYRRHIZAE,ETC.) ON MOUSE MEMORY FUNCTION BY CHEMICAL INJURY AND NATURAL SENILITY]. DAI XIANGDONG ET AL. **chinese traditional patent medicine.** 1994;16(12):27 (chi*).

60- gera: 88862/di/ra
[EFFECT OF GINSENG AND ANGELICA SINENSIS DECOCTION (GASD) ON LEARNING AND MEMORY OF DEMENTIA RAT WITH HIPPOCAMPAL LESIONS INDUCED BY QUNOLINIC ACID]. SONG QIANLIU ET AL. **chinese traditional and herbal drugs.** 1994;25(9):474 (chi*).

61- gera: 89993/di/ra
[EFFECT OF FATTY OIL OF ACUTE COMMON PERILLA (PERILLA FRUTESCENS) ON THE LEARNING AND MEMORY OF MICE]. ZHOU DAN ET AL. **chinese traditional and herbal drugs.** 1994;25(5):251 (chi*).

62- gera: 24028/di/ra
[CLINICAL STUDY ON IMPROVEMENT OF MEMORY IN ELDERLY BY COMPOUND RADIXET RHIZOMA REI]. JINZHOU T ET AL. **journal of tcm.** 1995;36(9):545 (chi*).
By studying the influence of a Chinese Rhubarb preparations, the Tongjiang Oral solution, and Qi- yin Oral solution without Chinese Rhubarb, it was found that the Tongjiang Solution shortens the interval of bowel movements, duration of defecation and improvement of memory in senile people. All these indexes were markedly superior to the other solution (P <0. 05). Moreover, the former one also decreased the contents of serum peroxide-lipids, increased the activity of superoxide dimutase, suggesting that Chinese rhubarb and its preparation possesses some antisenility and improving intelligence actions.

63- gera: 54256/di/ra
IONIC MECHANISM OF ACUPUNCTURE ON IMPROVEMENT OF LEARNING AND MEMORY IN AGED MAMMALS. DENG QS ET AL. **american journal of chinese medicine.** 1995;23(1):1-9 (eng).
Memory impairment is one of the most frustrating problems for older people. Several acupoints were used for the treatment of memory loss in old rats, and the elemental mechanism of acupuncture therapy was studied with Inductively Coupled Plasma Spectroscopy. The result indicates that acupuncture improves learning and memory ability significantly in aged animals when compared with controls. This study demonstrated that elevations of eight essential elements (B, Ca, Cu, Fe, K, Mg, Na, and P) in the brain are the ionic basis for the therapeutic effect of acupuncture. A hypothetical model of the mechanism of acupuncture therapy is described.

64- gera: 54422/di/ra
[PROTECTIVE EFFECTS OF SALVIANOLIC ACID A AGAINST IMPAIRMENT OF MEMORY INDUCED BY CEREBRAL ISCHEMIA-REPERFUSION IN MICE]. DU GH ET AL. **acta pharmaceutica sinica.** 1995;30(3):184-90 (chi*).
In the present experiments, an impairment of memory model was made by cerebral ischemia-reperefusion in mice. Sal A at the dosage of 3 and 10 mg. kg-1 i. v. was shown to improve the impairment of memory function induced by cerebral ischemia-reperefusion in step down and step through tests. In these tests, the number of errors of Sal A treated group was less and the latency was longer than that of control group. Meanwhile, Sal A

3 and 10 mg. kg-1 i. v. was found to reduce the MDA contents in the cortex, hippocampus and striatum of cerebral ischemia- reperfused rats in vivo. Sal A 10-100 nmol. L-1 was shown to inhibit the brain lipid-peroxidation and scavenge the free hydroxyl radical in vitro. These results indicate that the antagonistic effects of Sal A on impairment of learning and memory caused by cerebral ischemia-reperefusion may be related with its anti-oxidant activity.

65- gera: 54495/di/ra
[EFFECTS OF ZHENGDA ZHENHUA 851 ON IMPROVEMENT OF MEMORY AND FLUENCY OF LANGUAGE OF KIDNEY DEFICIENCY PATIENTS]. CHEN WEI-ZE ET AL. **chinese journal of integrated traditional and western medicine.** 1995;15(6):343-6 (chi*).
A study was conducted on the effects of Zhengda Zhenhua 851-R oral liquor on the improvement of memory and fluency of language of patients suffering from Kidney Deficiency and control group. It was found that the treated group did better in memory tests and the index of mental quotient (MQ) was higher than that of control group. They had markedly higher scores in the tests of directional memory which requires one's initiative and the free recollection of pictures. The scores achieved by the treated group were significantly higher than that of control on the tests of the fluency of language and expressions, particularly with words of different categories. The results showed that Zhengda Zhenhua 851-R oral liquor obviously had the function of improving the memory and fluency

66- gera: 54751/di/ra
[IMPROVING EFFECT OF RHIZOMA GASTRODIAE ON LEARNING AND MEMORY OF SENILE RATS]. GAO NANNAN ET AL. **china journal of chinese materia medica.** 1995;20(9):562-3, 5 (chi*).
After giving Rhizoma Gastrodiae to aging rats continuously for 3 months, the process of their learning and memory was observed through step-down test and the content of lipid peroxides (LPO) was determined. It has been found out that Rhizoma Gastrodiae can effectively improve the ability of learning and memmory of these rats and reduce the content of LPO. The result may indicate that it is by clearing away the free-radicals that Rhizoma Gastrodiae improves the brain function.

67- gera: 57127/di/ra
[PROMOTING ACTION OF YIZHILING ORAL LIQUID (RADIX POLYGALAE, RADIX ASTRAGALI SEU HEDYSARI, ETC.) ON LEARNING MEMORY OF MICE]. GU CHANGHONG ET AL. **chinese traditional patent medicine.** 1995;17(11):27 (chi*).

68- gera: 70198/di/ra
[CHERISH THE MEMORY OF DR. JOSEPH NEEDHAM]. ZHIFAN C. **chinese journal of medical history.** 1995;25(3):163 (chi).

69- gera: 85020/di/ra
[EFFECTS OF CHINESE GINSENG ROOT AND STEM-LEAF SAPONINS ON LEARNING MEMORY AND BIOGENIC MONOAMINES OF BRAIN IN RATS]. AIMIN W ET AL. **china journal of chinese materia medica.** 1995;20(8):496 (chi*).

70- gera: 88762/di/ra
[ON TCM DIAGNOSIS AND TREATMENT OF ALZHEIMER'S DISEASE]. ZHU ZHIBO. **jiangsu journal of tcm.** 1995;16(12):43 (chi).

71- gera: 55075/nd/re
EFFECT OF HACHIMI-JIO-GAN ON SCOPOLAMINE-INDUCED MEMORY IMPAIRMENT AND ON ACETYLCHOLINE CONTENT IN RAT BRAIN. . HIROKAWA S ET AL. **j ethnopharmacol.** 1996;50(2):77-84 (eng).
The effect of Hachimi-jio-gan (HJ) on scopolamine induced memory impairment was studied using a radial maze performance, the effect of HJ on the central cholinergic system as measured by acetylcholine (ACh) content, choline acetyltransferase (CAT) and acetylcholinesterase (AChE) activities was also examined. HJ (0. 01-1. 0 g/kg, p. o.) showed no influence on the radial maze performance. However, with the administration of scopolamine (0. 5 mg/kg, i. p.), the number of the correct choices decreased and the number of the error choices increased. HJ (0. 1 and 0. 5 g/kg, p. o.) reduced this scopolamine-induced cognitive disturbance. The effect of HJ on ACh content and enzyme activities in the brain, frontal cortex, hippocampus and striatum was also investigated. In normal rats, HJ (0. 1 and 0. 5 g/kg, p. o. x 7 days) significantly increased ACh content in the frontal cortex, although it did not increased ACh content in the hippocampus. In scopolamine-treated rats, ACh content decreased in the brain regions examined. HJ (0. 5 g/kg, p. o.) inhibited a decrease in ACh content in the frontal cortex, and with the same dosage of HJ increased CAT activity in the frontal cortex and AChE activity in the hippocampus. These results suggest that the behavioral effects of HJ may be related to its effect on the central cholinergic system.

72- gera: 55672/di/ra
[IN MEMORY OF DR. LIEN-TEH WU]. ZHAO PUSHAN. **chinese journal of medical history.** 1996;26(2):90 (chi*).
Based on materials dealing with early medical activities of Mr. Lien-teh Wu, this paper gives a description to his contribution to modern medical course in China. For examples, he inaugurated the Chinese Medical Journal both in Chinese and English within the same issue, which is the first of its kind in the history of Chinese journals. Moreover, Mr. Wu was also the first to establish modern hospital, port quarantine, banning drug abuse, and many others. He also advocated medical education, gave special attention to traditional medical morality and mottoes. He made substantial medical writing as well. He was a great contributor to the development of China's medicine.

73- gera: 57105/di/ra
[ESTABLISHING OF MOUSE LEARNING AND MEMORY DYSFUNCTION MODEL BY CEREBRAL ISCHEMIC REPERFUSION AND THE RELEVANT PROTECTING EFFECT OF YINAO GRANULES]. XU QIUPING ET AL. **journal of beijing university of tcm.** 1996;19(6):65 (chi*).

74- gera: 67620/di/ra
[PROGRESS ON PATHOGENETIC STUDIES OF ALZHEIMER'S DISEASE AND ITS THERAPEUTIC APPROACH]. SHEN ZI-YIN ET AL. **chinese journal of integrated traditional and western medicine.** 1996;16(11):698 (chi).

75- gera: 84491/di/ra
[CLINICAL OBSERVATION OF IMPROVING

MEMORY OF JIAN NAO YI ZHI CAPSULE ON CEREBRAL INFARCTION PATIENTS OF KIDNEY DEFICIENCY]. LI PING ET AL. **journal of beijing university of tcm.** 1996;19(1):60 (chi).

76- gera: 55258/di/re
OLD CHINESE HERBAL MEDICINE USED FOR FEVER YIELDS POSSIBLE NEW ALZHEIMER DISEASE THERAPY (NEWS) . SKOLNICK AA . **jama.** 1997;227(10):776 (eng).

77- gera: 56011/nd/re
GASTRODIN AND P-HYDROXYBENZYL ALCOHOL FACILITATE MEMORY CONSOLIDATION AND RETRIEVAL, BUT NOT ACQUISITION, ON THE PASSIVE AVOIDANCE TASK IN RATS. HSIEH MT ET AL. **j ethnopharmacol.** 1997;56(1):45-54 (eng).
Gastrodin (GAS) and p-hydroxybenzyl alcohol (HBA) which is an aglycone of gastrodin, are active ingredients of Gastrodia elata Blume. In this study, we attempted to investigate the effects of acute administration of GAS and HBA on learning and memory processes such as acquisition, consolidation and retrieval, on the passive avoidance task in rats; piracetam was used as a positive control. Scopolamine, impairing learning acquisition, shortened the step-through latency in the retention test in rats. GAS and HBA did not prolong the step-through latency induced by scopolamine in the passive avoidance task, but piracetam could prolong the step-through latency induced by scopolamine. Cycloheximide, impairing memory consolidation, shortened the step-through latency in the retention test in rats. GAS at 50 mg/kg, HBA at 5 mg/kg and piracetam at 100 mg/kg could prolong the step-through latency induced by cycloheximide in the passive avoidance task. Apomorphine, impairing memory retrieval, shortened the step-through latency in the retention test in rats. GAS at 5 mg/kg, HBA at 1 mg/kg and piracetam at 300 mg/kg could prolong the step-through latency induced by apomorphine in the passive avoidance task. From the above results, we concluded that the facilitating effects of HBA on learning and memory are better than those of GAS. In conclusion, GAS and HBA can improve cycloheximide- and apomorphine-induced amnesia, but not scopolamine-induced acquisition impairment in rats. Thus, GAS and HBA can facilitate memory consolidation and retrieval, but not acquisition. The facilitating effects of GAS and HBA are different from those of piracetam.

78- gera: 58341/di/ra
EFFECTS OF JEN-SAN-YAUNG-JUNG-TANG ON SCOPOLAMINE-INDUCED AMNESIA IN RATS. LU MING-CHIN. **american journal of chinese medicine.** 1998;26(2):117-25 (eng).
The effect of Jen-San-Yaung-Jung-Tang (YJT) on scopolamine (SCOP)-induced amnesia was investigated in a step-through passive avoidance task in rats. It was observed that YJT (0.5 and 1.0 g/kg) significantly improved SCOP-induced amnesia and did not change the horizontal activity and pain threshold. YJT at 0.5 and 1.0 g/kg also did not change SCOP-treated horizontal activity and pain threshold. Furthermore, the antiamnesic effect of YJT at 1.0 g/kg on the SCOP-induced amnesia was augmented by physostigmine, but was not altered by neostigmine or scopolamine Nmethylbromide. These results suggest that the antiamnesic effect of YJT could only be related to the memory-related process, and to an increase in central cholinergic neuronal activity.

79- gera: 58342/di/ra
EFFECTS OF GINKGO BILOBA EXTRACT ON IMPAIRMENT OF LEARNING INDUCED BY CEREBRAL ISCHEMIA IN MICE. TADANO TAKESHI ET AL. **american journal of chinese medicine.** 1998;26(2): 127-32 (eng).
The effect of Ginkgo biloba extract (GbE) on cerebral ischemia induced by 10-min bilateral occlusion of the carotid arteries in mice was studied. Severe impairment of memory was apparent when the passive avoidance test was carried out 48 hr after bilaterally induced ischemia. When GbE at doses of 50 and 100 mg/kg was given p.o. I hr before the 10-min occlusion, there was a significant improvement in memory. The i.p. injection of ifenprodil (30 mg/kg) also showed improvement on learning tasks. The p.o. administration of flavonoid, a fraction isolated from GbE, showed high stepthrough latency on scopolamine-induced amnesia. All these findings indicate that GbE is beneficial for clinical use in amnesia accompanied with cerebral vascular disease.

80- gera: 58663/di/ra
STUDIO CLINICO SU PREPARAZIONI A BASE DI DA HUANG (RADIX ET RHIZOMA RHEI) NEL MIGLIORAMENTO DELLE CAPACITA MNEMONICHE DELL' ANZIANO. JINZHOU T ET AL. **rivista italiana di medicina tradizionale cinese.** 1998;73(3):34-8 (ita).
Il confronto dell'efficacia terapeutica del preparato orale composto Tong Jiang, con aggiunta di da huang (TJ) e del preparato orale Qi Yin (QY) senza da huang sulle capacità mnemoniche dell'anziano, ha mostrato che l'efficacia di TJ nel ridurre l'intervallo fra gli svuotamenti dell'alvo e la durata degli stessi e nel migliorare le capacità mnemoniche dell'anziano è significativamente migliore di quella del QY ($P < 0.05$). Inoltre TJ è in grado di ridurre il contenuto sierico di lipoperossidasi (LP) e di aumentare l'attività della superossidodismutasi (SOD) nei globuli rossi (RBC). Si dimostra pertanto che da huang ed i suoi principi attivi possiedono un'azione

81- gera: 58773/di/re
THE ROLE OF THE ENDOGENOUS OPIOID SYSTEM IN THE EFFECTS OF ACUPUNCTURE ON MOOD, BEHAVIOR, LEARNING, AND MEMORY. SHER L. **med hypotheses.** 1998;50(6):4758 (eng).
Ancient and contemporary papers report that acupuncture and its variations have a considerable effect on psychological state and behavior. Evidence from experimental and clinical studies suggests that acupuncture and its variations exert a strong influence on endogenous opioids in the brain, and that the endogenous opioid system is involved in various mental functions. The author suggests that the endogenous opioid system can play the key role in the mediation of the effects of acupuncture and its variations on mood, behavior, learning, and memory. Clinical implications of this suggestion are discussed.

82- gera: 66571/di/ra
[THINKING ON PROGRESS OF BASIC AND CLINICAL RESEARCHES ON ALZHEIMER DISEASE]. CHEN KEJI. **chinese journal of integrated traditional and western medicine.** 1998;18(6):323 (chi).

83- gera: 66643/di/ra

[TREATING EFFECTS OF KANGDAI MIXTURE ON CEREBROVASCULAR DISTURBANCE OF LEARNING AND MEMORIZING IN MICE]. ZHAO SHUMIN ET AL. **journal of beijing university of traditional chinese medicine.** 1998;21(2):41 (chi*).
Effects of Kangdai mixture on the impairment of learning and memorising abilities induced by transient cerebral ischemia-reperfilsion were studied by means of step down test and water maze test in mice. The results showed that transient cerebral ischemia-reperfusion could induce learning and memorising impairment while Kangdai mixture could decrease the seriousness of learning and memorizing impairment.

84- gera: 68489/di/ra
L'AIKI SHIATSU NELLA TERAPIA DELLE DEMENZE DI TIPO ALZHEIMER. MOSCA U ET AL. **rivista italiana di agopuntura.** 1998;93:83-99 (ita).

85- gera: 68788/di/ra
[ACTIVE MEMORY METHOD OF ACUPUNCTURE LOCATION. ABSTRACT]. SHEN XIAOMING. **acupuncture research.** 1998;22(3):242 (chi*).
Four memory methods of reciting acupoint and channel size-location in verse, analysis of acupuncture names, locating acupoint by comparison and locating acupoint according to channel, which would be valuable for

86- gera: 69472/di/ra
[EXPERIMENTAL STUDY ON DEMENTIA RATS IN ALZHEIMER TYPE AND THE MODELS]. WANG CAIXIA ET AL. **liaoning journal of traditional chinese medicine.** 1998;25(3):141 (chi*).
In the experiment, Rat learning and memory capacity were observed by experiments on both avoiding dark and going through crooked road in Rat model with both Alzheimer's disease toxified with AICI3 and spleen - deficiency syndrome caused by improper diet and overstrain. The results show that the prescription of nourishing the spleen and stomach can improve Rat rearming and memory capacity, and the effects are better than YXIan BILO Wan tong that takds to treat senile dimentia. It is devealed that the method of nourishing the spleen and stomach is an important method of treating Alzheimer's disease.

87- gera: 75630/di/ra
[STUDY PROGRESS OF ETIOLOGY OF ALZHEIMER'S DISEASE]. WANG LINJIANG ET AL. **liaoning journal of tcm.** 1998;25(9):444 (chi).

88- gera: 59150/di/ra
[COMPARATIVE STUDY ON CLINICAL THERAPEUTIC EFFECTS OF ACUPUNCTURE FOR ALZHEIMER'S DISEASE]. QUYANG QI ET AL. **chinese acupuncture and moxibustion.** 1999;19(7):399 (chi*).
Thirty patients of mild to moderate Alzheimer s disease were randomly divided into acupuncture and control groups. The acupuncture group (16 cases) were treated with acupuncture of tonifying kidney and marrow, and the control group (14 cases) treated with nimodipine tablet. Results showed that acupuncture had function of obviously improving intelligence state, dysmnesia and capacity of taking care of oneself in the patients, and the mark of HDS,VMS,ADL after acupuncture were significantly improvement as compared with before treatment. It is suggested that acupuncture has a certain effect on Alzheimer's disease.

89- gera: 59627/di/ra
LE SINDROMI MNESICHE IN MTC. MORANDOTTI R. **rivista italiana di agopuntura.** 1999;95:67-82 (ita).

90- gera: 59809/nd/re
ACUPUNCTURE INHIBITS THE DECREASE IN BRAIN CATECHOLAMINE CONTENTS AND THE IMPAIRMENT OF PASSIVE AVOIDANCE TASK IN OVARIECTOMIZED MICE. TORIIZUKA K ET AL. **acupuncture electrotherapeutic research.** 1999;24(1):45-57 (eng).
The effects of acupuncture on the disorders elicited by abnormalities of endocrine system were investigated in ovariectomized mice. Female mice (strain; C57BL/6) were ovariectomized (OVX) and acupuncture points, Shenshu ([Japanese pictograph see text] : BL23) on both side of the back were continuously stimulated by subcutaneous needles for 20 days. After completion of experimental sessions, animals were sacrificed and specific brain regions were assayed for catecholamine contents by high performance liquid chromatography with electro chemical detector (ECD-HPLC). The mitogenic activities of splenic lymphocytes were measured by using 3-(4,5- dimethylthiazol-2-yl)-2,5-diphenyl tetrazolium bromide (MTS) assay and alkaline phosphatase (ALP) assay. Furthermore, the effects of needle stimulation on learning and memory ability were studied by the step-through type passive avoidance test. Norepinephrine and dopamine contents in the frontoparietal cerebral cortex, ventral hippocampus and olfactory bulb were decreased in the OVX group, and both MTS activity and ALP activity were decreased 20 days after ovariectomy. The mean latent period was also shortened in the passive avoidance test in the OVX group. However, applying needle stimulation increased norepinephrine and dopamine contents in the brain regions, and enhanced mitogenic activities of splenic lymphocytes. The stimulation also improved memory-related behavior. It was concluded from this study that after mice were stimulated by subcutaneous needle insertion, overall changes were observed in central nervous system (including retention of memory) and immune functions. The study suggests that acupuncture improves the memory loss and decrease of immune responses accompanying aging and/or menopause, and the that it may have an important role in medical care for the

91- gera: 59957/di/ra
ACUPUNCTURE AND HERBS IN THE TREATMENT OF NEURODEGENERATIVE DISORDERS: ALZHEIMER'S DISEASE, STROKE, AND PARKINSON'S DISEASE. CHEN JK. **medical acupuncture.** 1999;11(1):10-2 (eng).
Neurodegenerative disorders (such as Alzheimer's disease, sequelae of stroke, and Parkinson's disease) plague a sizable portion of the geriatric population. They are poorly recognized due to low public visibility and social isolation of those affected. Although neurodegenerative disorders include a vast number of illness, this article focuses on Alzheimer's disease, stroke sequelae, and Parkinson's disease. Approached from perspectives of both Western and Traditional Chinese medicine, treatment using acupuncture and herbal therapies is discussed.

92- gera: 70893/di/ra
EFFECTS OF ACUPUNCTURE AT PAI-HUI ON THE DEFICIT OF MEMORY STORAGE IN RATS. CHANG YH ET AL. **american journal of chinese medicine.**

1999;27(3-4):289-98 (eng).
In this study, we investigated the effects of Pai-Hui by acupuncture on cycloheximide (CXM)-induced impairment of the passive avoidance response in rats. Acupuncture at Pai-Hui (Go-20) treated 15 min before or immediately after training trial for 15 min significantly attenuated CXM-induced impairment of passive avoidance response in rats, but did not have the same effect 30 and 60 min before or 30 min after the training trial or before the retention trial. Acupuncture at Pai-Hui 15 min before the training trial for 15, 30 and 60 min significantly attenuated CXM- induced impairment of passive avoidance response in rats, and its efficacy paralleled the acupuncture duration. Furthermore, acupuncture at Pai-Hui did not attenuate scopolamine (SCOP)-induced impairment of passive avoidance response, but was slightly inhibited by SCOP at 0.3 mg/kg. Second, acupuncture at Pai-Hui attenuated p-chloroamphetamine (PCA)-induced impairment of passive avoidance response and was significantly antagonized by PCA at 1 mg/kg. These results suggest that acupuncture at Pai-Hui mainly affects the memory storage process and has preventive and immediate therapeutic effects on CXM-induced impairment of passive avoidance response. Its efficacy paralleled the acupuncture duration. The preventive effect of acupuncture at Pai- Hui on CXM-induced impairment is significantly reduced by serotonergic 5-HT releaser, and slightly by cholinergic manipulations.

93- gera: 71013/di/ra
TROUBLES DE LA MEMOIRE. NGUYEN TRONG KHANH. **revue francaise medecine traditionnelle chinoise.** 1999;161:20-22 (fra).

94- gera: 71888/di/ra
EFFECTS OF ACUPUNCTURE AT PAI-HUI ON THE DEFICIT OF MEMORY STORAGE IN RATS. YUNG-HSIEN CHANG ET AL. **american journal of chinese medicine.** 1999;27(3-4):289-8 (eng).
In this study, we investigated the effects of Pai-Hui by acupuncture on cycloheximide (CXM) induced impairment of the passive avoidance response in rats. Acupuncture at Pai-Hui (Go-20) treated 15 min before or immediately alter training trial for 15 min significantly attenuated CXM-induced impairment of passive avoidance response in rats, but did not have the same effect 30 and 60 min before or 30 min after the training trial or before the retention trial. Acupuncture at Pai-Hui 15 min before the training trial for 15, 30 and 60 min significantly attenuated CXM- induced impairment of passive avoidance response in rats, and its efficacy paralleled the acupuncture duration. Furthermore, acupuncture at Pai-Hui did not attenuate scopolamine (SCOP)-induced impairment of passive avoidance response, but was slightly inhibited by SCOP at 0.3 mg/kg. Second, acupuncture at Pai-Hui attenuated p-chloroamphetamine (PCA)-induced impairment of passive avoidance response and was significantly antagonised by PCA at I mg/kg. These results suggest that acupuncture at Pai-Hui mainly affects the memory storage process and has preventive and immediate therapeutic effects on CXM induced impairment of passive avoidance response. Its efficacy paralleled the acupuncture duration. The preventive effect of acupuncture at Pai-Hui on CXM-induced impairment is significantly reduced by serotonergic 5-HT releaser, and slightly by cholinergic manipulations.

95- gera: 74347/di/ra
[EFFECT OF WU LONG DAN PILL ON FUNCTIONS OF STUDY AND MEMORY IN RATS OF MULTIPLE INFARCTIONAL DEMENTIA AND ITS MECHANISMS]. PENG KANG ET AL. **journal of tcm.** 1999;40(12):746 (chi).

96- gera: 75167/di/ra
[EFFECTS OF TIANTAI N°.1 ON LEARNING,MEMORY AND SUBTYPE OF MCHOLINERGIC RECEPTOR IN AGED DEMENTIA MOUSE]. WU ZHENGZHI ET AL. **china journal of traditional chinese medicine and pharmacy.** 1999;14(2):18 (chi*).
In order to study the effect of Tiantai No. 1 on aged dementia mouse caused by AIC13, using the subtype-specific antibodies against Me and M2 subtypes of muscarinic acetylcholinergic receptors in hippocampus were measured by enzyme-linked immunosorbent assay (ELISA). The results showed that the abilities of learning and memory were inhibited, while the contents of M1 and M2 receptors were decreased significantly in the aged dementia mice. The learning and memory abilities, the contents of Me receptor in the groups of Tiantai No. 1 were all in creased remarkably, while those in Tiantai No. 1 were higher than that in hydergine group; the contents of and M2 receptor in groups of hydergine and Tiantai No. 1 were unchanged.

97- gera: 75294/di/ra
[THE ASSOCIATION OF APOLOPOPROTEIN E4 ALLELE WITH ALZHEIMER'S DISEASE]. TIAN JINZHOU ET AL. **journal of beijing university of tcm.** 1999;22(5):2 (chi*).

98- gera: 76184/di/ra
[QIGONG-AN EFFECTIVE METHOD FOR PROMOTING YOUR MEMORY]. HE XITAO. **qigong journal.** 1999;20(10):444 (chi).

99- gera: 76980/di/ra
[IN MEMORY OF PROFESSOR CHEN SHAOWU-PRESIDENT OF THE WORLD FEDERATION OF ACUPUNCTURE SOCIETIES (WFAS)]. X. **acupuncture research.** 1999;24(2):85 (chi).

100- gera: 77063/di/ra
[INFLUENCE OF ELECTROACUPUNCTURE ON LEARNING AND MEMORY OF EXPERIMENTAL RATS OF VASCULAR DEMENTIA]. LAI XINSHENG ET AL. **acupuncture research.** 1999;24(3):192 (chi*).
68 Sprague-Dawley rats were prepared to acute, incomplete cerebral ischemia by cutting off bilateral carotid arteries, and the animal models of vascular dementia (VD) were made. Then they were divided randomly into ischemic group (Isch, 34 cases) and electroacupuncture group (EA, 34 cases). In our study, we respectively detected the amount of autonomic activity, the response ability of learning escape dark, the contents of blood superoxide dismutase (SOD), blood cortisol, norepinephrine (NE), dopamine (DA), 5-hydroxytryptamine (5-HT) in cortex, striatum, hippocampus and hypothalamus. Results: the amount of autonomic activity, the response ability of learning escape dark, SOD in Isch and EA group decreased significantly (P<0.001) as compared with the control group (35 cases) but those in EA group were much higher than those in Isch group (P<0.05-0.01). Conclusion: electroacupuncture can promote the amount of autonomic activity and the response ability of learning escape dark in the animal model of VD, which

closely related with improving the cerebral circulation, enhancing the ability of

101- gera: 77064/di/ra
[EFFECTS OF ACUPUNCTURE ON THE BEHAVIOR OF MULTI-INFARCT DEMENTIA MODEL RATS]. LAI LIPING ET AL. **acupuncture research.** 1999;24(3):198 (chi*).
In this research, we observed the effects of the "Tiao Shen Yi Zhi" acupuncture method on the behavior changes of multi-infarct dementia (MID) model rats. The results show that MID rats manifest the disorder in learning and memory. The "Tiao Shen Yi Zhi" acupuncture method could obviously improve the ability of learning and memory of MID rats which was in prevention group. The effects of the acupuncture has point specificity.

102- gera: 71073/di/ra
[EFFECT OF NAOKANGTAI CAPSULE ON ABILITY OF LEARNING AND MEMORY IN MICE]. YANG JUN ET AL. **traditional chinese drug research and clinical pharmacology.** 2000;11(1):29 (chi*).

103- gera: 71085/di/ra
[THE PROBABLE AFFECTING LINK OF TRADITIONAL CHINESE MEDICINE TREATING ALZHEIMER'S DISEASE]. GAO JIE. **chinese journal of information on tcm.** 2000;7(2):5 (chi).

104- gera: 71599/di/ra
[EXPERIMENTAL STUDY ON INFLUENCE OF FUSHENG POWDER ON THE MEMORY OF LEARNING DEMENTIAMIMETIC RATS]. LEI YAN ET AL. **journal of tcm.** 2000;41(2):108 (chi).

105- gera: 72829/di/ra
INFLUENCE OF ELECTROACUPUNCTURE ON HYPERTENSION VASCULAR DEMENTIA AND ITS RED CELL IMMUNE FUNCTION IN THE RAT. MO FEIZHI. **word journal of acupuncture-moxibustion.** 2000;10(2):32 (eng).
Objective: To probe into the effect of electroacupuncture (EA) on vascular dementia and red cell immune function in the rat. Methods: 30 SD rats were made into renal hypertension rats (RHR) by clamping the kidney arteries with silver clip. 42 days later, their bilateral common carotid arteries were blocked repeatedly to cause cerebral ischemia. The Hypertension vascular dementia model was then set up. Then they were randomly divided into VD model group, EA groupand medication group (Dihydroergotoxine, DHET), with 10 cases in each group. The therapeutic course was 28 days. The ability of learning and memory was using an obs erved by water maze, and the function of red blood cell immune was detected after treatment. Results: the latecy of the EA group and medication group was shorter than that of model group (P < 0. 05, P < 0. 005), and that of EA group was shorter than medication group (P < 0. 05, P < 0. 005) . EA and medication could increase the RBCC3b receptor flower circle rate and reduce the RBC-IC flower circle rate significantly (P<0.05, P< 0. 0). Conclusion : The results indicated that EA therapy could raise the ability of learning and memory and improve the function of red cell

106- gera: 72830/di/ra
CAN LONG-TERM POTENTIATION BE INDUCED BY ACUPOINT STIMULATION?. WU DINGZONG ET AL. **word journal of acupuncture-moxibustion.** 2000;10(2):37 (eng).
Long-term potentiation (LTP) is usually induced by direct brain stimulation. An at tempt has been made to evoke LTP in dentate granule cells of hippocampus by acupoint stimulation in anesthetized rats. Assuming a gradual increasing course, LTP rose to 146% at the end of one hour. After applying such stimulation to the awake rats for six days (once everyday), their discriminative learning capacity in Y maze test markedly improved as compared

107- gera: 72849/di/ra
EFFECT OF BATROXOBIN ON EXPRESSION OF C-JUN IN LEFT TEMPORAL ISCHEMIC RATS WITH SPATIAL LEARNING AND MEMORY DISORDER. WU WEIPING ET AL. **journal of traditional chinese medicine.** 2000;20(2):147 (eng).
The effect of Batroxobin on expression of c-dun in left temporal ischemic rats with spatial memory disorder was investigated by means of Morri's water maze and immunohistochemistry methods. The results showed that the mean reaction time and distance of temporal ischemic rats for searching a goal were significantly longer than those of sham-operated rats, and at the same time c-dun expression of left temporal ischemic region was significantly increased. However, the mean reaction time and distance of Batroxobin-treated rats were shorter and they used normal strategies more often and earlier than those of ischemic rats. The number of c-dun immune reactive cells of Batroxobin-treated rats was also less than that of ischemic group. In conclusion, Batroxobin can improve spatial memory disorder in temporal ischemic rats, and the down-regulation of the expression of c-dun is

108- gera: 72861/di/ra
[EFFECTS OF ELECTROACUPUNCTURE ON STUDY AND MEMORY AND CONTENTS OF SOD AND MDA IN RATS OF EXPERIMENTAL VASCULAR DEMENTIA]. LAI XINSHENG ET AL. **chinese acupuncture and moxibustion.** 2000;20(8):497 (chi).

109- gera: 73239/di/ra
[FLEXIBLE MEMORY METHOD FOR INDICATIONS OF ACUPOINTS]. SHEN XIAOMING ET AL. **chinese acupuncture and moxibustion.** 2000;20(9):563 (chi*).
Effects of different therapeutic methods, acupuncture, moxibustion and acupuncture plus moxibustion and different acupoints, "Zusanli" (ST36) and "Guanyuan" (CV4) points on T-lymphocyte subgroups, B-lymphocyte in rats of experimental Yang-deficiency were studied comparatively. Results indicate that acupuncture can regualte lower immunologic function of the organism and action of acupuncture plus moxibustion is superior to that of simple acupuncture or moxibustion; the action of "Zusanli" point is superior to that of "Guanyuan" point.

110- gera: 74003/di/ra
[THE EFFECT OF ACUPUNCTURE AND MOXIBUSTION ON THE MEMORY FUNCTION IN RAT MODEL OF DEMENTIA]. SHEN WEI-DONG ET AL. **shanghai journal of acupuncture and moxibustion.** 2000;19(4):36 (chi).
Objective : To observe the effect of acupuncture and moxibustion on the memory function in rat model of dementia. Methods : The rat model of dementia was established. and the Morris maze was used to observe the changes of rat's swimming time in normal group.

model group, acupuncture group. and moxibustion group respectively. Results : There was very significant difference in rat's swimming time between normal group and model group, suggesting that rat's swimming time was directly related to memory. when acupuncture group and moxibustion group were compared with model group respectively. the significant difference in swimming time also appeared. Conclusion The above results demonstrated that acupuncture and moxibustion could improve the

111- gera: 75090/di/ra
[APPLICATION OF SIX MEMORY METHODS IN TEACHING AND STUDYING]. YAO YUFANG. **chinese acupuncture and moxibustion.** 2000;20(10):631 (chi).

112- gera: 76234/di/ra
[EFFECT OF ACUPUNCTURE ON CHOLINERGIC CENTRAL NERVOUS SYSTEM IN RAT OF ALZHEIMER DISEASE]. WANG SHAOJIN ET AL. **acupuncture research.** 2000;25(3):175 (chi*).
Objective: To explore the effect of acupuncture on cholinergic central nervous system in rat of Alzheimer disease as well as the way how to create the effect. Methods: Divided rats into three groups of the normal group, AD group and the acupuncture group. Observed respectively the behaviour alteration of rats before and after acupuncture, and observed the change of senile plaques (SPs) and neurofibrillary tangles (NFT) in cerebral cortex and hippocampus by special staining for SPs. Results: The rats of acupuncture group were found the behaviour had better improvement and the SPs number was decreased, but NFT hadn't evidently changed. Conclusion: Acupuncture can improve rat's function of cholinergic central nervous system.

113- gera: 76292/di/ra
[EFFECT OF POINT INJECTION OF BRAIN HORMONE ON SPATIAL DISTINCTION LEARNING ABILITY OF MICE AGING MODEL]. WANG ZHONG-LIN ET AL. **journal of nanjing university tcm.** 2000;16(6):358 (chi*).
OBJECTIVE To observe the effect of injection of the same dosage of brain hormone into the acupuncture points "Baihui' and "Dazhui" with different amount stimulation on the learning ability of mice aging mode] made by using D-galactose. METHOD The three-factor three-level orthogonal design was employed with the Y-labyrinth spatial distinction learning ability as the index. RESULT Among the three factors of medicine concentration, internal of treatment and time phase of treatment, the internal of treatment is the main factor, and the other two factors have little to do with the effect of treatment. The optimal method for point injection of brain hormone in promoting the learning ability of mice aging model is to use 30-time Fluent of the original medicine for point

114- gera: 77689/di/ra
[ETHOLOGICAL EXAMINATION OF ALZHEIMER' S DISEASE MODEL RATS TREATED WITH BUSHEN YIZHI DECOCTION]. WANG HUAIXING ET AL. **chinese journal of integrated traditional and western medicine.** 2000;20(10):771 (chi*).

115- gera: 77733/di/ra
[EFFECT OF BUSHEN YIZHI RECIPE ON SOMATOSTATIN LIKE IMMUNOPOSITIVE AND SOMATOSTATIN MESSENGER RIBONUCLEIC ACID EXPRESSED POSITIVE NEURONS I ALZHEIMER' S DISEASE MODEL RATS]. HU JINGQING ET AL. **chinese journal of integrated traditional and western medicine.** 2000;20(7):533 (chi*).

116- gera: 77823/di/ra
[EFFECTS OF NIUHUANG SHANGQING SOFT CAPSULE ON MEMORY OF MICE OF CEREBRAL ISCHEMIA AND DEMENTIA]. YANG JUN ET AL. **chinese journal of information on tcm.** 2000;7(4):33 (chi).

117- gera: 77899/di/ra
[CLINICAL STUDY ON HEART AND BRAIN BENEFITING FORMULA IN TREATING ALZHEIMER' S DEMENTIA]. GU YUN ET AL. **journal of shandong university of tcm.** 2000;24(4):271 (chi*).

118- gera: 77901/di/ra
[CLINICAL STUDY ON TREATMENT OF ALZHEIMER' S DEMENTIA WITH YIZHI FANGDAI MIXTURE TO IMPROVE THE FACULTY OF MEMORY]. ZHANG QIN YUAN ET AL. **journal of shandong university of tcm.** 2000;24(4):260 (chi).

119- gera: 78073/di/ra
[EFFECT OF ACUPUNCTURE ON LEARNING AND MEMORY ABILITIES OF SCOPOLAMINE RATS]. OUYANG QI ET AL. **journal of nanjing university tcm.** 2000;16(5):302 (chi*).
OBJECTIVE To observe the effect of acupuncture on the reaming and acquisition disturbance of rats caused by scopolamine. METHODS Diving platform experiment and water labyrinth experiment were conducted to test the learning ability of scopolamine rats. RESULTS Acupuncture has marked effect of protecting and improving the reaming and memory abilities. In the diving platform experiment, the number of mistakes in learning in the acupuncture group was far less than in the model group ($P < 0.01$) and the incubation period WAS prolonged, with marked significance ($P < 0.05$ or 0.01). In the water labyrinth experiment, the number of mistakes decreased greatly from the second day on, with significant statistical significance ($P < 0. 05$). CONCLUSION Acupuncture is an effective method to improve reaming and memory abilities, the mechanism of which may be related to the fact

120- gera: 78471/di/ra
[EFFECTS OF TIAOXIN RECIPE ON THE ABILITIES OF LEARNING AND MEMORY AND CHOLINERGIC SYSTEM IN ALZHEIMER' S RAT MODEL INDIUED BY INJECTING D GALACTOSE AND IBOTENIC ACID]. LI YA MING ET AL. **chinese journal of traditional medical science and technology.** 2000;7(4):237 (chi).

121- gera: 78494/di/ra
[EFFECT OF ZHINAO CAPSULE ON BEHAVIOR OF LEARMING AND MEMORY AND METABOLISM OF PROTEIN AND NUCLEIC ACID IN BRAIN TISSUE OF MICE]. YANG WEN MING ET AL. **chinese journal of traditional medical science and technology.** 2000;7(5):315 (chi*).

122- gera: 79260/di/ra
[EFFECT OF NAOLIKANG ON THE LEARNING AND MEMORY IN THE RAT WITH SENILE MID]. CHENG JIANZONG ET AL. **journal of anhui traditional chinese medical college.** 2000;19(2):50 (chi*).

Objective: To observe the effects of the Naolikang oral liquid on the learning and memory in the rat with senile MID. Method: The rats were divided into 4 groups. The-treatment group and control group were administered Naolikang oral liquid and Hydergin, respectively. Then their achievement of the learning and memory was observed by the method of the Y-Labyrinth. Result: the achievement of the learning and memory of treatment group was increased (P < 0. 01, vs model group), the achievement of the learning and memory of treatment group was increased (P < 0. 05, vs control group) after 30 days. Conclusion: The learning and memory of the rat with senile MID were improved by Naolikang oral liquid to a certain extent.

123- gera: 79409/di/ra
EFFECTS OF BATROXOBIN ON SPATIAL LEARNING AND MEMORY DISORDER OF RATS WITH TEMPORAL ISCHEMIA AND THE EXPRESSION OF HSP32 AND HSP70. WU WEIPING ET AL. **journal of tcm.** 2000;20(4):297-301 (eng).
The effect of Batroxobin on spatial memory disorder of left temporal ischemic rats and the expression of HSP32 and HSP70 were investigated with Morri`s water maze and immunohistochemistry methods. The results showed that the mean reaction time and distance of temporal ischemic rats in searching a goal were significantly longer than those of the sham-operated rats and at the same time HSP32 and HSP70 expression of left temporal ischemic region in rats was significantly increased as compared with the sham-operated rats. However, the mean reaction time and distance of the Batroxobin-treated rats were shorter and they used normal strategies more often and earlier than those of ischemic rat. The number of HSP32 and HSP70 immune reactive cells of Batroxobin-treated rats was also less than that of the ischemic group. In conclusion, Batroxobin can improve spatial memory disorder of temporal ischemic rats; and the down-regulation of the expression of HSP32 and HSP70 is probably related to

124- gera: 79780/di/ra
[PROBE INTO THEORY OF ALZHEIMER BY REGULATION OF MENTAL ACTIVITIES AND TONIFYING THE KIDNEY]. LI YAMING ET AL. **journal of gansu college of tcm.** 2000;17(2):1 (chi).

125- gera: 79781/di/ra
[REVIEW AND PROBE OF STUDY IN PATHOGENIC MECHANISM AND CHINESE DRUGS PREVENTION OF ALZHEIMER]. LIU YONGQI ET AL. **journal of gansu college of tcm.** 2000;17(2):3 (chi*).

126- gera: 86832/di/ra
[CLINICAL OBSERVATION OF ELECTRIC ACUPUNCTURE COMBINED WITH FENTAZIN IN TREATING MENTAL SYMPTOM OF ALZHEIMER'S DISEASE]. OU YANG-QI ET AL. **shanghai journal of acupuncture and moxibustion.** 2000;19(6):16 (chi*).
Purpose: Observation of the effect on AD treated by electric acupuncture and Fentazin. Methods The patients were randomized to two groups treatment group, containing 16, by electric acupuncture and Fentazin' control group, containing 14, by Fentazin only. Results: The effects were almost the same in two groups. Conclusion The effect in treatment group appeared in a shorter time and is longer lasting (P<0. 05). Meanwhile, it reduced the dosage of Fentazin (P<0. 01), so did the side effect.

127- gera: 87329/nd/re
PROTECTIVE EFFECT OF OREN-GEDOKU-TO (HUANG-LIAN-JIE-DU-TANG) AGAINST IMPAIRMENT OF LEARNING AND MEMORY INDUCED BY TRANSIENT CEREBRAL ISCHEMIA IN MICE. XU J ET AL. **j ethnopharmacol.** 2000;73(3):405-13 (eng).
The protective effect of Oren-gedoku-to (OGT; Huang-Lian-Jie-Du-Tang), a traditional Chinese medicine, against impairment of learning and memory induced by transient cerebral ischemia was investigated in mice. The cerebral ischemia caused a reduction of step-down latency and an increase of step-down errors in the passive avoidance task. Pretreatment with oral administration of OGT (2, 4 or 8 g of herbs per kg) once daily for 5 days prolonged the step-down latency significantly and decreased the step-down errors as compared with those of sham-operated controls. In the Morris water maze test, the cerebral ischemia caused an increase in the latency until finding the platform in the training trial and a decrease in the percentage of swimming in the quadrant of the former platform in the probe trial. Oren-gedoku-to (OGT; 2, 4 and 8 g/kg, p. o.) shortened the latency of escaping markedly onto the platform in the training trial and increased the percentage of crossing the former platform quadrant in the probe trial. A reference drug, tacrine (0.5 and 1.0 mg/kg, p.o.), prevented the reduction of step-down latency in the passive avoidance task and shortened the escape latency in the Morris water maze task. Furthermore, OGT significantly protected against cerebral ischemia-induced reduction in the acetylcholine (ACh) content of the cerebral cortex, hippocampus and striatum. These results indicate that the protective effects of OGT against the impairment of learning and memory induced by transient cerebral ischemia may be associated with preventing the decrease in the ACh content of the mouse brain.

128- gera: 87560/di/ra
[THE EFFECT OF CHIFUKANG ON STUDY AND MEMORY ABILITY OF DEMENTIA RATS]. HUANG YONGQING ET AL. **chinese journal of information on tcm.** 2000;7(12):34 (chi).

129- gera: 87663/di/ra
[POINT-INJECTION OF "YAMEN" IMPROVE MOUSE'S LEARNING DYSMNESIA INDUCED BY CEREBRAL ISCHEMIA]. CHEN HUADE ET AL. **journal of zhejiang college of tcm.** 2000;24(6):54 (chi).

130- gera: 88185/di/ra
[INFLUENCE OF ELECTROACUPUNCTURE ON LEARNING AND MEMORY IN VASCULAR DEMENTIA RATS]. CHEN ZHENHU ET AL. **acupuncture research.** 2000;25(4):245 (chi*).
Objective: To investigate the influence of electroacupuncture (EA) on learning and memory in vascular dementia (VD) rats. Methods: 70 SP rats were randomly divided into 5 groups: normal control group (n = 10), false operation groupie (n = 10), VD model group (n = 15), VD model + EA group (n = 17) and VD model + medication group (n = 18). VD model was established by using a modified Pulsinelli's 4-vessel occlusion method, and then all the rats accepted Morris water maze test and accorded with our experimental demands. In rats of EA group, "Baihui" (DU 20) and "Dachangshu" (GB 14) were punctured and stimulated

with an EA Therapeutic Apparatus. SD rats in medication group were administered with nimotop. Results: After generation of VD, the learning and memory capability of rats in VD model, VD model + EA and VD model + medication groups declined apparently in comparison- with that of control group and false operation group. However, comparison between VD model group and EA + VD model group or VD + medication group showed that both EA and medication could obviously improve the learning and memory capability (P<0.01); and the effect of EA was superior to that of medication.

131- gera: 89234/di/ra
[EXPERIMENTAL STUDY ON NAO-JIAN CAPSULE ON MEMORY AND TRANSMITTER OF MOUSE WITH DEMENTIA]. ZHOU ZHONGGUANG. **acta chinese medicine and pharmacology.** 2000;28(6):64 (chi).

132- gera: 91532/di/ra
[RESEARCH ON TCM PATTERN IDENTIFICATION IN DEMENTIA OF THE ALZHEIMER TYPE]. YANG BAI-CHAN ET AL. **shanghai journal of tcm.** 2000;34(4):12 (chi*).
In order to investigate the distribution regularity and feature of pattern identification in Chinese medicine in dementia of Alzheimer type (DAT) in the different severity, 139 DAT cases were divided into the mild, moderate and sever grades upon the self-drawn standard (changes in the special cognitive ability, together with changes in MMSE scores and daily life) and were identified into six major patterns of insufficiency in the heart blood, and deficiency and decline of kidney essence, and three annexed patterns of internal accumulation of phlegm turbidity, obstruction of stagnation in the brain, fire dicturbance in the mind. The results showed that the severity in DAT condition was related directly to different patterns in Chinese medicine, and the pathological change in one organ or involvement of several organs was in positive correlation with severity of its pathological condition, and that the combination of phlegm, stagnation and fire was an important factor to promote the change in the

133- gera: 91534/di/ra
[SURVEY AND ANALYSIS OF ALZHEIMER'S DISEASE TREATED BY CHINESE MEDICINE]. DONG HONG-TAO ET AL. **shanghai journal of tcm.** 2000;34(4):17 (chi*).
Through the review and analysis on the general situation of Alzheimer's disease (AD) treated by Chinese medicine in the recent years, the authors found that there were mainly modes of specific formulas and specific herbal drugs, treatment by pattern identification, injections and acupuncture therapy in the treatment of AD by Chinese medicine, but also there existed many problems in diagnosis, criteria of therapeutic effect, evaluation of long-term effect and prognosis. Meanwhile, the authors put forward the corresponding research thinking and policies.

134- gera: 92100/di/ra
[EFFECT OF NAOERKANG ON LEARNING AND MEMORY DISORDER IN MOUSE WITH ALZHEIMER'S DISEASE AND THE CONTENT OF M-RECEPTOR IN MOUSE'S BRAIN]. LI XI ET AL. **chinese journal of traditional medical science and technology.** 2000;7(6):385 (chi).

135- gera: 92976/di/ra
[SEEKING YANG IN YIN IS THE BASIC TREATMENT ON ALZHEIMER'S DISEASE]. HE JIAN-CHENG ET AL. **liaoning journal of tcm.** 2000;27(11):485 (chi*).
The pathogenesis of Alzheimer's disease is dysfunction of Zang and Fu, insufficiency of the spleen, heart and kidney accumulation of phlegm and blood stasis derangement of Qi and blood. The basic pathogenesis is the deficiency of the kidney essence. In clinic, the prominent treatment is adjusting the wholism and tonifying the kidney essence which emphasising Seeking Yang in Yin. So Seeking Yang in Yin is basic treatment of Alzheimer's

136- gera: 93620/di/ra
[IMPROVEMENT EFFECT OF BAJISIN ON SPATIAL LEARNING AND MEMORY ABILITY OF RATS]. TAN BAOXUAN ET AL. **traditional chinese drug research and clinical pharmacology.** 2000;11(2):95 (chi*).

137- gera: 93807/di/ra
[BUSHEN YIZHI DECOCTION IMPROVES LEARNING AND MEMORY OF ALZHEIMER DISEASE RAT MODEL]. LAI SHI-LONG ET AL. **traditional chinese drug research and clinical pharmacology.** 2000;11(6):337 (chi*).

138- gera: 95129/di/ra
[DRUGS FOR THE TREATMENT OF ALZHEIMER'S DISEASE FORM NATURAL ORIGIN]. NIE CHUN. **chinesetraditional and herbal drugs.** 2000;31(7):app10 (chi*).

139- gera: 87339/nd/re
INDIRUBINS INHIBIT GLYCOGEN SYNTHASE KINASE-3BETA AND CDK5/P25,TWO PROTEIN KINASES INVOLVED IN ABNORMAL TAU PHOSPHORYLATION IN ALZHEIMER'S DISEASE. A PROPERTY COMMON TO MOST CYCLIN KINASE INHIBITORS?. LECLERC S ET AL. **j biol chem.** 2001;276(1):251-260 (eng).
The bis-indole indirubin is an active ingredient of Danggui Longhui Wan, a traditional Chinese medicine recipe used in the treatment of chronic diseases such as leukemias. The antitumoral properties of indirubin appear to correlate with their antimitotic effects. Indirubins were recently described as potent (IC(50): 50-100 nm) inhibitors of cyclin-dependent kinases (CDKs). We report here that indirubins are also powerful inhibitors (IC(50): 5-50 nm) of an evolutionarily related kinase, glycogen synthase kinase-3beta (GSK-3beta). Testing of a series of indoles and bis- indoles against GSK-3beta, CDK1/cyclin B, and CDK5/p25 shows that only indirubins inhibit these kinases. The structure-activity relationship study also suggests that indirubins bind to GSK-3beta's ATP binding pocket in a way similar to their binding to CDKs, the details of which were recently revealed by crystallographic analysis. GSK- 3beta, along with CDK5, is responsible for most of the abnormal hyperphosphorylation of the microtubule-binding protein tau observed in Alzheimer's disease. Indirubin-3'-monoxime inhibits tau phosphorylation in vitro and in vivo at Alzheimer's disease-specific sites. Indirubins may thus have important implications in the study and treatment of neurodegenerative disorders. Indirubin-3'-monoxime also inhibits the in vivo phosphorylation of DARPP-32 by CDK5 on Thr-75, thereby mimicking one of the effects of dopamine in the striatum. Finally, we show that many, but not all, reported CDK inhibitors are

powerful inhibitors of GSK-3beta. To which extent these GSK-3beta effects of CDK inhibitors actually contribute to their antimitotic and antitumoral properties remains to be determined. Indirubins constitute the first family of low nanomolar inhibitors of GSK-3beta to be described.

140- gera: 89609/di/ra
[EFFECTS OF CONGSHENG CAPSULES ON THE DISTURBANCE IN LEARNING AND MEMORIZING CAUSED BY CEREBRAL ISCHEMIA REPERFUSION IN PRESENILE MICE]. ZHAO LING ET AL. **journal of beijing university of tcm.** 2001;24(1):36 (chi*).

141- gera: 91563/di/ra
[THE IMPROVEMENT OF MEMORY OF VASCULAR DEMENTIA RATS BY EAR-ACUPUNCTURE AND ITS RELATIONSHIP WITH THE EXPRESSION OF NNOS]. ZHANG XUE-CHAO ET AL. **shanghai journal of acupuncture and moxibustion.** 2001;20(1):39 (chi*).
Objective: To probe into the improvement of learning and memory of vascular dementia rats by car acupuncture and its relationship with expression of nNOS. Methods: Vascular dementia rat model was established by blocking 4- vessel, then the rats were treated by acupuncture at car points kidney and Nao, the immunohistochemistry method was used to detect the nNOS protein, and the lest rate of hippocampus neurons was calculated by NissI staining method combined with image analysis. In the meantime, Y-type maze was also used to measure the behaviour of the rats. Results: After acupuncture the expression of nNOS in CA1, area of rat's hippocampus was reduced and the lost rate of neurone in CA1, area of rat's hippocampus is less than that in VD model group, which is negatively corrective with learning and memory. Conclusions Ear acupuncture could improve the learning and memory of Vdrat and its mechanism may be that acupuncture could inhibit the over-increased nNOS after cerebral ischemia

142- gera: 92166/di/ra
[EFFECT OF FUYUANBUNAO GRANULES ON MEMORY OF EXPERIMENTAL MICE]. LIU YONG-QI ET AL. **chinese traditional patent medicine.** 2001;23(2):115 (chi*).

143- gera: 92512/di/ra
[HISTORICAL MEMORY,THOUGHT RESOURCES AND REINTERPRETATION IN THE WRITING OF THOUGHT HISTORY]. GE ZHAOGUANG. **history of chinese philosophy.** 2001;1:45 (chi).

144- gera: 92710/di/ra
[EXPERIMENTAL STUDY ON TREATING ALZHEIMER'S DEMENTIA IN RATS WITH TONGYU DECOCTION]. FANG HONG ET AL. **journal of shandong university of tcm.** 2001;25(2):148 (chi).

145- gera: 94084/di/ra
[EFFECT OF DU CHANNEL JING POINTS IN ACUPUNCTURE ON MOUSE ABOUT LEARNING MEMORY AND CEREBRAL CHOLINESTERASE ACTIVITY]. GAO XIYAN ET AL. **forum on tcm.** 2001;16(2):55 (chi).

146- gera: 95635/di/ra
[CORRELATION BETWEEN AURICULAR ACUPUNCTURE-INDUCED IMPROVEMENT OF MEMORY AND BEL-2 EX- PRESSION IN VASCULAR DEMENTIA RATS]. ZHANG XUEZHAO ET AL. **acupuncture research.** 2001;26(2):106 (chi*).

147- gera: 95672/di/ra
THE FUNCTION OF POINT INJECTION IN IMPROVING LEARNING AND MEMORY DYSFUNCTION CAUSED BY CEREBRAL ISCHEMIA. CHEN HUADE. **international journal of clinical acupuncture.** 2001;12(1):33 (eng).
In this experiment, the author investigated the influence of Yamen (Dul5) point injection on learning and memory dysfunction caused by cerebral ischemia and reprofusion in the bilateral cervical general artery combined with bleeding on the tail of a mouse to mimic vascular dementia in human beings. 40 mice were divided into 4 groups: group 1-false operation group, group 2-model group, and group 3-point injection with Cerebrolysin, group 4-point injection with saline. According to random division principles, the author observed the influence of Yamen (Dul5" point injection on the time the mice, which had received treatment on different days in different groups, took to swim the entire course, and the number of times they entered a dead end. The results showed that point injection with Cerebrolysin and saline improved learning and memory dysfunction caused by cerebral ischemia in mice.

148- gera: 95724/di/ra
[THE TREATMENT OF ALZHEIMER'S DISEASE BY THE COMBINATION OF ACUPUNCTURE AND MEDICINE]. MU YANYUN ET AL. **shanghai journal of acupuncture and moxibustion.** 2001;20(3):3 (chi*).
Purpose To compare the effects of acupuncture plus medicine and simple acupuncture on intelligence, gnosis and life self-care ability in AD patients. Methods Each of the two groups had 21 cases. A score was counted according to various neuropsychology scales before and after treatment. A comparison was made between pre-treatment and post-treatment in the same patient and between the two groups. Results Intelligence and gnosis was ameliorated in both groups. The improving effects on recent and remote memory, spatiotemporal orientation, calculation ability and life self-care ability were better in acupuncture plus medicine group than in simple acupuncture group (P<O. 05). Conclusion the curative effect of acupuncture plus medicine is better than that of simple acupuncture.

149- gera: 95873/di/ra
[STUDY ON EFFECTS OF QISHENG PILLS DECOCTION ON MEMORY DISTURBANCE BEHAVIOR OF RAT]. FUNG YUZHEN ET AL. **yunnan journal of tcm and materia medica.** 2001;22(3):26 (chi*).

150- gera: 96330/di/ra
[CLINICAL OBSERVATION OF "CLIMACTERIUM CAPSULE" IN IMPROVING THE MEMORY OF CLIMACTERIC WOMEN]. WEI MEI-JUAN. **shanghai journal of traditional chinese medicine.** 2001;35(8):32 (chi*).

151- gera: 96582/di/ra
[EFFECTS OF YIZHILING CAPSULE ON LEARNING AND MEMORY ABILITY AND CHOLINESTERASE ACTIVITIES IN MICE MODEL]. YU JIAN-PING, ZHANG CHENG-WEI. **journal of anhui traditional chinese medical colllege.** 2001;20(5):47 (chi*).

152- gera: 96746/di/ra

[EFFECTS OF XUEMAI TONG ON LEARNING AND MEMORY OF MEE]. CHEN JIANPING, CHEN DONG, CHEN HAOYU, ET AL. **traditional chinese medicinal research.** 2001;12(4):272 (chi).

153- gera: 96747/di/ra
[EFFECTS OF LIUWEI DIHUANG TANG ON THE LEARNING AND MEMORY OF AGING YIN - DEFICIENCY RATS]. CHEN JINGPING, ZHOU IEQUAN, DING SHENGYUAN ET AL. **traditional chinese medicinal research.** 2001;12(4):282 (chi).

154- gera: 96937/di/ra
[EFFECTS OF EEL OIL CAPSULE ON BRAIN MEMORY OBSTRUCTION MODEL OF MICE INDUCED BY AIC13]. GAO MEI-MEI MEI XUE-TING ET AL. **chinese traditional patent medicine.** 2001;23(10):737 (chi).

155- gera: 97463/di/ra
[EFFECT OF XIEHUOKAIQIAO FORMULA ON MEMORY ACQUIRING CONSOLIDATING AND REAPPEARING IN MOUSE WITH IMPAIRMENT]. FENG JI-DE, ET AL. **chinese journal of traditional medical science and technology (.** 2001;8(5):314 (chi).

156- gera: 97464/di/ra
[EFFECT OF YINAO CAPSULE ON THE LEARNING AND MEMORY IN RAT WITH ALZHEIMER' S DISEASE CAUSED BY BA DEPOSIT]. DING BO-PING, ET AL. **chinese journal of traditional medical science and technology (.** 2001;8(5):316 (chi).

157- gera: 97494/di/ra
[EFFECT OF ELECTRIC ACUPUNCTURE ON CHANGES OF SYNAPSE AND DISTURBANCE OF LEARNING AND MEMORY OF RATS CAUSED BY GALACTOSE]. YUAN SHUJUAN, ZHANG ZHIXIONG, QIU HONG, ET AL. **jiangsu journal of traditional chinese medicine.** 2001;22(7):39 (chi).

158- gera: 98143/di/ra
[EFFECT OF ACUPUNCTURE AND MOXIBUSTION TO ALZHEIMERS' S DISEASE MICE]. ZHANG WEI, LIU LAI-HU, WEI PEI-FENG, ET AL. **journal of chengdu university of traditional chinese medicine.** 2001;24(2):24 (chi).

159- gera: 98199/di/ra
[EFFECTS OF ELECTROACUPUNCTURE ON LEARNING AND MEMORY BEHAVIOUR AND ACETYLCHOLINESTERASE OF BRAIN IN THE RAT OF VASCULAR DEMENTIA]. MO FEIZHI, LI JIANQIANG, LEI LIPING, ET AL. **journal of traditional chinese medicine.** 2001;42(6):344 (eng*).

160- gera: 98528/di/ra
EFFECT OF BATROXOBIN ON EXPRESSION OF NEURAL CEII ADHESION MOLECULE IN TEMPORAL INFARCTION RATS AND SPATIAL LEARNING AND MEMORY DISORDER. WU WEIPING ET AL. **journal of tcm (english edition).** 2001;21(4):294 (eng).
The effect of Batroxobin expression of neural cell adhesion molecule (NCAM) in left temporal ischemic rats with spatial memory disorder was investigated by means of Morri's water maze and immunohistochemical methods. The results showed that the mean reaction time and distance of temporal ischemic rats for searching a goal were significantly longer than those of sham-operated rats and at the same time NCAM expression of left temporal ischemic region was significantly increased. However, the mean reaction time and distance of Batroxobin-treated rats were shorter and they used normal strategies more often and earlier than those of ischemic rats. The number of NCAM immune reactive cells of Batroxobin-treated rats was more than that of ischemic group. In conclusion, Batroxobin can improve spatial memory disorder of temporal ischemic rats and the regulation of the expression of

161- gera: 98744/di/ra
[EFFECT OF NAOYIQING CAPSULE ON LEARNING AND MEMORY ABILITY IN DECLINED MEMORY MICE]. CHEN QIN ET AL. **journal of anhui traditional chinese medical college.** 2001;20(6):30 (chi*).

162- gera: 98870/di/ra
[EFFECTS OF XUEMAI TONG ON LEARNING AND MEMORY OF MICE]. CHEN JIANPING ET AL. **traditional chinese drug research and clinical pharmacology.** 2001;12(4):272 (chi*).

163- gera: 98871/di/ra
[EFFECTS OF LIUWEI DIHUANG TANG ON THE LEARNING AND MEMORY OF AGING YIN - DEFICIENCY RATS]. CHEN JINGPING ET AL. **traditional chinese drug research and clinical pharmacology.** 2001;12(4):282 (chi*).

164- gera: 99278/di/ra
[REGULATORY EFFECT OF TIAOXIN RECIPE (A. 10~) DRUG SERUM ON ANIMAL'S ALZHEIMER DISEASE RELATED TAU PROTEIN PHOSPHORYLATION *]. ZHU CUI-QING ET AL. **journal of external therapy of traditional chinese medicine.** 2001;10(6):834 (chi*).

165- gera: 99303/di/ra
[EFFECT OF NAO ER KANG ON LEARNING AND MEMORY DISORDERS IN MODEL RATS WITH ALZHEIMER' S DISEASE]. LI XI ET AL. **china journal of traditional chinese medicine and pharmacy.** 2001;16(5):24 (chi*).

166- gera: 99848/di/ra
[EFFECT OF NAOYIQING CAPSULE ON LEARNING AND MEMORY ABILITY IN DECLINED MEMORY MICE]. CHEN QIN ET AL. **journal of anhui traditional chinese medical college.** 2001;20(6):30 (chi*).

167- gera: 99974/di/ra
[EFFECTS OF XUEMAI TONG ON LEARNING AND MEMORY OF MICE]. CHEN JIANPING ET AL. **traditional chinese drug research and clinical pharmacology.** 2001;12(4):272 (chi*).

168- gera: 99975/di/ra
[EFFECTS OF LIUWEI DIHUANG TANG ON THE LEARNING AND MEMORY OF AGING YIN - DEFICIENCY RATS]. CHEN JINGPING ET AL. **traditional chinese drug research and clinical pharmacology.** 2001;12(4):282 (chi*).

169- gera: 100382/di/ra
[REGULATORY EFFECT OF TIAOXIN RECIPE (A. 10~) DRUG SERUM ON ANIMAL'S ALZHEIMER DISEASE RELATED TAU PROTEIN

PHOSPHORYLATION *]. ZHU CUI-QING ET AL. **journal of external therapy of traditional chinese medicine.** 2001;10(6):834 (chi*).

170- gera: 100407/di/ra
[EFFECT OF NAO ER KANG ON LEARNING AND MEMORY DISORDERS IN MODEL RATS WITH ALZHEIMER' S DISEASE]. LI XI ET AL. **china journal of traditional chinese medicine and pharmacy.** 2001;16(5):24 (chi*).

171- gera: 104476/di/ra
[EFFECTS OF AURICULAR NEEDLING ON MEMORY AND EXPRESSION OF APOPTOSIS-RELATED PROTEINS IN HIPPOCAMPUS IN RATS OF VASCULAR DEMENTIA]. ZHANG XUESHAO, LU MINGZHUANG, JIANG NAICHANG, E. **chinese acupuncture and moxibustion.** 2001;21(8):499 (chi*).
Purpose: To approach to relation of improvment of learning and memory with expression of apoptosis-related proteins bcl-2 and bax in the rat of vascular dementia (VD). Methods: VD rat model was Prepared by occlusion of four blood-vessels and after acupuncture at auricular points Nao and Shen, immunohistochemical analysis, behavioral observation and image pattern analysis were made. Results After treatment of auricular needling, expressions of bcl-2 and bax proteins in CAI region of hippocampus increased, especially, bcl-2 had obvious increase, which was positively correlated with learning and memory. Conclusion:Auricular needling improves learning and memory in rats of VD possibly through control of apoptosis of cells to protect neurons of hippocumpus.

172- gera: 104506/di/ra
[OUGHT TO INCREASE MEMORY EFFICIENCY OF STUDENTS IN CHINESE MATERIA SUBJECT TEACHING]. ZHANG PING . **henan journal of traditional chinese medicine and pharmacy.** 2001;16(4):30 (chi).

173- gera: 104511/di/ra
[EVALUATION AND PROSPECTS OF STUDY ON TREATMENT OF ALZHEIMER'S DISEASE FROM KIDNEY DEFICIENCY]. LIU YI-FAN . **shandong journal of traditional chinese medicine.** 2001;20(9):515 (chi*).
According to the TCM,the basic pathogenesis of Alzheimer's disease (AD) is deficiency of kidney essence, which leading malnutrition of cerebral spirit and void marrow, and it is the main cause of cerebral function disturbance that the combination of phlegm and stasis cover the mental aperture. Kidney deficiency plays an important role in the pathological progress of AD. Most styles of clinical differentiation in TCM are closely related to kidney deficiency, and clinical observations on curing AD guided by this principle have proved its remarkable effects. In order to explore its mechanism, experimental study was undertaken from aspects of behavior, B-AP, transmitter, free radicals, NGF, and etc. The main existing problem is lack of large scale cooperration in clinical study and

174- gera: 104680/di/ra
[EXPERIMENTAL STUDY ON EFFECT OF TIANWANGBUXIN CINNABAR ON MEMORY.]. LI DONG-TENG YE MING-YUAN . **chinese traditional patent medicine.** 2001;23(4):296 (chi*).

175- gera: 107125/di/ra
EFFECT OF CISTANCHE DESERTICA. POLYSACCHRIDES ON LEARNING AND MEMORY FUNCTIONS AND ULTRASTRUCTURE OF CEREBRAL NEURONS IN EXPERIMENTAL AGING MICE. SUN YUN, DENG YANG-MEI, WANG DEJUN, ET AL. **chinese journal of integrated traditional and western medicine (english edition).** 2001;7(4):288 (eng).

176- gera: 111877/di/ra
TREATMENT OF ALZHEIMER ' DISEASE BY ACUPUNCTURE AND MASSAGE. NAGURA SHIGERU. **world journal of acupuncture-moxibustion.** 2001;11(1):50 (eng).

177- gera: 101361/di/ra
[EFFECT OF BUSHENYIZHIFANG ON THE SYNAPTIC STRUCTURE OF ALZHEIMER ' DISEASE MODEL IN RATS]. GAO JIE ET AL. **chinese journal of basic medicine in traditional chinese medicine.** 2002;8(2):25 (chi*).

178- gera: 101559/di/ra
[RELATIONSHIP BETWEEN PROMOTING EFFECT OF ACUPUNCTURE ON LEARNING MEMORY OF RATS AND ITS ANTI-OXIDATION EFFECT]. OUYANG QI ET AL. **journal of nanjing university of traditional chinese medicine (natural science).** 2002;18(2):110 (chi*).
OBJECTIVE : To investigate into the effect of acupuncture on the learning memory of rats and analyze the relationship between the effect of acupuncture on learning memory and its effect on reaction of free radicals. METHOD : Water labyrinth was used to test the learning memory of normal rats and dementia rats induced by sodium nitrite. The content of brain peroxidation lipid and the activity of superoxide dismutase of the rats were also determined. RESULT : Acupuncture could improve the learning memory of normal rats and antagonize the impairment in the learning memory of rats induced by sodium nitrite. In the acupuncture group, the content of LPO in the brain cortex was lower than that in the model group, but the SOD activity was higher than that in the model group ($P < 0.05$ or $P < 0.01$), with negative con-elation between SOD/LPO ratio and learning ability. CONCLUSION : There is some relationship between the effect of acupuncture in promoting the learning memory

179- gera: 102534/di/ra
[A SUMMARY ON 50 CASES OF ALZHEIMER'S DISEASE TREATED BY YIZHI JIANNAO GRANULES]. DONG KELI, ET AL. **hunan journal of tcm.** 2002;18(3):13 (chi).

180- gera: 102600/di/ra
[EFFECT OF DSS ON THREE MODELS OF MEMORY DYSFUNCTION]. KOU JUN-PING JIN WEI-FENG ET AL . **chinese traditional patent medicine.** 2002;24(3):191 (chi*).

181- gera: 103142/di/ra
[CLINICAL OBSERVATION OF ALZHEIMER'S DISEASE TREATED WITH NAOFUYICONG CAPSULE]. LI HAO, ET AL. **chinese journal of information on traditional chinese medicine.** 2002;9(4):20 (chi).

182- gera: 103164/di/ra
[EFFECT OF ELECTROACUPUNCTURE ON D-GALACTOSE INDUCED LEARNING AND MEMORY IMPAIRMENT AND LTP INDUCTION CHANGES OF HIPPOCAMPAL DENTATE GYRUS IN RATS]. ZHANG ZHIXIONG, YUAN SHUJUAN, WU DINGZONG. **acupuncture research.** 2002;26(4):247 (chi).

183- gera: 103207/di/ra
[ESTABLISHMENT OF MULTI-FACTOR ANIMAL MODEL AND ACUPUNCTURE EFFECT ON ITS MEMORY]. DONG HONG-TAO FANG YI-GONG . **shanghai journal of tcm.** 2002;36(5):43 (chi).

184- gera: 103252/di/ra
[INFLUENCE OF ELECTROACUPUNCTURE ON LEARNING AND MEMORY FUNCTION AND CEREBRAL BLOOD FLOW IN VASCULAR DEMENTIA RATS]. HE FENG. **journal journal of anhui traditional chinese medical college.** 2002;21(3):28 (chi*).
Objective: To investigate the effect of electroacupuncture (EA) therapy on learning and memory function, regional cerebral blood flow in vascular dementia (VD) rats. Method : VD rat models were established by repeatedly clipping the common carotid artery of the rats in combination with reducing the rat blood pressure with a peritoneal injection of sodium nitroprusside. The models were also screened by the first jumping-off latency of step-down avoidance test. The VD rats were treated by electroacupuncture at Baihui, Dazhui and Zusanli points. Step-down avoidance test recorded the time of latency to evaluate the therapeutic effect. The rCBF in parietal lobe and hippocampus were measured by hydrogen gas clearance method and compared among groups. Result : The scores of the behavior test of the VD rats were obviously increased ($P < 0.01$). Both the rCBF in parietal lobe and hippocampus were significantly improved ($P < 0.01$). Conclusion : The EA therapy can significantly improve the learning and memory function, and increase the level of cerebral blood flow in VD rats. These will be helpful

185- gera: 103317/di/ra
[CLINICAL STUDY ON THE EFFECTS OF TIAOXIN FORMULA AGAINST ALZHEIMER ' S DISEASE]. WANG JIAN, LIN SHIMIAO, ZHOU RUQING, ET AL. **journal of beijing university of traditional chinese medicine.** 2002;25(3):51 (chi*).

186- gera: 103530/di/ra
[STUDY ON THE IMPROVING LEARNING AND MEMORY EFFECTS OF JIANNAOHEJI ON PATIENT WITH VASCULAR DEMENTIA]. LIU DE-HUAN, ET AL. **chinese journal of traditional medical science and technology.** 2002;9(2):96 (chi).

187- gera: 104110/di/ra
[CLINICAL STUDY ON "KIDNEY-NOURISHING FORMULA" IN TREATING ALZHEIMER'S DISEASE]. WANG JIAN, LIN SHUI-MIAO, ZHOU RU-QIAN, ET AL. **shanghai journal of traditional chinese medicine.** 2002;36(4):4 (chi*).

188- gera: 104555/di/ra
[SUMMARY RESEARCH ON CAUSES AND PATHOGENETIC MECHANISM OF ALZHEIMER ' S DEMENTIA.]. JIANG ZHE-HAO, XIA YONG-LIANG, LI DE-XIN. **liaoning journal of traditional chinese medicine.** 2002;28(7):446 (chi*).

189- gera: 104747/di/ra
[THE INFLUENCE OF JIAN-NAO CAPSULE ON MEMORY PROBLEM OF MOUSE CAUSED BY SCOPOLAMINE]. MU JINGWEN ET AL. **information on traditional chinese medicine.** 2002;18(4):52 (chi*).

190- gera: 105110/di/ra
[EFFECT OF TIAOXIN RECIPE ON LEARNING AND MEMORY RELATED GENE EXPRESSION IN HIPPOCAMPUS OF SENESCENCE ACCELERATED MICE*]. ZHOU WEN-XIA, ZHANG YONG-XIANG. **chinese journal of integrated traditional and western medicine.** 2002;22(8):603 (chi*).

191- gera: 105884/di/ra
[HE ALIKE HIS PRESCRIPTIONS, HIS PRESCRIPTIONS ALIKE HIM -CHERISH THE MEMORY OF MY FATHER ZHU CHEN-YU]. ZHU ZHAO-GANG. **knowledge of ancient medical literature.** 2002;18(3):14 (chi).

192- gera: 105925/di/ra
[FREQUENTLY RECALL INSTRUCTOR'S KINDNESS, ALWAYS REMEMBER INSTRUCTOR'S MORALITY -IN PROFOUND MEMORY OF PROF. LIU SHU-NONG]. ZHU KANG-MEI. **knowledge of ancient medical literature.** 2002;19(1):17 (chi).

193- gera: 106118/di/ra
[INFLUENCE OF ACUPUNCTURE, THERAPY TO ALZHEIMER'S DISEASE IN THE SCORE OF MMSE MEASURING SCALE]. DONG HONGTAO BAI YING. **journal of external therapy of traditional chinese medicine.** 2002;11(3):6 (chi).

194- gera: 106142/di/ra
[EFFECT OF HEART BENEFITING RECIPE ON SPATIAL MEMORY AND BRAIN MITOCHONDRIAL RESPIRATORY FUNCTION OF OXIDATIVE DAMAGED "AD" RATS]. QIU HONG, JIN GUO-QIN, ZHAO WEI-KANG, ET AL. **chinese journal of basic medicine in traditional chinese medicine.** 2002;8(6):26 (chi*).

195- gera: 106144/di/ra
[EFFECT OF BUSHENTIANJING RECIPE ON LEARNING AND MEMORY IN RAT'S MODEL OF ALZHEIMER'S DISEASE .]. ZHAO CHANG-AN, LI EN ZHAO JING-SHAN. **chinese journal of basic medicine in traditional chinese medicine.** 2002;8(6):33 (chi*).

196- gera: 106145/di/ra
[EFFECT OF YI-ZHI-SAN ON THE LEARNING AND MEMORY OF MULTIINFARCTED DEMENTIA IN RAT .]. YUAN HONG WANG QING CUI XU, ET AL. **chinese journal of basic medicine in traditional chinese medicine.** 2002;8(6):36 (chi*).

197- gera: 106146/di/ra
[EFFECT OF ACORUS GRAMINEUS SOLAND ON LEARNING AND MEMORY AND THE MECHANISM OF SYNAPSE .]. JING YU-HONG, FENG SHEN-YUAN, TANG XIAO-QIN. **chinese journal of basic medicine in traditional chinese medicine.** 2002;8(6):38 (chi).

198- gera: 106305/di/ra
[EFFECT OF ACUPUNCTURE TREATMENT COMBINED WITH PHARMACOTHERAPY ON ACETYLCHOLINE AND ACETYLEHOLINESTERASE IN BRAIN OF RATS WITH MEMORY DISTURBANCE]. SHEN MEI-HONG, LI ZHONG-REN, MU YAN-YUN, ET AL. **journal of nanjing university of traditional chinese medicine.** 2002;18(4):236 (chi*).
OBJECTIVE: To explore into the mechanism of the effect of acupuncture treatment combined with pharmacotherapy in improving neurotransmitter of rat models. METHOD: Memory disturbance models were made by injecting scopolamine into the rats' abdominal cavity, so as to observe the effect of acupuncture treatment combined with pharmacotherapy on the activity of acetylcholine and acetyleholinesterase in the cerebral cortex of rats with memory disturbance. RESULT Acupuncture treatment combined with pharmacotherapy could greatly antagonize hypofunction of the cholinergic system induced by scopolamine. CONCLUSION Acupuncture treatment combined with pharmacotherapy has better therapeutic effect than simple acupuncture treatment or treatment with Danggui Shaoyao Powder in treating Alzheimer's disease. Ms study provides scientific basis for the clinical

199- gera: 106312/di/ra
EFFECT OF AURICULAR ACUPUNCTURE ON THE LEARNING AND MEMORY AND BCL-2 EXPRESSION IN VASCULAR DEMENTIA RATS. ZHANG XUEZHAO, ET AL. **world journal of acupuncture-moxibustion.** 2002;12(2):30 (eng*).
Objective:: To study the effect of auricular acupuncture on dysmnesia and the relationship between the memory improvement and bcl-2 protein expression in vascular dementia (VD) rats. Methods: Forty Wistar rats were randomized into control group, VID group, acupuncture+ VD group and pseudo-operation group, with 10 cases in each group. Rat VD model was established by using 4-vessel occlusion method. Otopoint " Nao "-point and " Shen " (MA-SC) were punctured, once daily continuously for 15 days. The rats' memory capability was tested with Y- maze method and bcl-2 expression of the brain tissues displayed by immunohistochemical method and measured using MIAS-2000 Image Analyzer. Results: Results showed that the scores of control group, VD group and acupuncture+ VD group before operation were 5.68 ± 1. 29, 6. 07 ± 1. 67 and 5. 86 ± 1. 74 respectively, while following auricular acupuncture treatment, the scores of the 3 groups were 5. 81 ± 1. 51, 18. 06 ± 2. 68 and 8. 31 ± 1. 85 separately, suggesting that the VD rat's learning and memory abilities in acupuncture+ VD group were raised apparently in comparison with those of VD group (P < 0 - 0 1). In control, VID and acupuncture + VD group, bcl-2 immuno-reaction positive neurons in CAI area of the hippocampus were 14.31 ± 4. 87, 28. 67 ± 5. 63 and 65. 74 ± 8. 19 respectively, displaying that the improvement of learning and memory abilities caused by auricular acupuncture treatment may be related to the up-regulation of bcl-2 expression (an inhibitory gene of apoptosis). In comparison with control group, the loss of neurons in the pyramidal cell layer of the hippocampal CA, area of VD group was more severe, while that of acupuncture group was markedly lighter. Conclusion: Auricular acupuncture of otopoint " Nao "-point and "Shen" (MA-SC) can raise the learning and memory abilities of VID rats, which may be realized by its inhibitory effect on apoptosis and the protection action on ischemic hippocampal neurons.

200- gera: 106357/di/ra
[MUTUALLY APPROPRIATE FOR BOTH SPRING SILKWORM AND RED CANDLE-IN MEMORY OF PROF. HUANG WEN-DONG, FAMOUS EDUCATOR OF CHINESE MEDICINE IN SHANGHAI]. LOU SHAO-LAI. **knowledge of ancient medical literature.** 2002;19(3):21 (chi).

201- gera: 106494/di/ra
[AN EXPERIMENTAL STUDY ON THE EFFECTS OF DLXNP ON LEARNING AND MEMORY ABILITY AND CEREBRAL EAAS IN RAT MODELS OF VASCULAR DEMENTIA]. ZHOU XIAOQING, LU WANGHUA LI HUA ET AL. **journal of hunan college of traditional chinese medicine.** 2002;22(2):4 (chi*).

202- gera: 106629/di/ra
[EXPLORE AND CARRY FORWARD A VETERAN THOROUGHBRED ' S SPINT-IN MEMORY OF PROF. WANG YU- RUN]. XU LIE-MING. **knowledge of ancient medical literature.** 2002;2:15 (chi).

203- gera: 106691/di/ra
[THE IMPROVEMENT OF MEMORY IN VASCULAR DEMENTIA MODEL OF RATS BY ELECTRO - ACUPUNCTURE]. WANG LI. **new journal of traditional chinese medicine.** 2002;34(9):70 (chi).

204- gera: 106716/di/ra
[INFLUENCE OF JIAN - NAO - NING ON MEMORY BEHAVIOR OF RAT WITH MIDDLE CEREBRAL ARTERY OBSTRUCTION.]. SHI JING ET AL . **information on traditional chinese medicine.** 2002;19(3):74 (chi).

205- gera: 106841/di/ra
[CLINICAL STUDY ON RELATIONSHIP BETWEEN MEMORY QUOTIENT , ESTROGEN AND CHINESE NOURISHING KIDNEY HERBS IN PERIMENOPAUSAL WOMEN*]. JING SU-YU, WEI MEI-JUAN. **chinese journal of integrated traditional and western medicine.** 2002;22(7):494 (chi*).

206- gera: 106984/di/ra
[EFFECT AND MECHANISM OF COMPOUND RADIX ASTRAGELI LIQUID ON LEARNING AND MEMORY FUNCTIONS OF SENILE MICE]. HUANG FEIHUA, CHEN YONGCAN, ZHU WANPING, ET AL. **journal of zhejiang college traditional chinese medicine.** 2002;26(4):57 (chi*).

207- gera: 107373/di/ra
ENHANCED EXPRESSION OF PHOSPHO-AKT BY ELECTRO-ACUPUNCTURE IN NORMAL RAT BRAIN. WANG SJ ET AL. **neurol res.** 2002;24(7):719-24 (eng).
Electro-acupuncture (EA) is an effective curative method for various diseases in oriental medicine. To investigate a detailed molecular mechanism of EA stimulation, an induction of phospho-Akt (p-Akt) was examined in normal adult rat brain after 60 min of EA with acupoints of Baihui (D20) and Renzhong (D26). In the sham control brain, strong neuronal p-Akt expression was found in ventral posterolateral thalamic nucleus (VPL) and medial habenular nuclei (MHb), but moderate to weak in cortex, caudate, CA1 sector and

dentate gyrus of hippocampus, and ventral posteromedial thalamic nucleus. EA stimulation generally enhanced and sustained p-Akt expression for at least 24 h especially in the regions listed above, except VPL and MHb where no apparent change was found. Western blot analysis of p-Akt confirmed the enhanced signal intensity after EA at 8 and 24 h. These results suggest that the EA on D20 and D26 acupoints activates the survival Akt signal pathway, which may be maintaining the neural functions such as cell survival and memory formation in normal brain.

208- gera: 107432/di/ra
[EFFECTS OF ELECTROACUPUNCTURE ON LEARNING AND MEMORY ABILITY AND ULTRASTRUCTURES OF HIPPOCAMPUS NEURONS IN RATS OF WHOLE CEREBRAL ISCHEMIA]. WANG LI, LAI XINSHENG, LEI WEIWEI. **chinese acupuncture and moxibustion.** 2002;22(1):47 (chi*).
Purpose : To observe effects of electroacupuncture (EA) on learning and memory ability and neurons of hippocampus in the rat of vascular dementia (VD). Methods : In four vessels occlusion (4-vo) model rats, Morris water maze tests were used for behavioural study. Ultrastructural changes of neurons in hippocampus were observed with transmission electron microscope. Results : The model animals needed more escape time (latency) than the control animals in place navigation test, and they did not swim more times in platform quadrant than in the others in spatial probe test. The ultrastructure of neurons in hippocampus were altered obviously and damaged severely. In the EA group and Nimoton group, the latencies were not different from control group rats in place navigation test and in the spatial probe test, the two groups rats swam more times in platform quadrant than in other three quadrants. Compared with the model group, the damage of the neurons of hippocampus, in the EA and Nimoton groups was obviously slight. Conclusion : EA can improve learning and memory ability in VD model rats, and it can also improve markedly ultrastructural alteration of neurons in brain, inhibiting the demage of

209- gera: 107543/di/ra
[EFFECT OF BUSHEN YIZHI RECIPE ON BRAIN B-AMYLOID PRECURSOR PROTEIN IN RAT MODEL OF ALZHEIMER DISEASE*]. GAO JIE, LAI SHI-LONG, RAO YAN. **chinese journal of integrated traditional and western medicine.** 2002;22(9):677 (chi*).

210- gera: 107687/di/ra
[COMPARATIVE RESEARCH OF EFFECT OF ZIPIYIZHI DECOCTION ON THREE KINDS OF ALZHEIMER ' S DISEASE MOUSE MODELS]. X. **chineses archives of tcm.** 2002;20(4):439 (chi*).

211- gera: 107704/di/ra
[AN EXPERIMENTAL STUDY ON THE EFFECTS OF DLXNP ON LEARNING AND MEMORY ABILITY, CEREBRAL SOD, MDA AND CA 2+ IN RATS WITH VASCULAR DEMENTIA]. ZHOU XIAOQING, LU WANGHUA, LI HUA, ET AL. **journal of hunan college of tcm.** 2002;22(3):1 (chi*).

212- gera: 107748/di/ra
[EFFECT OF HUOLIJING GRANULES ON ABILITIES OF LEARNING AND MEMORY IN NORMAL ADULT RATS]. YANG YU-FU, LU XIONG-WEN, MA CHUAN-GENG. **journal of anhui traditional chinese medical college.** 2002;21(5):45 (chi*).

213- gera: 108011/di/ra
[11 CASES OF ALZHEIMER ' S DISEASE TREATED BY ACUPUNCTURE]. DONG HONG-TAO, JIN YUAN-GUANG, AU YING. **acta universitatis traditionis medicalis sinensis pharmacologiaeque shanghai.** 2002;16(3):26 (chi*).
In order to observe the therapeutic effect in the acupuncture treatment of Alzheimer's disease , 32 cases of AD patients were divided into the three groups of the acupuncture group (acupuncture treatment) , medication group (Hupperzine) and control group (psychological consultation) and were treated for three months, to observe memory, intelligent status, daily life ability and improvement of the symptoms in the various groups by MMSE , ADL scale and integral of clinical symptoms. The results showed that MMSE integral was enhanced obviously and ADL and symptom integral were obviously decreased in the acupuncture group and medication group, but without any obvious change in the control group. The findings indicate that acupuncture and Harboin are somewhat effective for AD, but the former is better in the improvement of some symptoms than the latter.

214- gera: 109116/di/ra
JIAN NAO NING FOR TREATMENT OF MEMORY IMPAIRMENT IN PATIENTS WITH MILD OR MODERATE MULTI- INFARCT DEMENTIA. TIAN JINZHOU, YIN JUNXIANG, LIU HUAN, ET AL. **journal of tcm.** 2002;22(4):247 (eng*).
In order to inquire into the therapeutic effects of Xiao Shi Xiong Huang San qiA--6*jtfA the Nitrum and Realgar Powder), one of the Dunhuang Prescription, on angina pectoris due to coronary heart disease (APCHD), the authors have treated 61 cases of APCHD by externally applying paste of the powder on Zhiyang (GV 9), with another 30 cases of APCHD treated with the nitroglycerin paste on Zhiyang as the controls. The results showed that the total effective rate was 82% and markedly effective rate 31.2% in the treatment group (the Paste of Nitrum and Realgar Powder), and the total effective rate was 46.6% and markedly effective rate 23.2% in the control group (the nitroglycerin paste). The difference in therapeutic effects between the two groups was very significant (P<0.01) , indicating that the therapeutic effect of the former was significantly superior to that of the latter.

215- gera: 111261/di/ra
[EFFECTS OF ELECTROACUPUNCTURE ON LEARNING AND MEMORY ABILITY AND ULTRASTRUCTURES OF HIPPOCAMPUS NEURONS IN RATS OF WHOLE CEREBRAL ISCHEMIA]. WANG LI, LAI XINSHENG, LEI WEIWEI. **chinese acupuncture and moxibustion.** 2002;22(1):47 (chi*).
Purpose : To observe effects of electroacupuncture (EA) on learning and memory ability and neurons of hippocampus in the rat of vascular dementia (VD). Methods : In four vessels occlusion (4-vo) model rats, Morris -ater maze tests were used for behavioural study. Ultrastructural changes of neurons in hippocampus were observed with transmission electron microscope. Results : The model animals needed more escape time (latency) than the control animals in place navigation test, and they did not swim more times in platform quadrant than in the others in spatial probe

test. The ultrastructure of neurons in hippocampus were altered obviously and damaged severely. In the EA group and Nimoton group, the latencies were not different from control group rats in place navigation test and in the spatial probe test, the two groups rats swam more times in platform quadrant than in other three quadrants. Compared with the model group, the damage of the neurons of hippocampus in the EA and Nimoton groups was obviously slight. Conclusion : EA can improve learning and memory ability in VD model rats, and it can also improve markedly ultrastructural alteration of neurons in brain, inhibiting the damage of neurons.

216- gera: 113320/di/ra
[MEMORY METHODS OF LOCATIONS AND INDICATIONS OF SCALP ACUPUNCTURE]. TIAN KAIYU. **chinese acupuncture and moxibustion.** 2002;22(2):113 (chi*).

217- gera: 116311/di/ra
[MEMORY METHODS OF LOCATIONS AND INDICATIONS OF SCALP ACUPUNCTURE]. TIAN KAIYU. **chinese acupuncture and moxibustion.** 2002;22(2):113 (chi*).
In the 6th edition of TCM higher education textbook, Acupuncture anti moxibustion, the locations and indications of scalp-acupuncture are introduced in order of the four regions, forehead, vertex, temporal and occiput, respectively. In order to make the memory easier, the author classifies the 14 standard scalp acupuncture lines into two ordinates (IO lines) and diagonals (4 lines) I and sub-classifies them according to their anatomic regions and involved acupoints, By comparing and analyzing their locations and indications, some simple and easy - memory features have been summed up. This article win benefit to quickly learn and practice scalp acupuncture for TCM college students and medical workers who have not studied acupuncture systematically.

218- gera: 117352/di/tt
LOS OLVIDOS DE LA MEMORIA - A PROPOSITO DE LA ACUPUNTURA COMO TRATAMIENTO DE LA ENFERMEDAD DE ALZHEIMER BASADO EN EL CODIGO GENETICO DESCRITO EN EL I-CHING. DE NAVERAN T. **miraguano s a ediciones, madrid.** 2002;:185P (esp).

219- gera: 144640/0/tp
WUJIN MEDICINE REMEMBERED: MEMORY, IDENTITY AND SOCIAL NETWORKS IN CHINESE MEDICINE 1800- 2000, SCHEID V. **taiwanese journal for studies of science, technology, and medicine.** 2002;2:121-84 (eng).
The present article examines by means of a case study approach how four different medical traditions that originated in Wujin County, Jiangsu Province, in late imperial China have been remembered since. The study shows that representations of Wujin medicine and the social networks in which these representations circulate change over time as a variety of social agents participate in the shaping of social memory. These agents include physicians competing for patients, fame and status, who exploit their relation to medical resources for both clinical and non-clinical ends; patients, who seek physicians in order to cure their afflictions but also to engage with them in a social dialogue; politicians, who import ideological struggles into the field of medicine; scholars, who use medicine as a tool in status competitions between regions and localities; and others related to the above through reciprocal social obligations of various kinds. Drawing inspiration from an interdisciplinary range of sources that include genealogical approaches in Western philosophy, actor-network theory in the cultural studies of science, and work on social memory in anthropology and area studies, the interaction between these various agents is described as an ongoing labour that conjoins the formation of social identities to the shaping of the clinical practice, doctrinal content and institutional organization of medicine in such a manner that they mutually determine each other. As a result of this labour diverse memories of Chinese medicine circulate in networks of different shapes and sizes that are more or less enduring. Elements of one network can be assimilated into another and thereby brought into its memory of itself, but also dis-assimilated and thereby forgotten. The value of this approach is, first and foremost, that it allows for a mode of analysis that grasps medicine as intrinsically plural and unstable. Furthermore, it links work in the social history of Chinese medicine to that in a variety of other fields and thereby hopes to benefit all through increased cross-fertilization.

220- gera: 111385/di/ra
[MUE NEC OF CORIDUS VERSICOLAR POLYSACCHARIDE ON THE RAT'S LEARNING AND MEMORY DISTURBANCE CAUSED BY STRESS]. HU WANG-PING, ET AL. **journal of traditional medical science and technology.** 2003;10(1):32 (chi*).

221- gera: 111391/di/ra
[COMPARATIVE STUDY ON THE EFFECTS OF TONIFYING KIDNEY NOURISHING LIVER AND STRENGTHENING SPLEEN ON MOUSE'S MEMORY DISTURBANCE]. WU ZHENG-ZHI, ET AL. **journal of traditional medical science and technology.** 2003;10(1):41 (chi*).

222- gera: 111392/di/ra
[EFFECT OF INVIGORATING LIVER AND NOURISHING MARROW METHOD ON THE DISTURBANCE OF MOUSE'S MEMORY ACQUIRENENT, CONSOLIDATION AND REPETITION.]. WU ZHENG-ZHI, ET AL. **journal of traditional medical science and technology.** 2003;10(1):42 (chi).

223- gera: 112058/di/ra
[EFFECTS OF ELECTROACUPUNCTURE ON LEARNING AND MEMORY AND THE PRODUCING SYSTEM OF FREE RADICALS IN BRAIN TISSUE IN THE RAT OF VASCULAR DEMENTIA]. WANG LI, TANG CHUNZHI. **journal of tcm.** 2003;44(1):25 (chi*).

224- gera: 112964/di/ra
[EFFECT OF BUSHEN HUOXUE RECIPE ON LEARNING AND MEMORY DYSFUNCTION AND HIPPOCAMPAL NERVE CELL APOPTOSIS IN MICE WITH CEREBRAL ISCHEMIA/REPERFUSION INJURY*]. TIAN GUO-QING, GUO SAI-SHAN, LU HE-QI. **chinese journal of integrated traditional and western medicine.** 2003;23(2):123 (chi*).

225- gera: 112990/di/ra
[TANGERINE GREEN IN SOUTHERN YANGTSZ RIVER, FRAGRANCE SPREADING IN NORTHERN

CHINA -IN MEMORY OF TEACHER ZHANG LIAN-QIN]. YAO SHAO-WU. **knowledge ancient medical literature.** 2003;20(1):12 (chi).

226- gera: 113250/di/ra
[A STUDY ON TCM SYNDROME CATEGORY OF ALZHEIMER DISEASE AND DISEASE NAME]. XING BIN, YAN QIANLIN. **jiangsu journal of tcm.** 2003;24(2):47 (chi).

227- gera: 113339/di/ra
[EXPERIMENTAL STUDY OF EFFECT OF SPINE DATE SEED DECOCTION ON MEMORY ABILITY]. DUAN RUI,HUANG PENG,ZHANG HONG,ET AL. **fujian journal of tcm.** 2003;34(1):37 (chi).

228- gera: 113403/di/ra
[INFLUENCE OF COMBINING ACUPUNCTURE AND MEDICINE ON NO AND NOS IN RATS' HIPPOCAMPI WITH ACQUIRED LEARNING-MEMORY DISTURBANCE AND THEIR CORRELATION]. MU YY LI ZR SHENG MH ET AL. **shanghai journal of acupuncture and moxibustion.** 2003;22(3):3 (chi*).

229- gera: 113700/di/ra
[EFFECT OF ELECTROACUPUNCTURE ON IMPAIRMENT OF LEARNING AND MEMORY INDUCED BY CHRONIC STRESS AND CHOLINERGIC FUNCTION OF HIPPOCAMPUS IN RATS]. HU WANG-PING, ZHANG JIAN, HU SHENG-WANG, ET AL. **liaoning journal of tcm.** 2003;30(3):215 (chi*).

230- gera: 114082/di/ra
[EXPERIMENTAL STUDY ON EFFECT OF YIZHI ORAL LIQUID LEARNING, MEMORY AND ACTS OF BABY MICE]. SHI ZHENGGANG. **journal of gansu college of tcm.** 2003;20(1):10 (chi).

231- gera: 114191/di/ra
[EFFECT OF BUSHEN YIZHI PRESCRIPTION ON LEARNING AND MEMORY IN OVARIECTOMIZED RATS]. ZHOU JIEMING, LAI SHILONG, HU JINGQING, ET AL. **traditional chinese drug research and clinical pharmacology.** 2003;14(2):99 (chi*).

232- gera: 114376/di/ra
[MUE NEC OF CORIDUS VERSICOLAR POLYSACCHARIDE ON THE RAT'S LEARNING AND MEMORY DISTURBANCE CAUSED BY STRESS]. HU WANG-PING, ET AL. **journal of traditional medical science and technology.** 2003;10(1):32 (chi*).

233- gera: 114382/di/ra
[COMPARATIVE STUDY ON THE EFFECTS OF TONIFYING KIDNEY NOURISHING LIVER AND STRENGTHENING SPLEEN ON MOUSE'S MEMORY DISTURBANCE]. WU ZHENG-ZHI, ET AL. **journal of traditional medical science and technology.** 2003;10(1):41 (chi*).

234- gera: 114383/di/ra
[EFFECT OF INVIGORATING LIVER AND NOURISHING MARROW METHOD ON THE DISTURBANCE OF MOUSE'S MEMORY ACQUIREMENT, CONSOLIDATION AND REPETITION.]. WU ZHENG-ZHI, ET AL. **journal of traditional medical science and technology.** 2003;10(1):42 (chi).

235- gera: 115049/di/ra
[EFFECTS OF ELECTROACUPUNCTURE ON LEARNING AND MEMORY AND THE PRODUCING SYSTEM OF FREE RADICALS IN BRAIN TISSUE IN THE RAT OF VASCULAR DEMENTIA]. WANG LI, TANG CHUNZHI. **journal of tcm.** 2003;44(1):25 (chi*).
Objective : To observe regulative action of electroacupuncture (EA) on learning and memory and the producing system of free radicals in the rat of experimental vascular dementia (VD) . Methods : In the 4-VO model rat of vascular dementia (VD), learning and memory were detected by morris's water maze , and nitric oxide (NO), malondiadehyde (MDA) contents, nitric oxide synthase (NOS), superoxide dismutase (SOD) and glutathione peroxidase (GSH - Px) activities in the brain were determined. Results : The model rat had obvious learning and memory disorder, -and had significantly longer escape latency in the orientation navigation experiment as compared with that of false operation group; and the running over platform times in the original platform quadrant were not significantly higher than other 3 quadrants in the space exploration test. While in the EA group, the escape latency was shortened; the running over platform times in the original platform quadrant were significantly more than other 3 quadrants, with no significant difference to the false operation group. NOS activity, NO and MDA contents in the brain tissue in the model group increased significantly, SOD, GSH - Px activities decreased significantly with significantly differences as compared with that of the false operation group, EA group and Nimotop group (P<0. 05 or P< 0. 01). It is indicated that NO. MDA contents and NOS activity decrease in the EA group and the Nimotop group, and SOD and GSH - Px activities increase in varying degrees in the brain tissue. Conclusion : EA can regulate the balance of production and elimination of free radicals , and can relieve lesion of nervous cells of the brain due to ischemia, so as to improve learning and memory in the rat of VD.

236- gera: 115955/di/ra
[EFFECT OF BUSHEN HUOXUE RECIPE ON LEARNING AND MEMORY DYSFUNCTION AND HIPPOCAMPAL NERVE CELL APOPTOSIS IN MICE WITH CEREBRAL ISCHEMIA/REPERFUSION INJURY*]. TIAN GUO-QING, GUO SAI-SHAN, LU HE-QI. **chinese journal of integrated traditional and western medicine.** 2003;23(2):123 (chi*).

237- gera: 115981/di/ra
[TANGERINE GREEN IN SOUTHERN YANGTZE RIVER, FRAGRANCE SPREADING IN NORTHERN CHINA -IN MEMORY OF TEACHER ZHANG LIAN-QIN]. YAO SHAO-WU. **knowledge ancient medical literature.** 2003;20(1):12 (chi).

238- gera: 116241/di/ra
[A STUDY ON TCM SYNDROME CATEGORY OF ALZHEIMER DISEASE AND DISEASE NAME]. XING BIN, YAN QIANLIN. **jiangsu journal of tcm.** 2003;24(2):47 (chi).

239- gera: 116330/di/ra
[EXPERIMENTAL STUDY OF EFFECT OF SPINE DATE SEED DECOCTION ON MEMORY ABILITY]. DUAN RUI,HUANG PENG,ZHANG HONG,ET AL. **fujian journal of tcm.** 2003;34(1):37 (chi).

240- gera: 116394/di/ra
[INFLUENCE OF COMBINING ACUPUNCTURE AND MEDICINE ON NO AND NOS IN RATS' HIPPOCAMPI WITH ACQUIRED LEARNING-MEMORY DISTURBANCE AND THEIR CORRELATION]. MU YY LI ZR SHENG MH ET AL. **shanghai journal of acupuncture and moxibustion.** 2003;22(3):3 (chi*).
Objective : To study the correlation between NO and NOS and learning-memory disturbance in rats, and further to explore the possible mechanism of combining acupuncture and medicine in the treatment of it. Methods : 10 rats in every group were modeled to be with learning-memory disturbance by scopolamine, and then treated with nimodipine, single acupuncture, and combining acupuncture and medicine respectively. Jumping-platform and labyrinth tests were conducted. The landing period and the contents of NO and NOS in the rats' hippocampi were compared correlatively. The improvements of learning-memory capacity in every group were compared. Results : The content of No (1. 300±0.14 umol/g) and activity of NOS (0. 064 ± 0. 007 u/mg) were significantly lower in single acupuncture group than in nimodipine group (0. 808 ± 0. 23 umol/g 9 0. 056 ± 0. 012 u/mg) and combining acupuncture and medicine group (0. 705 ± 0. 52 umol/g, 0. 047 ± 0. 005 u/mg) (P <0. 05). The learning-memory disturbance was improved obviously less in single acupuncture group than in nimodipine group and combining acupuncture and medicine group. Conclusion : Combing acupuncture and medicine has better effects than single acupuncture in inhibiting NOS activity and thus reduce the damage of neurons.

241- gera: 116691/di/ra
[EFFECT OF ELECTROACUPUNCTURE ON IMPAIRMENT OF LEARNING AND MEMORY INDUCED BY CHRONIC STRESS AND CHOLINERGIC FUNCTION OF HIPPOCAMPUS IN RATS]. HU WANG-PING, ZHANG JIAN, HU SHENG-WANG, ET AL. **liaoning journal of tcm.** 2003;30(3):215 (chi*).
Objective :To study the effect of electroacupuncture on the spatial learning and memory dysfunction induced by chronic stress and cholinergic function of hippocampus in rats. Methods: The learning and memory impairment model in adult rats was induced by electric foot companied -with noise. The spatial learning and memory abilities were observed by Morris water maze. Radioimmunoassay technology was used to measured the content of acetylcholine(Ach) and the activity of choline acetyltransferase (ChAT) and acetylcholinesterase(AchE) . Results : Chronic stress induced spatial learning and memory dysfunction, and the content of Ach and the activity of ChAT and AchE in hippocampus were significantly decreased. Electroacupuncture improved stressful rats cognitive function and increased the content of Ach and the activity of ChAT and AchE in hippocampus. Conclusions : Improvement of the spatial learning and memory dysfunction by electroacupuncture in rats induced by chronic

242- gera: 117073/di/ra
[EXPERIMENTAL STUDY ON EFFECT OF YIZHI ORAL LIQUID LEARNING, MEMORY AND ACTS OF BABY MICE]. SHI ZHENGGANG. **journal of gansu college of tcm.** 2003;20(1):10 (chi).

243- gera: 117182/di/ra
[EFFECT OF BUSHEN YIZHI PRESCRIPTION ON LEARNING AND MEMORY IN OVARIECTOMIZED RATS]. ZHOU JIEMING, LAI SHILONG, HU JINGQING, ET AL. **traditional chinese drug research and clinical pharmacology.** 2003;14(2):99 (chi*).

244- gera: 117854/di/ra
[CLINICAL EFFECT OF SHAPE-MEMORY HOOK IN THE MANAGEMENT OF SPONDYLOLYSIS]. LI CHONG-MAO, CHEN CHANG-WEI, XIN YONG-MING,ET AL. **journal of cervicodynia and lumbodynia.** 2003;24(4):196 (chi*).

245- gera: 118069/di/ra
[INFLUENCE OF SPLEEN DEFICIENCY ON SPATIAL LEARNING AND MEMORY IN RATS]. JI LI-JIN,BAI ZHENG-YONG,WANG PING,ET AL. **journal of fujian college of tcm.** 2003;13(4):34 (chi*).

246- gera: 118443/di/ra
[TREATMENT OF ALZHEIMER'S DISEASE BY INTEGRATED TCM AND WM - - - PRESENT SITUATION AND PROSPECT]. WEI HUILI. **shaanxi journal of tcm.** 2003;24(9):857 (chi).

247- gera: 118933/di/ra
[CLINICAL STUDY ON TREATMENT OF ALZHEIMER'S DISEASE FROM THE VIEWPOINT OF XIN AND SHEN*]. LIN SHUI-MIAO, WANG JIAN, ZHOU RU-QIAN, ET AL. **chinese journal of integrated traditional and western medicine.** 2003;23(8):583 (chi*).

248- gera: 118934/di/ra
[ESTABLISHMENT OF ANALOGOUS OXIDATIVE DAMAGED ALZHEIMER'S DISEASE RAT MODEL AND EFFECT OF TIAOXIN RECIPE ON IT]. QIU HONG, JIN GUO-QIN, ZHAO WEI-KANG, ET AL. **chinese journal of integrated traditional and western medicine.** 2003;23(8):603 (chi*).

249- gera: 118938/di/ra
[STUDY ON ESTABLISHMENT OF ALZHEIMER'S DISEASE ANIMAL MODEL AND INTERVENING EFFECT OF ZHINAO CAPSULE ON IT*]. HAN MING-XIANG, YANG WEN-MING, LI ZE-GENG, ET AL. **chinese journal of integrated traditional and western medicine.** 2003;23(9):688 (chi*).

250- gera: 118939/di/ra
[EXPERIMENTAL STUDY OF CONGYING GRANULE IMPROVING DISTURBANCE OF LEARNING AND MEMORY DUE TO PHENYTOIN SODIUM]. YAN SHUXUN , ET AL. **hubei journal of tcm.** 2003;25(9):5 (chi).

251- gera: 118941/di/ra
EFFECTS OF MODIFIED DANGGUI SHAOYAO POWDER ON MEMORY AND IL-10, IL-6 AND NO CONTENTS IN THE BRAIN TISSUE IN AD MODEL MOUSE. LIU MENGYUAN, XIAO LIUYING, PAN JINGQIANG, ET AL. **journal of tcm.** 2003;44(9):693 (eng).

252- gera: 119560/di/ra
[EFFECT OF KIDNEY-TONIFYING RECIPE ON SPATIAL LEARNING AND MEMORY ABILITY AND CHOLINERGIC SYSTEM IN RATS WITH AMYLOID-B25-35 INJECTED INTO AMYGDALE.]. LIU XUE-YUAN, ZHAO WEI-KANG, XU PIN-CHU, ET AL. **modern journal of integrated traditional chinese and**

western medicine . 2003;12(19):2042 (chi*).

253- gera: 119575/di/ra
[EFFECT OF YIQI FUZHI GRANULE IN IMPROVING LEARNING AND MEMORY OF RATS WITH MULTI - INFARCT DEMENTIA]. ZHOU JIANYING, JIANG CHUNHUA, WANG MINGYAN. **traditional chinese drug research and clinical pharmacology.** 2003;14(5):301 (chi*).

254- gera: 119644/di/ra
[EFFECT OF TIAOXIN PRESCRIPTION ON THE ANTIOXIDATIVE ABILITY OF BRAIN TISSUE IN RATS WITH ALZHEIMER DISEASE]. SUN QUAN, ET AL. **chinese journal of traditional medical science and technology.** 2003;10(5):273 (chi).

255- gera: 119913/di/ra
[SIGNIFICANCE OF CEREBROSPINAL FLUID AP DETECT FOR ALZHEIMER'S DISEASE DIAGNOSIS IN EARLY STAGE]. ZHANG XUE-LING, DING XIN-SHENG, CHENG HONG, ET AL. **modern journal of integrated traditional chinese and western medicine .** 2003;12(8):789 (chi*).

256- gera: 120123/di/ra
[DIFFERENTIAL DIAGNOSIS OF ALZHEIMER'S DISEASE AND VASCULAR DEMENTIA]. ZHANG SHENGLIN XIN HUICHUEN GAO BINGBING. **chinese journal of integrative medicine on cardio-/cerebrovascular disease.** 2003;1(4):204 (chi*).

257- gera: 120192/di/ra
EFFECT OF TIAOXIN RECIPE ON SPATIAL MEMORY AND ENERGY METABOLISM OF OXIDATION INJURED ALZHEIMER 'S DISEASE RATS. QIU HONG, JIN GUO-QIN, ZHAO WEI-KANG, ET AL. **chinese journal of integrative medicine.** 2003;9(1):44 (eng*).

258- gera: 120829/di/ra
[INFLUENCE OF LINAOSHEN ON LEANING AND MEMORY OF MODEL ANIMAL]. DI LIN, ET AL. **chinese journal of traditional medical science and technology.** 2003;10(3):163 (chi).

259- gera: 121180/di/ra
[STUDY ON THE EFFECT OF ACUPUNCTURE IN THE PREVENTION AND TREATMENT OF LEARNING-MEMORY DECLINE IN DIABETES MELLITUS RATS]. WANG YUAN-CHAO, ZHU LI-XIA, LIU ZHONG-WU, ET AL. **acupuncture research.** 2003;28(1):21 (chi*).

260- gera: 121277/di/ra
[TCM PATHOGENESIS OF HYPOMNESIS IN MIDDLE AND IN OLD PEOPLE]. WANG PING, MA ZUO-FENG, LIU PING. **chinese journal of basic medicine in tcm.** 2003;9(5):11 (chi*).

261- gera: 121524/di/ra
[A BRILLIANT LIFE CONTRIBUTED TO KAMPOO MEDICINE -IN MEMORY OF MR. YAKAZU DOMI, A MASTER OF JAPANESE KAMPOO MEDICINE]. YU XUE-RU. **knowledge of ancient medical literature.** 2003;20(2):22 (chi).

262- gera: 121901/di/ra
[EFFECT OF GEN-SENG CORDYCEPS ORAL LIQUID ON IMPROVING ABILITIES TO STUDY AND MEMORY]. LIU MINGPING,HUANG ZHAOSHENG. **traditional chinese medicinal research.** 2003;16(3):12 (chi).

263- gera: 121964/di/ra
[ANTI-AGING AND WIT-BENEFITING EFFECTS OF YANG SHOU DAN ON RATS WITH ALZHEIMER'S DISEASE COMBINING DEFICIENCY OF KIDNEY YANG]. HUANG ZHAO-SHENG, SUN WEI-GUANG, LIU MING-PING, ET. **chinese journal of basic medicine in tcm.** 2003;9(6):36 (chi).

264- gera: 122294/di/ra
[EXCITING STUDENT'S MEMORY POTENTIAL, AN IMPORTANT SECTOR OF TEACHING REFORM IN ANATOMY]. YOU YANWEN, TIAN XINHONG. **journal of henan university of chinese medicine.** 2003;18(106):68 (chi*).

265- gera: 122526/di/ra
[EXPERIMENTAL RESEARCH ON THE MECHANISMS OF THE EFFECT OF COMPOUND RHUBARB ANTIAGING PREPARATION FOR ENHANCING MEMORY]. REN YING, SONG CHONGSHUN, GUO JING, ET AL. **journal of beijing university of tcm.** 2003;26(3):35 (chi*).

266- gera: 123223/di/ra
[EXPANSION OF PURPOSE AND METHODS OF TCM TREATMENT IN ALZHEIMER'S DISEASE]. YAN QIANLIN, XING BIN . **journal of tcm.** 2003;44(10):725 (chi).

267- gera: 123638/di/ra
[EFFECT OF NAOLI ZHIBAO ON NEURON APOPTOSIS IN RATS WITH ALZHEIMER'S' DISEASE]. ZHU CHENG-QUAN, LI RUI, ZHOU LI-LIN, ET AL. **journal of anhui traditional chinese medical college.** 2003;22(5):47 (chi*).

268- gera: 123663/di/ra
[EXPANSION OF PURPOSE AND METHODS OF TCM TREATMENT IN ALZHEIMER'S DISEASE]. YAN QIANLIN, XING BIN . **journal of tcm.** 2003;44(10):725 (chi).

269- gera: 126607/di/ra
[EFFECT OF ELECTROACUPUNCTURE ON LEARNING AND MEMORY AND APOPTOSIS OF HIPPOCAMPAL NEURONS IN VASCULAR DEMENTIA RATS]. LAI XIN-SHENG, WANG LI. **acupuncture research.** 2003;28(4):245 (chi*).
In the present paper, the authors summarize their results of 30 cases of external humeral epicondylitis treated with thermal acupuncture of Chongyang (ST 42) and Ashi-points. After 3-15 sessions of treatment, of the 30 cases, 24 (80%) were cured, and the rest 6 (20%) responded with apparent improvement in their symptoms. latency of rats in' model group increased considerably (P < 0. 01) ; while in comparison with model group, the increased escape latency values of rats in EA and medication groups were shortened significantly (P < 0. 01). No significant differences were found between EA and sham-operation, and between medication and sham-operation groups (P >0. 05) . Spatial probe test displayed that the number of rats passing through the original platform in model group was obviously smaller than that of rats in the rest 3 groups (P < 0.01) , while no significant differences between EA group or medication group and sham-

operation group (P >0. 05) . It showed that administration of EA and Nimodipine could improve the learning and memory of VD rats. The apoptotic neurons of EA and medication groups were significantly fewer than those of model group in both the cerebral cortex and CAI area of hippocampus, and no significant difference was found between EA and medication groups, suggesting that both EA and medication could suppress ischemia-reperfusion induced apoptosis. Conclusion: Electroacupuncture can improve the learning and memory of VD rats and inhibit cerebral apoptosis after cerebral ischemia-reperfusion.

270- gera: 142586/di/ra
[INFLUENCE OF COMBINING ACUPUNCTURE AND MEDICINE ON NO AND NOS IN RATS' HIPPOCAMPI WITH ACQUIRED LEARNING-MEMORY DISTURBANCE AND THEIR CORRELATION]. MU YY, LI ZR, SHENG MH,AL. **shanghai journal of acupuncture and moxibustion.** 2003;22(3):3 (chi*).
Objective To study the correlation between NO and NOS and learning-memory disturbance in rats, and further to explore the possible mechanism of combining acupuncture and medicine in the treatment of it. Methods 10 rats in every group were modeled to be with learning-memory clisturbance by scopolamine, and then treated with nimodipine, single acupuncture, and combining acupuncture and medicine respectively. Jumping-platform and labyrinth tests were conducted. The landing period and the contents of NO and NOS in the rats' hippocampi were compared correlatively. The improvements of learning-memory capacity in every group were compared. Results The content of NO(1. 300-1-0. 14 iimol/g) and activity of NOS (0. 064 ± 0. 007 u/mg) were significantly lower in single acupuncture group than in nimodipine group (0. 808 ± 0. 23 tnnol/g , O. 056±0. 012 u/mg) and combining acupuncture and medicine group(0. 705±0. 52 bnol/g , O. 047±0. 005 u/mg) (P <0. 05). The learning-memory disturbance was improved obviously less in single acupuncture group than in nimodipine group and combining acupuncture and medicine group. Conclusion Combing acupuncture and medicine has better effects than sin-gle

271- gera: 124933/di/ra
[THE CLINICAL STUDY ON NEUROPSYCHOLOGICAL TEST IN THE ALZHEIMER DISEASE]. ZHANG YI, ZHANG SHENGLIN . **chinese journal of integrative medicine on cardio-/cerebrovascular disease.** 2004;2(1):17 (chi*).

272- gera: 127223/di/ra
[STUDY ON THE MECHANISM OF NAOFUCONG ()M IE U) GRANULE IN IMPROVING MEMORY OF CEREBRAL ISCHEMIC MICE]. ZHANG MENG-REN, GUO SAI-SHAN, XU HUI-YUAN, ET AL. **chinese journal of integrated traditional and western medicine.** 2004;24(2):147 (chi*).

273- gera: 127425/di/ra
[EXPERIMENTAL STUDY ON INFLUENCE OF KANGXIANYIZHI GRANULE ON LEARNING AND MEMORY OF RATS WITH EPILEPSY]. YAO FENGLI, ET AL. **journal of emergency in tcm.** 2004;13(4):238 (chi*).

274- gera: 128307/di/ra
[EFFECT OF TIANTAI NO.1 ON LEARNING, MEMORY AND NOS OF SPONTANEOUS AGED DEMENTIA MICE]. WU ZHENGZHI, YOU LONGWU, LI MING, ET AL. **chinese journal of integrative medicine on cardio-/cerebrovascular disease.** 2004;2(3):155 (chi*).

275- gera: 128423/di/ra
[STUDY ON PHARMACODYNAMICS EFFECT OF FUYUANBUNAO GRANULES ON ATPASE ACTIVITIES AND LIPID PEROXIDATION IN ALZHEIMER' DISEASE MOUSE]. LIU YONG-GI HE JIAN-CHENG ET AL. **chinese traditional patent medicine.** 2004;26(2):130 (chi*).

276- gera: 128434/di/ra
[EFFECT OF DIHUANGYINZI ON NO AND NOS CONTENTS IN BRAIN TISSUE AND BEHAVIOR OF SENILE RATS WITH ALZHEIMER DISEASE]. ME NING, LIU LIN, ZHOU YAN-YAN, ET AL. **chinese journal of traditional medical science and technology.** 2004;11(2):84 (chi).

277- gera: 129172/di/ra
[EFFECTS OF MODIFIED DANGGUI SHAOYAO POWDER ON MEMORY AND CONTENTS OF TAU PROTEIN AND FAS ANTIGEN IN BRAIN TISSUES OF ALZHEIMER'S DISEASE MODEL RAT]. LIU MENGYUAN, XIAO LIUYING, PAN JINGQIANG, ET AL. **journal of tcm.** 2004;45(5):378 (chi).

278- gera: 129541/di/ra
[SUPERFICIAL TALK BOUT THE FACTS OF TREATING ALZHEIMER'S DISEASE ACCORDING TO THE CONDITION OF KIDNEY]. YUAN QUAN ET AL . **academic periodical of changchun college of tcm.** 2004;20(2):3 (chi).

279- gera: 129999/di/ra
[EFFECTS OF BU SHEN XING NAO (BSXN) PRESCRIPTION ON BEHAVIORS OF LEARNING AND MEMORY IN VASCULAR DEMENTIA RATS]. FENG YIN-MAN ZHENG PANG,REN XIAO-QIAO . **chinese journal of basic medicine in tcm.** 2004;10(5):55 (chi).

280- gera: 130625/di/ra
[EFFECTS OF STILBENE - GLYCOSIDE ON LEARNING AND MEMORY AND INFLAMMATORY REACTION OF BRAIN IN DEMENTIA MICE]. CHU JIN, YE CUIFEI, LI LIN . **traditional chinese drug research and clinical pharmacology.** 2004;15(4):235 (chi*).

281- gera: 131246/di/ra
[EFFECT OF TIANTAI I ON STUDY AND MEMORY ABILITY OF MICE WITH AGNOSIA INDUCED BY ACUTE OR CHRONIC ALUMINIUM POISONING]. LIU ZHI-CHENG , WU ZHENG-ZHI, LI MING, ET AL. **chinese journal of traditional medical science and technology.** 2004;11(3):169 (chi).

282- gera: 131478/di/ra
EFFECTS OF ELECTROACUPUNCTURE ON LEARNING, MEMORY AND FORMATION SYSTEM OF FREE RADICALS IN BRAIN TISSUES OF VASCULAR DEMENTIA MODEL RATS. WANG LI, TANG CHUNZHI. **journal of tcm.** 2004;24(2):140 (eng*).
In order to observe the regulative effect of electro-acupuncture on the formation system of free radicals in

the brain tissues and learning and memory in vascular dementia (VD) model rats, the Morris's water labyrinth was used for testing the learning ability and memory in VD model rats made by 4-vessel occlusion method, and the activities or contents of nitric oxide (NO), NO synthase (NOS), superoxide dismutase (SOD), malondialdehyde (MDA), glutathione peroxidase (GSH-Px) were determined. Results showed that the mean escape latency in the electro- acupuncture group was markedly reduced in place test, and the times swam the place of the plate-form in the original plate-form quadrant were significantly more than those in the rest three quadrants in spatial probe test as compared with the model group. In the electro-acupuncture group and the nimodipine group the contents of NO and MDA and the activity of NOS were decreased, while the activities of SOD and GSH-Px were increased. It is indicated that electro-acupuncture can modulate the production and clearance of free radicals, and improve the

283- gera: 132417/di/ra
[THE DEVELOPMENT OF RESEARCH ABOUT THE RELATIVITY OF HIPPOCAMPUS AND MEMORY]. ZHANG MING, ZHOU MIN,DING XIANG-DONG. **guang ming journal of tcm.** 2004;114(5):21 (chi).

284- gera: 132862/di/ra
[) INFLUENCE ON GINATON TO LEARNING, MEMORY AND CONTENTS OF RELEVANT NEUROTRANSMITTER OF OLD RATS]. CHEN JIAN-ZONG , HUANG CHENG , GAO XIAN-YUAN , ET AL. **journal of chengdu university of tcm.** 2004;27(3):27 (chi).

285- gera: 132864/di/ra
[EFFECT ON NAO - LI - SHU CAPSULE TO ETHOLOGY , LEARNING AND MEMORY IN RAT WITH VASCULAR DEMENTIA]. YUE REN-SONG , CHEN ZHONG-YI. **journal of chengdu university of tcm.** 2004;27(3):32 (chi).

286- gera: 133153/di/ra
[EFFECT OF ACUPUNCTURE ON ACHE AND CHAT ACTIVITY OF HIPPOCAMPUS OF RATS]. WANG SHAO JING , LI AI-YING, ZHANG XUE JING . **journal of nanjing university of tcm.** 2004;20(5):289 (chi*).
OBJECTIVE To explore into the effect of acupuncture on AchE and ChAT activity of the hippocampus of rats. METHOD Labyrinth test was used to observe the effect of acupuncture on the learning ability of rats and hydrosulfide colorimetric analysis and immune composition method were used respectively to determine changes in AchE and ChAT activity. RESULT In the acupuncture group, there was greater changes in the AchE and ChAT activity than in the model group (P < 0.01) . Through labyrinth test it was found that the learning ability of the rats in the acupuncture group was better than the model group (P < 0.01) . CONCLUSION Acupuncture at points on Du

287- gera: 133157/di/ra
[EFFECT OF LINGZHI PILL ON RAT MODELS WITH DIFFERENT MEMORY DISTURBANCE]. BIAN HUI-MIN, YU JING-HUA, XU BING . **journal of nanjing university of tcm.** 2004;20(5):300 (chi).

288- gera: 133541/di/ra
INVESTIGACIONES DE LA ESCUELA: ENFERMEDADES GENÉTICAS. ALZHEIMER. X. **medicina tradicional.** 2004;194:5 (esp).

289- gera: 133711/di/ra
[EFFECTS OF LINGCAO LIQUID ON ENERGY METABOLISM IN THE BRAIN OF MODEL RATS OF ALZHEIMER'S DISEASE]. ZHANG WEI-JUAN , AN YU-HUI, FANG NA. **shandong journal of tcm.** 2004;23(8):488 (chi*).

290- gera: 134104/di/ra
[EFFECT OF ACUPUNCTURE ON FREE RADICAL SYSTEM AND CHOLINERGIC SYSTEM IN THE BRAIN OF ALZHEIMER'S DISEASE RATS]. WANG SHAO-JIN, KANG SUO-BIN, LI AI-YING. **acupuncture research.** 2004;29(2):102 (chi*).

291- gera: 134105/di/ra
[EFFECT OF ELECTROACUPUNCTURE OF "BAIHUI" POINT ON MEMORY-RETENTION AND EXPRESSION OF C - FOS PROTEIN IN THE HIPPOCAMPUS OF RATS]. JING YU-HONG, WANG ZI-REN. **acupuncture research.** 2004;29(2):107 (chi*).

292- gera: 134321/di/ra
[EFFECTS OF ALUM, ALUMINUM CHLORIDE AND ALUMINUM HYDROXIDE ON MEMORY, LIVER AND RENAL FUNCTION OF MICE]. WU YING-HONG, ET AL . **chinese journal of information on tcm.** 2004;11(11):971 (chi*).

293- gera: 135063/di/ra
ACUPUNCTURE IN THE TREATMENT OF ALZHEIMER DISEASE COMPLICATED BY AGITATION: A RANDOMIZED CONTROLLED PILOT STUDY. MILLEA PJ, REED BR. **medical acupuncture.** 2004;15(3):19 (eng*).
Background In addition to destroying cognitive function, Alzheimer disease (AD) often causes symptoms of agitation, frequently the reason foi institutionalization. Behavioral and pharmacological therapies are not always reliable; therefore, an effective complementary modality such a! acupuncture could be helpful.Objective To evaluate the effect of acupuncture in reducing symptoms of agitation in patients diagnosed with probable or possible AD. Design, Setting, and Patients Randomized, single-blind controlled trial of patients with probable or possible AD based on the criteria of the National Institute of Neurologic and Communicative Disorders and Stroke (NINCDS) and the Alzheimer and Related Disorders Association (ADRDA). Care givers had to have spent an average of 5 hours of contact daily with the patient over the preceding month, with the same amount of contact planned for the duration of the study. Of 13 interested patient-caregiver pairs, 10 were enrolled. Seven patients resided in assisted living, in which the caregiver informant was not a family member, and 3 lived at home with the spouse as informant. Interventions Group 1 patients received standard care plus 20-minute discussion sessions twice weekly for 2 weeks. Group 2 patients receiver standard care plus acupuncture, achieving De Qi at designated points (Ear Shenmen, Governor Vessel 20, Pericardium 6, Heart 7, and Yin Tang) with needles taped in place for 20 minutes twice weekly for 2 weeks. Group 3 patients received standard care plus placebo acupuncture using blunt acupuncture needle taped in place over the designated points for 20 minutes twice weekly for 2 weeks. Main Outcome Measures Baseline vs postintervention (collected 48-72 hours after the final intervention session) scores on the Mini-Mental State Examination (MMSE) and the Neuropsychiatric

Inventory (NPI), both validated questionnaires assessing cognitive impairment and be havioral disposition. Results Of the 10 pairs enrolled, 9 pairs completed the study: 4 were randomized to the acupuncture group, 2 to the placebo acupuncture group and 3 to control treatment. The median total baseline score on the MMSE was 10 (range, 0-24); the possible range (from low to high cognitive(ability) was from 0-30. The median severity score on the NPI at baseline was 41 (range, 24-71); the possible range (from lowest to highest fre quency x severity of symptoms) was from 0-144. Among the 9 pairs, differences between placebo and control observations were all modest, rang ing from 6 to -5 (median, 0: no change in symptoms). Score differences for acupuncture recipients were much larger, ranging from -6 to -31 (median between -18 and -273). An exact x2 test was made on a 2-x-2 table of acupuncture vs other treatments by score differences greater than vs less than or equal to the median of all 9 score differences. This yielded a 2-sided P=.047.Conclusions The improvement in agitation in the acupuncture group was consistent with the known effects of acupuncture on the central nervous system. A larger randomized trial is needed to generalize any of these findings to the clinical arena.

294- gera: 135129/di/ra
INVESTIGACIONES DE LA ESCUELA: ENFERMEDAD DE ALZHEIMER. HERMENEJILDA, URSULA, JUAN, CLAUDIA, RAFAEL, MARTA ARAGÓN. **medicina tradicional.** 2004;193:5 (esp).

295- gera: 136711/di/ra
[EFFECT OF ELECTROACUPUNCTURE ON IMPAIRMENT OF LEARNING-MEMORY AND LONG-TERM POTENTIATION IN THE RAT HIPPOCAMPAL CM REGION]. ZENG YAN, LIANG XUN-CHANG, LI MAN, ET AL. **acupuncture research.** 2004;29(4):245 (chi*).
Objective: To determine if chronic morphine treatment affects the rat's learning-memory ability and the induction of long-term potentiation (LTP) of hippocampal CA3 region, and to examine if electroacupuncture (EA) can improve learning-memory and LTP in morphine-dependent rats. Methods: 64 SD rats were randomized into control, morphine-abstinence model, EA-one-session and EA-multi-session groups. Morphine-abstinence model was established by i. p. of hydrochloride morphine. EA (2 Hz, 1—3 mA, 30 min) was applied to bilateral "Zusanli" (ST 36) and "Sanyinjiao" (SP 6), once and multiple times. The rats' passive and active avoidance reactions in a compartment equipped with a grid floor through which an electric shock (40 V) was delivered were used as the indexes of learning-memory. The population spike (PS) was recorded from pyramidal cells of CM in vivo, following stimulation of lateral perforant path in control and morphine-abstinence rats. For the induction of LTP, 4 trains (50 shocks/train, 500 Hz) high-frequency tetanic stimulations were applied to lateral perforant path. Results: Results indicated that the attack times of morphine withdrawal syndrome of EA-one-session group at 24 h and EA-multi- session group at 24 h, 48 h and 72 h times were significantly fewer than those of morphine-abstinence model group (P < 0.05) . Passive experiments displayed that the latency values of platform leaving of EA-one-session and EA-multi-session groups were significantly shorter than that of model group (P<0.05). Results of active avoidance experiments indicated that the avoidaance-reaction correct rates of EA-multi-session group on the 1st , 2nd, 3rd days were significantly higher than those of model group , showing an improvement of learning-memory after acupuncture. In model group, the amplitude of tetanic stimulation induced PS potential was attenuated significantly in comparison with that of control group, and those of EA-one-session and EA-multi-session groups were higher than that of model group, suggesting that EA could reverse morphine induced harmful influence on LTP and better synaptic transmission of hippocampal neurons. Local application of naloxone to CA3 area, the effect of EA on LTP was inhibit significantly, suggesting an involvement of opium system in the therapeutic effect of EA. Conclusion: EA can improve morphine-induced lesion of learning-memory and modulate the synaptic plasticity of neurons in perforant path-CA3 in morphine-dependent rats, and the effect of EA may be mediated by

296- gera: 140049/di/ra
[SELECTION OF GENE EXPRESSION PROFILE OF ALZHEIMER'S DISEASE BY CDNA MICROARRAY]. FAN XIAO-NONG WEN TING-YI, DU YUAN-HAO, ET AL. **tianjin journal of tcm.** 2004;21(6):450 (chi*).
[Objective] To select the abnormal expression genes of Alzheimer's Disease(AD) in Senescence Accelerated Mouse(SAM) and discuss their role in the pathogenesis of AD. [Methods] Using 15 400 mouse cDNA microarray the abnormal expression genes in AD were screened. [Results] Two hundred and forty two genes related to dementia were selected, 234 genes related to senile were selected. One hundred and ten genes were selected in both groups considered to be related to both senile and dementia. Most the selected genes were down-regulated, the number of them were almost two-fold than that of up-regulated. The gene function of 22 in 110 were known. The down-regulated genes were mostly related to the pathological functions in releasing of synaptic vesicle, signal trans-duction, cell skeleton, energy metabolism, etc. On the other hand, the up-regulated genes were mainly involved in the pathologic functions of cell cycle, ion channel, protein synthesis, inflammatory reaction, and so on. [Conclusion] "Gene expression profile of AD" may find some rules in many clues in researches of AD and provide

297- gera: 119258/di/ra
[CLINICAL OBSERVATION ON ACUPUNCTURE COMBINED WITH MUSIC FOR TREATMENT OF ALZHEIMER DISEASE]. LIU G, YUAN LX. **chinese acupuncture and moxibustion.** 2005;25(6):390-2. (chi).
OBJECTIVE: To find the method for increasing clinical therapeutic effect on Alzheimer disease (AD). METHODS: The patients of AD meeting American NINCDS-ADRDA Criteria were randomly divided into group A and group B. The group A (n = 21) were treated with acupuncture for 10 courses, 10 sessions constituting one course; and the group B (n = 20) were treated with combination of acupuncture and music therapy. The acupuncture method was the same as the group A and the music therapy was given for 20 sessions, once every 5 days. After treatment, their effectiveness were evaluated with the Mini-Mental State Examination (MMSE) and Activities of Daily Living (ADL). RESULTS: After treatment, the scores for MMSE increased significantly (P < 0.05) and the scores for ADL decreased significantly (P < 0.05) in the both groups, and the therapeutic effect in the group A was better than the group B (P < 0.05). CONCLUSION:

Acupuncture combined with music therapy can increase the therapeutic effect

298- gera: 126012/di/ra
TRADITIONAL CHINESE HERBS AGAINST HYPERTENSION ENHANCE MEMORY ACQUISITION. HO SC, HO YF, LAI TH, LIU TH, WU RY. **american journal of chinese medicine.** 2005;33(5):787-95. (eng).
Recent findings of a link between high blood pressure (BP) and dementia have given new prospects. The aim of this study is to analyze a mixture of Chinese herbs, Tianma Gouteng Decoction (TGD), which was traditionally used to treat hypertension, and investigate its relation to ameliorating cognitive impairment. We discovered that TGD also had properties involving enhancement of memory acquisition (learning) skills in mice, but not memory consolidation. It was observed that TGD could prolong the step-through latency at doses of 1.0 and 2.5 g/kg on passive avoidance task in mice. TGD could be developed further to treat mice with amnesia, which was induced by scopolamine at the same dose under long-term (8 days) administration.

299- gera: 136973/di/ra
[EFFECT OF JIANJIAN DIHUANG YINZI ON LEARNING MEMORY AND ANTIOXIDANT ON THE MODEL RATS OF ALZHEIMER'S DISEASE INDUCED BY B-AMYLOID1-4O]. XIE NING, ET AL. **chinese archives of tcm.** 2005;23(2):212 (chi*).

300- gera: 137482/di/ra
[EFFECT OF SHOU' ERZHI CAPSULE ON APOPTOSIS OF CULTURED HIPPPOCAMPUS NEURON CELL IN FENG FANG-JUN, TU JIN-WEN , DONG MENG-JIU , ET AL. **chinese journal of traditional medical science and technology.** 2005;12(1):40 (chi).
Objective: The preventive and therapeutic mechanism of Alzheimer' s dementia with traditional Chinese herbs has been studied by observing the effects of Shou' erzhi capsule upon the apoptosis of hippocampus neurons. Methods: Observing the influence of the serum with Shou' erzhi capsule upon the apoptosis of hippocampus neuron cultured in vitro of new — horn Wistar rats by seropharmacology and cell — flow device. Results: Shou' erzhi capsule could protect cultured hippocampus neuron cell from apoptosis, there was obvious difference between Shou' erzhi group and other groups. Conclusion: Shou' erzhi capsule is helpful for the prevention of

301- gera: 137937/di/ra
[INFLUENCE OF GUBEN HUATAN JIANNAO RECIPE ON THE BEHAVIOR OF RATS WITH ALZHEIMER'S DISEASE]. YOU QIOUYUN, ET AL. **hubei journal of tcm.** 2005;27(3):9 (chi).

302- gera: 138002/di/ra
[THE INFLUENCE OF GMODERMA HUCIDUM SEU JAPONICUM ON LEARNING AND MEMORY OF MICE LI YAPING BAI SHUFANG JING XIURONG . **inner mongol journal of tcm.** 2005;24(1):33 (chi).

303- gera: 139183/di/ra
[CLAVICULAR FRACTURE TREATED BY RE-SETTING STEELPLATE INTERNAL FIXATION WITH TINI SHAPEMEMORY ALLOY AND TITANIUM ALLOY]. JIANG TAO. **journal of zhejiang college of tcm.** 2005;29(2):22 (chi*).
Objective:Compare the curative effects and features between treating clavicular fracture with re-setting steel plate and shape-memory alloy. Methods: Treat 25 cases of mid-clavicular fracture with shape-memory alloy,32 with re- setting steel plate. Result:Loose and falling happened in 2 cases treated with memory alloy, partly protruding in 1 case with steel plate,they were all clinically cured after timely treatment,the good effective rates of both groups were above 90%. Conclusion: Two methods have good curative effect; the shape-memory alloy is simple and easy for Operation,which should be carefully applied for the fracture on lateral 1/ 3 point,and the re-setting steel plate is more popular and reliable compared with re-setting steel plate shape-memory alloy.

304- gera: 140520/di/ra
POST-ISCHEMIC TREATMENT WITH TOKI-SHAKUYAKU-SAN (TANG-GUI-SHAO-YAO-SAN) PREVENTS THE IMPAIRMENT OF SPATIAL MEMORY INDUCED BY REPEATED CEREBRAL ISCHEMIA IN RATS. FENGLING PU, KENICHI MISHIMA, NOBUAKI EGASHIRA, YUKI AKIYOSHI, AN-XIN LIU, KAZUNORI SANO, KEIICHI IRIE, DAISUKE ET AL. **american journal of chinese medicine.** 2005;33(3):475 (eng*).
Previously we have reported that Toki-shakuyaku-san (TSS) ameliorated the impairment of spatial memory induced by single cerebral ischemia (1 × 10 minutes) and scopolamine, a muscarinic receptor antagonist. In this experiment, we studied the effect of TSS on repeated cerebral ischemia (2 × 10 minutes, 1-hour interval) induced impairment of spatial memory and neuronal injury in rats. The 8-day post-ischemic treatment with TSS (30–300 mg/kg) was administered p.o. once per day. TSS dose-dependently prevented the impairment of spatial memory, neuronal death and TUNEL positive cells induced by repeated cerebral ischemia. In order to determine the mechanism of TSS, we also studied the effect of TSS on GluR2 mRNA, one of the glutamate α-amino-3-hydroxy-5- methyl-4-isoxazole (AMPA) receptor subunits. Repeated cerebral ischemia significantly decreased GluR2 flop mRNA at 1 and 3 days after the occlusion. TSS (300 mg/kg) significantly suppressed the decrease in GluR2 flop at 3 days after repeated cerebral ischemia. These results suggested that the TSS has neuroprotective action which may be indirectly mediated by the AMPA receptor, and TSS may be beneficial for the treatment of

305- gera: 141667/di/ra
[EFFECT OF ACUPUNCTURE OF "BAIHUI -(GV 20) AND "SISHENCONG" (EX-FIN 1) ON MEMORY AND CEREBRAL SOD ACTIVITY IN ALZHEIMER' S DISEASE RATS]. ZHAO LI-GANG, MA LI, ZHENG ZU-YAN, ET AL. **acupuncture research.** 2005;30(1):26 (chi*).
Objective: To investigate the effect of acupuncture on the memory and SOD activity in the cerebral issues in Alzheimer' s disease (AD) rats. Methods: 48 healthy Wister rats were randomly divided in-to control group (n =11) , model group (n = 10) , medication group (n 10) and acupuncture group (n = 11). AD model was established by microinjection of 13-amyloid protein ((3-AP)1-40 (1 uL) into the hippocam-pal CA1 region (AP: 2.22 mm; ML: 3.0 mm, DV: 2.8 mm). In acupuncture group, "Baihui"(GV 20) and "Sishencong"(EX-HN 1) were punctured with filiform needles which were lifted, thrust and twirled continuous-ly for 5 min, and then

retained for 20 min. The treatment was conducted once daily except Sundays and con-tinuously for one month. Rats of medication group were fed with Piracetum (40 mg/mL, 6 mL/kg/time) once daily for 30 days. The rats' memory was detected with shuttle-box test and the activity of superoxide dismu-tase (SOD) in the cerebral issues assayed by enzymological method. Results: Shuttle box test showed that compared with control group, the times and duration of electric shock were significantly more and longer than those of model group (P<0. 05) ; while compared with model group, the times and duration of electric shock of both acupuncture and medication groups were significantly more and longer (P<0. 01) . No significant dif-ferences were found between two groups in these two indexes, suggesting that both acupuncture and medica-tion can improve AD rats' memory. In comparison with control group, SOD activity in the cerebral tissue low-ered considerably; while in comparison with model group, SOD activity of both medication and acupuncture groups increased significantly (P < 0. 01) , and no significant difference was found between the later two groups (P >O. 05). Conclusion: Acupuncture treatment can improve AD rats' learning and memory and raise SOD activity in the cerebral tissue.

306- gera: 142620/di/ra

[INFIUENCE OF DIFFERENT-TIME ELECTRACUPUNCTURE INTERVENTION ON LEARNING AND MEMORY ADILITIES AND MACHR RATS WITH CEREBRAL ISCHEMIA AND REPERFUSION]. FANG C. **shanghai journal of acupuncture and moxibustion.** 2005;24(12):36 (chi*).

Objective To investigate die idiot-mye of electracupuncture on learning and memory adilities Io rab with cerebral is-chcmin and reperfusion and eompare the effects on the rats hetween pre-isehemie eleetraeupuncture pretreatment and post-ischemic super-early electracupuncture. Method A model of cerebral ischemia and reperfusion was made by intracarotid thread occlusion. The preoperative and postoperative groups were treated with electroacupuncture for 30 min before the operation and in the super-early stage after ischemia, respectively. The influences on die darkness-avoiding test and hippocampi mAchR binding quantity were observed by e darkness-avoiding method and receptor-radioactive ligand binding analysis, respectively. Results After 1.5 hrs cerebral ischemia and 24 hrs reperfusion, the darkness-avoiding test showed a shorted latent period (215.00 ± 69.498 s) and an increase in the number of errors (0.90 f 0.316) , and hippocampi mAchR binding quantity decreased (362.24 ±162.53 fmol/mg) (P <0.05) , in the model group of rats. Electroacupuncture intervention could prolong the latent period and decrease the number of errors. Preoperadve electroa-cupuncture could increase hippocampi mAchR binding quantity (518.62 ± 165.35 fmol/mg) (P <0.05). Conclusion Electroa-acupuncture, especially can improve learning and memory adilities in, a rat model of isehernia Preoperative electroacupuncture pre-treatment can significantly increase mAchR binding quantity lowered abnormally after injury due to ischemic and reperfusion to improve the function of the central cholinergic system, which is of the potential value of application in preventing and treating ischemic cerebrovascular diseases.It can not be considered that there was a difference in the effect on cerebral ischemia between pre-ischemic electro-acupuncture pretreatment and post-

307- gera: 131668/di/ra

PROTECTIVE EFFECT OF GINKGO BILOBA LEAF EXTRACT ON LEARNING AND MEMORY DEFICIT INDUCED BY ALUMINUM IN MODEL RATS. GONG QH, WU Q, HUANG XN, SUN AS, NIE J, SHI JS. **chinese journal of integrative medicine.** 2006;12(1):37-41 (eng*).

OBJECTIVE: To examine the protective effect of Ginkgo biloba leaf extract (GbE) on learning and memory deficit induced by aluminum chloride (AlCl(3)), and explore its mechanisms. METHODS: The rat models with learning and memory deficit were induced by administering via gastrogavage and drinking of AlCl(3) solution. And the model rats were treated with GbE at the dose of 50, 100, 200 mg/kg every day for 2 months accompanied with drinking of AlCl(3) solution, respectively. Their abilities of spatial learning and memory were tested by Morris water maze, and the acetylcholinesterase (AChE) activity in serum was assayed with chemical method, the AChE expression in hippocampus was observed by immunohistochemistry assay, and then quantitative analysis was done by BI 2000 image analysis system. RESULTS: Learning and memory deficit of rats could be induced by AlCl(3) solution (P < 0.01), and AChE expressions in rats hippocampus were increased (P < 0.01); GbE ameliorated learning and memory deficit and reduced AChE expression in rats hippocampus in a dose-dependent manner, while GbE significantly increased serum AChE activity at the dose of 200 mg/kg each day (P < 0.05). CONCLUSION: GbE can ameliorate learning and memory deficit induced by AlCl(3), which may be due to its inhibition of the AChE expression in hippocampus.

308- gera: 132998/di/ra

EFFECTS OF YIZHI CAPSULE ON LEARNING AND MEMORY DISORDER AND BETA-AMYLOID PEPTIDE INDUCED NEUROTOXICITY IN RATS. WU HY, XU JP, LI L, ZHU BH. **chinese journal of integrative medicine.** 2006;12(2):137-41. (eng*).

OBJECTIVE: To explore the effects of Yizhi Capsule (YZC) on learning and memory disorder and beta-amyloid peptide induced neurotoxicity in rats. METHODS: Various doses of YZC were administered to Sprague-Dawley (SD) rats for 8 consecutive days, twice a day. On the 8th day of the experiment, scopolamine hydrobromide was intraperitoneally injected to every rat and Morris water maze test and shuttle dark avoidance test were carried out respectively to explore the changes of learning and memory capacities in the rats. Besides, after the cerebral cortical neurons of newborn SD rats aged within 3 days were cultured in vitro for 7 days, drug serum containing YZC was added to the cultured neurons before or after beta amyloid peptide(25 - 35) (Abeta(25 - 35)) intoxication to observe the protective effect of YZC on neurotoxicity by MTT assay and to determine the LDH content in the supernatant. RESULTS: Compared with those untreated with YZC, the rats having received YZC treatment got superiority in shorter time of platform seeking in Morris water maze test, as well as elongated latent period and less times of error in shuttle dark avoidance test. On the cultured neurons, YZC drug serum could effectively increase the survival rate of Abeta(25 - 35) intoxicated neurons and reduce the LDH contents in cultured supernatant. CONCLUSION: YZC has an action of improving learning and memory disorder, and good protective

effect on Abeta(25 - 35) induced neurotoxicity in SD rats.

309- gera: 135877/di/ra
[INFLUENCE OF ELECTROACUPUNCTURE ON LEARNING AND MEMORY ABILITY IN DIABETIC COGNITIVE DYSFUNCTION PATIENTS]. XU YUN-XIANG, ZHANG JIA-WEI. **acupuncture research.** 2006;31(4):232 (chi*).
Objective: To observe the effect of electroacupuncture (EA) on the learning and memory ability in diabetic cognitive dysfunction patients. Methods: Forty-f ive cases of diabetic mellitus (DM) patients with cognitive dysfunction were ran-domly divided into EA group (n=25) and medication group (n=20). For patients of EA group, main acupoints as Sishenchong (EX-HN 1), Baihui (GV 20) , bilateral Fengchi (GB 20) , Benshen (GB 13) and Neiguan (PC 6) were punctured with filiform nee-dies and stimulated electrically by setting the stimulating parameters being dense-sparse waves, frequency of 14 -26 pulses/min, strength of 3 - 5 mA and duration of 30 min. The treatment was conducted once daily, 5 times a week and continuously for 6 weeks. Patients of medication group were ordered to take Nimotop (30 mg/time) , 3 times everyday and continuously for 6 weeks. Modified Hastgawa Dementia Scale (HDS) and Wilson's Memory Scale (WMS) were used to evaluate the patients' cogni-tive function, memory ability and general conditions before and after the treatment. Results: After the treatment, according to HDS, of the 20 and 25 cases in medication and EA groups, 1 (5%) and 4 (16%) experienced marked improvement, 5 (25%) and 15 (60%) had moderate improvement, 10 (50%) and 5 (20%) had mild improvement, and 4 (20%) and 1 (4%) had no im-provement, with the total effective rates being 80% and 96% respectively. Rank test showed that the therapeutic effect of EA group was significantly superior to that of medication group (P< O. 05) in improving patients' cognitive function. Self-comparison indicated that WMS of both groups increased significantly after the treatment (P< 0.001, 0.05) , including adding test of long-term memory and touching test of short-term memory in medication group, counting-down test of long-term memory, association test and touching test of short-term memory in EA group; and the effects of EA were apparently superior to those of medication in raising WMS (MQ) , counting-down test and association test (P< 0 . 05 , 0.01). Conclusion: The therapeutic effect of EA is sig-nificantly superior to that of Nimotop in improving DM patients' cognitive function, learning and

310- gera: 141610/di/ra
THE INFLUENCES OF ELECTROACUPUNCTURE ON LEARNING AND MEMORY AND CARBON MONOXIDE IN THE PLASMA OF VD RATS. BING YAN, NENGGUI XU AND HUAFENG PAN. **international journal of clinical acupuncture.** 2006;14(3):173 (eng).
Objective: To observe the effect of electroacupuncture (EA) on learning and memory and carbon monoxide (CO) in the plasma of vascular dementia (VD) rats. Method: The VD rats were modeled with the method of global ischemia reperfusion by 4 vascular occlusions (4-vo). Morris water maze tests were used for a behavioral study. The content of CO in the plasma was measured by a two-wavelength spectrophotometer. Results: The model group animais required more escape time than the control group and they did not swim longer in the platform quadrant than in the others in the Morris water maze tests. The content of CO in the plasma was higher than the others. In the EA group, for the most part, the animais cut down the escape time and swam longer in the platform quadrant than in the others. The content of CO in the plasma was obviously decreased. Conclusion: EA can improve learning and memory and it can also inhibit the increase of CO content in the plasma of VD model rats.

311- gera: 141979/nd/re
GOMISIN A IMPROVES SCOPOLAMINE-INDUCED MEMORY IMPAIRMENT IN MICE. KIM DH, HUNG TM, BAE KH, JUNG JW, LEE S, YOON BH, CHEONG JH, KO KH, RYU JH. **eur j pharmacol.** 2006;542(1-3): (eng).
Gomisin A is a component of the fruits of Schizandra chinesis which are widely used as a tonic in traditional Chinese medicine. In the present study, we assessed the effect of gomisin A on the learning and memory impairments induced by scopolamine. The cognition-enhancing effect of gomisin A was investigated using a passive avoidance test, the Y-maze test, and the Morris water maze test in mice. Drug-induced amnesia was induced by treating animals with scopolamine (1 mg/kg, i.p.). Gomisin A (5 mg/kg, p.o.) administration significantly reversed scopolamine-induced cognitive impairments in mice by the passive avoidance test and the Y-maze test (P<0.05), and also improved escape latency in the Morris water maze test at 5 mg/kg (P<0.05). Moreover, in an in vitro study, gomisin A was found to inhibit acetylcholinesterase activity in a dose-dependent manner (IC50 value; 15.5 microM). These results suggest that gomisin A may be a useful cognitive impairment treatment, and its

312- gera: 142028/nd/re
SPATIAL MEMORY PERFORMANCE AND HIPPOCAMPAL NEURON NUMBER IN OSTEOPOROTIC SAMP6 MICE. LIU CZ, YU JC, CHENG HY, JIANG ZG, LI T, ZHANG XZ, ZHANG LL, HAN JX. **experimental neurology.** 2006;201(2): (eng).
The senescence-accelerated mouse strain P6 (SAMP6) is an inbred mouse that represents a clinically relevant model of senile osteoporosis. However, whether osteoporotic SAMP6 mice have cognitive deficits remains largely unexplored. Here, we used Morris water maze to assess reference memory and working memory performance in SAMP6 mice and SAMR1 controls, at 4 and 8 months of age. In addition, unbiased stereological techniques were used to estimate total neuron number in hippocampal CA1 subfield of the mice used in the behavioral study. Morris water maze test revealed impairments in working memory but not in reference memory of the 4- and 8-month-old SAMP6 mice compared with the SAMR1 mice at the same age. However, there were no significant differences in the total numbers of neurons in hippocampal CA1 subfield when comparing 4-month-old SAMR1 and 4-month-old SAMP6 and 8-month-old SAMR1 and 8-month-old SAMP6, which indicate that, in SAMP6 mice, the structural correlates of working memory deficits are to be found in parameters other than the number of neurons in hippocampal CA1 subfield. These findings suggest that SAMP6 mice exhibit selective cognitive deficits and highlight the importance of this mouse model for studying the brain alterations associated with osteoporosis.

313- gera: 142095/di/ra

THE INFLUENCES OF ELECTROACUPUNCTURE ON LEARNING AND MEMORY AND CARBON MONOXIDE IN THE PLASMA OF VD RATS. BING YAN, NENGGUI XU,HUAFENG PAN. **international journal of clinical acupuncture.** 2006;14(3):173 (eng).
Objective: To observe the effect of electroacupuncture (EA) on learning and memory and carbon monoxide (CO) in the plasma of vascular dementia (VD) rats. Method: The VD rats were modeled with the method of global ischemia reperfusion by 4 vascular occlusions (4-vo). Morris water maze tests were used for a behavioral study. The content of CO in the plasma was measured by a two-wavelength spectrophotometer. Results: The model group animais required more escape time than the control group and they did not swim longer in the platform quadrant than in the others in the Morris water maze tests. The content of CO in the plasma was higher than the others. In the EA group, for the most part, the animais cut down the escape time and swam longer in the platform quadrant than in the others. The content of CO in the plasma was obviously decreased. Conclusion: EA can improve learning and memory and it can also inhibit the increase of CO content in the plasma of VD model rats.

314- gera: 142112/nd/re
RELEVANT ACTIVITIES OF EXTRACTS AND CONSTITUENTS OF ANIMALS USED IN TRADITIONAL CHINESE MEDICINE FOR CENTRAL NERVOUS SYSTEM EFFECTS ASSOCIATED WITH ALZHEIMER'S DISEASE. REN Y, HOUGHTON P, HIDER RC. **j pharm pharmacol.** 2006;58(7): (eng).
The centipede Scolopendra subspinipes mutilans L. Koch ('Wugong'), the beetle Mylabris phalerata Pallas ('Ban mao') and the earthworm Pheretima aspergillum Chen ('DiLong') have a reputation in traditional Chinese medicine for reducing symptoms of central nervous system decline, including memory loss. A series of extracts of all three organisms was tested for acetylcholinesterase (AChE) inhibition and copper ion binding effects, the latter likely to reduce oxidative damage caused by excess copper. The beetle and centipede chloroform extracts showed the strongest AChE inhibitory effects (30.6% inhibition at 105 microg mL(-1) and 32.3% inhibition at 167 microg mL(-1), respectively) and, in the case of the centipede, this was traced to the unsaturated fatty acids present using bioassay-guided fractionation. Cantharidin from the beetle was shown to have AChE activity (31% inhibition at 1 muM, 0.196 microg mL(-1)), making it a major contributor to the activity of the beetle extract. The earthworm showed no AChE inhibitory activity. Since unsaturated fatty acids have not been previously reported to have AChE inhibitory activity, a series of related compounds was tested to determine structure-activity relationships. It was found that activity existed where there was a chain length of more than 16 C atoms with at least one unsaturated bond in the chain. The carboxylic acid group was also necessary for activity. The fatty acids present in the centipede also showed the ability to bind copper ions when tested using a novel thin layer chromatography method designed to detect copper-binding compounds. The activities reported give some support to the use of the beetle and centipede in traditional Chinese medicine for improving cognitive function.

315- gera: 143283/di/ra
[THE INFLUENCE OF ACUPUNCTURE ON PATHOMORPHOLOGY AND SPATIAL LEARNING AND MEMORY IN MID RATS]. WANG T, YU JC, LIU CZ, ET AL. **shanghai journal of acupuncture and moxibustion.** 2006;25(10):44 (chi).
Objective To investigate the improving effect of acupuncture on spatial learning and memory in rats with multiple in farcted dementia(MID). Methods A model of MID was made by an injection of thrombus through external carotid retrocatheterism. Changes in spatial learning and memory were determined by Morris water maze. Morphological changes in the cortex and hippocampus were observed by HE staining. Results In MID rats, the cortical and hippocampal structures were destroyed, which was more marked in hippocampal areas CAI and CA3 ; disorders of spatial learning and memory occurred and they were manifested in poor abilities in spatial learning, memory maintenance and relearning, and prolongation of the learning course. Acupuncture could ameliorate the above conditions and improve MID rat' s abilities in, spatial learning and memory. Conclusion Acupuncture improves MID rat' -s abilities in spatial learning and memory by reducing cortical and hippocampal injury to protect

316- gera: 143587/di/ra
USING REIKI TO DECREASE MEMORY AND BEHAVIOR PROBLEMS IN MILD COGNITIVE IMPAIRMENT AND MILD ALZHEIMER'S DISEASE. CRAWFORD SE, LEAVER VW, MAHONEY SD. **journal of alternative and complementary medicine.** 2006;12(9):911-3 (eng).
OBJECTIVES: This empirical study explored the efficacy of using Reiki treatment to improve memory and behavior deficiencies in patients with mild cognitive impairment or mild Alzheimer's disease. Reiki is an ancient hands-on healing technique reputedly developed in Tibet 2500 years ago. DESIGN: This study was a quasi- experimental study comparing pre- and post-test scores of the Annotated Mini-Mental State Examination (AMMSE) and Revised Memory and Behavior Problems Checklist (RMBPC) after four weekly treatments of Reiki to a control group. SETTINGS/LOCATION: The participants were treated at a facility provided by the Pleasant Point Health Center on the Passamaquoddy Indian Reservation. SUBJECTS: The sample included 24 participants scoring between 20 and 24 on the AMMSE. Demographic characteristics of the sample included an age range from 60 to 80, with 67% female, 46% American Indian, and the remainder white. INTERVENTIONS: Twelve participants were exposed to 4 weeks of weekly treatments of Reiki from two Reiki Master-level practitioners; 12 participants served as controls and received no treatment. OUTCOME MEASURES: The two groups were compared on pre- and post- treatment scores on the AMMSE and the Revised Memory and Behavior Problems Checklist (RMBPC). RESULTS: Results indicated statistically significant increases in mental functioning (as demonstrated by improved scores of the AMMSE) and memory and behavior problems (as measured by the RMBPC) after Reiki treatment. This research adds to a very sparse database from empirical studies on Reiki results. CONCLUSION: The results indicate that Reiki treatments show promise for improving certain behavior and memory problems in patients with mild cognitive impairment or mild Alzheimer's disease. Caregivers can administer Reiki at little or no cost, resulting in significant societal value by potentially reducing the needs for medication and hospitalization.

317- gera: 143611/di/ra
[EFFECTS OF EAR POINT NEEDLE EMBEDDING THERAPY ON MEMORY DISORDER AND EXPRESSION OF BETA-AMYLOID PROTEIN IN THE RAT OF VASCULAR DEMENTIA]]. LU YW, LU MZ. **chinese acupuncture and moxibustion.** 2006;26(11):804-8. (chi).
OBJECTIVE: To study the mechanism of auricular acupuncture for improvement of learning and memory disorders in the rat of vascular dementia (VD). METHODS: The vascular dementia rat model was made by 4-vessel occlusion method. Four groups, a sham operation group, a normal control group, a model group and an auricular acupuncture group were set up. After acupuncture was given at auricular points, Brain and Kidney. Immunohistochemical analysis, behavioural observation and computer image analysis were made. RESULTS: Auricular acupuncture could decrease significantly the beta-amyloid protein (A beta) immunoreactivive neurons and increase its average optical density in the parietal cortex of the VD rats (P < 0.05). CONCLUSION: Auricular acupuncture can reduce or inhibit the over-production of Abeta in the brain, so as to improve the learning and

318- gera: 144836/ra/di
[EFFECTS OF MODIFIED WUZI YANZONG GRANULE ON MEMORY ABILITY AND VOLUME OF HIPPOCAMPUS MEASURED BY MRI IN PATIENTS WITH MILD COGNITIVE IMPAIRMENT]. FU H, WANG XM, LIU GX. **chinese journal of integrated traditional and western medicine.** 2006;26(12):1066 (eng).
OBJECTIVE: To observe the effect of modified Wuzi Yanzong Granule (WYG) on memory ability and volume of hippocampus measured by magnetic resonance imaging (MRI) in patients with mild cognitive impairment (MCI). METHODS: According to the international accepted diagnostic criteria, 36 MCI patients were selected and randomly assigned to two groups equally, the treated group treated with WYG and the control group with placebo, with a course of 3 months for both groups. Besides, 20 healthy subjects were selected as the normal group. The changes of memory ability were observed and the volume of hippocampus was detected by MRI before and after treatment. RESULTS: Memory quotient (MQ) was significantly lower in MCI patients than in healthy subjects (P < 0.01), after treatment it increased in the treated group as compared with that before treatment (P < 0.01), and the increment was higher than that in the control group (P < 0.05); the volume of hippocampus, total or that of either side, as well as the increment of the total volume of hippocampus in the treated group were all higher than those in the control group (P < 0.05). CONCLUSION: WYG could improve memory ability in MCI patients and could

319- gera: 145256/di/ra
[THE INFLUENCE OF ACUPUNCTURE ON NEURON APOPTOSIS IN A RAT MODEL OF ALZHEIMER DISEASE]. JIANG GUI-MEI , JIA CHAO LAIAIN-SHENG. **shanghai journal of acupuncture and moxibustion.** 2006;25(12):33 (chi).
[Abstract] Objective To observe corticocerebral and hippocampine neuron apoptosis in a rat model of Alzheimer disease (AD) and investigate the influence of acupuncture on the neuron apoptosis. Methods SD rats were randomly allocated to blank control, model and acupuncture groups. A model of AD was made by a combination of an peritoneal injection of 0.96% D-galactose and bilater-al Meynert basal nuclei injections of ibotenic acid (IBO) for destruction. Meanwhile, Baihui, Dazhui and Fengchi were acupunctured in the acupuncture group. A behavioral examination was made by a Y-shaped electricity maze. Cellular apoptosis was determined by TUNEL. Results (1) Rat' learning and memory abilities were significantly lower in the model group than in the blank control group (both P < 0.01) and significantly higher in the acupuncture group than in the model group (both P < 0. 01) . (2) Large numbers of apoptosis cells were distributed in the cerebral cortex and hippocampus in the model group of rats, while few were in the acupuncture group. The number of apoptosis cells in the cortex were significantly more in the model group (45.34 ± 6. 28) than in the acupuncture group (20.39 ±5. 48) and in the blank control group (9.46 ±1. 86) (both P < 0. 01) . The number of apoptosis cells in the hippo-campus were also significantly more in the model group (53.64 ± 8. 20) than in the acupuncture group (11. 38 ± 6. 36) and in the blank control group (3.62 ±0. 89) (both P < 0.01) . The number of apoptosis cells in the cortex were also significantly more in the acupuncture group than in the blank control group (P < 0. 01) . Conclusion Acupuncture can reduced corticocerebral and hipp-ocampine neuron apoptosis to a certain extent and thereby prevent a decline in learning and memory abilities in a rat model of AD.

320- gera: 145743/di/ra
MECHANISM OF ELECTROACUPUNCTURE ON SYNAPTIC PLASTICITY OF HIPPOCAMPAL NEURONS IN ALZHEIMER DISEASED RATS. SONG LUO, SHU-GUANG YU, FANGZHENG LIAO, AND TING **international journal of clinical acupuncture.** 2006;15(4):241 (eng).
Background: Electroacupuncture (EA) has a good clinical effect on Alzheimer's disease, but its mechanism remains unclear.Objective: To observe the effect of EA on the number of synaptic numeric density (Nv), surface density (Sv) and average size of the synaptic junction and ultrastructure in the hippocampal CA3 area of neurons of model rats with Alzheimer's disease (AD).Design: Completely randomized grouping and controlled study.Setting: Department of Traditional Chinese Medicine of Sichuan Provincial People's Hospital; College of Acupuncture & Moxibustion and Massage of Chengdu University of Traditional Chinese Medicine.Materials: A total of 50 male SD rats (24-months old, weighing 480±20 g) and 6 male rats (3-months old, weighing 250±15 g) were selected in this study. A passage water maze (2.1 x 1.7 X 0.6) m3 was constructed of black glass with 4 inlets and filled to a 40 cm depth with water. A Brain Tridimensional Localizer and WQ1002F Hans electrically heated distilling apparatus were used.Methods: The experiment was carried out at the Grade III Animal Experimental Center of Chengdu University of Traditional Chinese Medicine between September 2002 and June 2003.The older SD rats were grouped on the basis of water-maze test results. First, 6 young rats were subjected to the water-maze test 8 days before modeling for 4 consecutive days to obtain an average escape latency. Second, 50 older rats were subjected to the water-maze test for 4 consecutive days before modeling to obtain an average escape latency. A total of 36 rats whose latencies were less than the average values plus one standard deviation of young rats were regarded as normal old rats. Among them, 12 rats were randomly divided into a control group and a sham operation group with 6 in

each group. Another 24 rats were transected at the fornix-fimbria for AD modeling. Third, 24 modeled rats were subjected to the water-maze test 2 days after modeling. .i%aw whose latencies flTVl more luau Luc average value plus two standard deviations of young rats were chosen as the AD model. Twelve AD models were randomly divided into the model group and the EA group with 6 in each group.On the 6th day after modeling, the rats in the EA group were needled at Baihui (DU 20) to a 0.5 inch depth and at Yongquan (KI 1), Taixi (KI 3) and Xuehai (SP 10) to a 0.3 inch in depth with No. 30 milli-needles (3.33 cm). The electrically heated distilling apparatus was used with successive waves (20 Hz in frequency and 2-4 V in voltage). The level of stress tolerated by the rats in a quiet state was regarded as the standard value (2 mA). The needle was retained for 30 minutes and the acupuncture was done once a day for a total of 20 successive days. For the rats in the control group and sham operation group, the cerebral cortex was exposed at the same site as in the model rats and the fornix-fimbria was not removed and the rats in the model group were only fixed and not treated.After treatment, the ultrastructure in the hippocampal CA3 area of the rats was observed with a transmission electron microscope. The synapse numbers and cross-point numbers between synaptic junction and test lines were counted with the stereological technique. The stereological parameters, such as numeric density (Nv), surface are (Sv) and average size of synaptic junction, which could reflect plastic changes of synaptic form, were calculated at the same time.Differences between the two groups were compared with a t test at regular variance and a t test at irregular variance.Main Outcome Measures: Comparisons of numeric density (Nv), surface density (Sv) and average size of synaptic junction.Results: A total of 24 older rats were involved in the final analysis with 6 in each group.Ultrastructure: The synaptic density of the control and sham operation groups was higher than that of the model group and the average area of the synapse was smaller. The synaptic density of the EA group increased compared with that of the model group and the average area of the synapse was smaller.The numeric density and surface density in the hippocampal CA3 area in the model and EA groups were lower than those of the control group and sham operation group (P < 0.05). There was no significant difference between the sham operation group and the control group (P> 0.05) and those of the EA group were higher than those of the model group (P<0.01).The average size of the synaptic junction in the hippocampal CA3 of the model and EA groups was higher than that of the control group and the sham operation group (P <0.05). There was no significant difference between the sham operation group and the control group (P>

321- gera: 145744/di/ra

THE INFLUENCE OF ELECTROACUPUNCTURE ON LEARNING AND MEMORY AND THE PLASMA CONTENT OF TXB2 AND 6-KETO-PGF,A OF RATS WITH VASCULAR DEMENTIA. LILEI HE, BING YAN, CHUNZHI TANG, AND YING SHAO. **international journal of clinical acupuncture.** 2006;15(4):249 (eng).

Objective: To observe the influence of electroacupuncture (EA) on learning and memory as well as the plasma content of TXB2 and 6-keto-PGF1a of rats with vascular dementia (VD). Also, to discuss the mechanism of EA treatment on VI) and offer favorable conditions to use this method clinically and to illustrate TCM's value in treating VD. Method: The VD model rats were made following the method of global ischemia reperfusion by 4 vascular occlusion (4-vo). Morris water tests were used for a behavioral study. The TXB2 and 6-keto-PGF1a in plasma was estimated by radioimmunoassay. Results: The rats in the model group had lesser learning and memory capability compared with those in the control group. They needed more time to escape, and they did not swim as long in the platform quadrant as the other quadrants in the Morris water maze tests. The plasma content of TXB2 increased and the plasma content of 6-keto-PGFIa, decreased. The rats in the EA group only required less time to escape than those in the model group and they swam longer in the platform quadrant than in other quadrants. Compared with the model group, the plasma content of TXB2 decreased and the plasma content of 6-keto- PGF1at, increased. Conclusion: EA can improve the learning and memory capability of VD rats and it can also inhibit the increase in the plasma content of TXB2 and promote the increase in plasma content of 6-keto-PGFIa.

322- gera: 145891/di/ra

EFFECTS OF SHENLONG DECOCTION ON LEARNING AND MEMORY ABILITIES AS WELL AS SOD AND MDA IN BRAIN-AGING MODEL MICE INDUCED BY D-GALACTOSE. LIU YI, WANG FAWEI, YANG MINGHUI, ET AL. **journal of traditional chinese medicine.** 2006;26(4):294 (eng).

Brain aging (dementia) model mice were made by cervical subcutaneous injection of D-galactose solution. Learning and memory abilities were detected with water maze test and superoxide dismulase(SOD) activities and malondiadehyde (MDA) contents in the liver and brain were determined after intragastrical administration of Shenlong Decoction (Ji) for 6 weeks. The results indicated that the swimming time was shortened and the correct swimming times increased, SOD activity raised and MDA content decreased in the three Shenlong Decoction groups with different doses as compared with the model group. It is concluded that Shenlong Decoction has the effects of anti-free radical injuries and improving the learning and memory abilities of the brain-aging mice

323- gera: 144594/di/ra

[CLINICAL STUDY OF REINHARTDT AND SEA CUCUMBER CAPSULE COMBINED WITH DONEPEZIL IN TREATING ALZHEIMER'S DISEASE]. ZHOU ZL, LIANG LZ, YAN YX. **chinese journal of integrated traditional and western medicine.** 2007;27(2):110 (eng).

OBJECTIVE: To study the efficacy and safety of Reinhartdt and sea cucumber capsule (RSC) combined with donepezil in treating Alzheimer's disease (AD), and its effect on thyroid function axis. METHODS: Sixty-eight patients were randomly assigned to the RSC group, the Donepezil group and the combined treatment group, who were treated for 3 and 6 months with RSC, Donepezil and RSC combined with Donepezil, respectively. The curative effect was evaluated by scoring according to Mini-Mental State Examination (MMSE), ADAS-Cog and ADL chart, and the level of thyroid hormones, including TSH, FT3, FT4, TT3 and TT4, were measured with radioimmunoassay before treatment, 3 and 6 months after treatment respectively. RESULTS: As compared with the baseline, MMSE score increased, ADAS-Cog score and ADL score decreased significantly in all the three groups after 3

months and 6 months of treatment (P < 0.05 and P < 0.01), but the improvement in the combined treatment group was more significant than that in the other two groups (P < 0.01). After 6 months of treatment, the levels of FT3 and FT4 in the combined treatment group were significantly changed (P < 0.01), but no significant change in all the thyroid hormones was found in the other two groups. No obvious adverse reaction occurred in all the three groups. CONCLUSION: RSC combined with Donepezil in treating AD is effective and safe with no evident adverse reaction, better than single drug treatment, which may be through influencing the metabolism of thyroid hormones to improve the cognition function of AD patients.

324- gera: 145413/di/ra

ENHANCEMENT OF LEARNING AND MEMORY BY A MEDICINAL FORMULATION, SAENHYETANG, IN MICE. JIN UH, KIM JH, CHANG GT, KIM JK, CHUNG KH, KIM CH. **j ethnopharmacol.** 2007;109(2):271-80 (eng).

The effects on memory and learning ability of the Korean herbal medicine, Saenhyetang (SHT), which is consisted of nine herbs, were investigated. Hot water extracts (HWE-SHT) and ethanol extracts (EE-SHT) were used for the studies. It was shown that N-methyl-d-aspartate (NMDA) receptor 2B (NR2B) was increased in the forebrains of SHT- administrated mice (HWE-SHT), leading to enhanced activation of NMDA receptors, facilitating synaptic potentiation in response to stimulation at 10-100Hz. These HWE-SHT-treated mice exhibit superior ability in learning and memory in various behavioral tasks, showing that NR2B is enhanced by HWE-SHT treatment and also is critical in gating the age-dependent threshold for plasticity and memory formation. NMDA receptor-dependent modifications, which were mediated in part by HWE-SHT administration, of synaptic efficacy, therefore, represent a mechanism for associative learning and memory. Results suggest that oriental medical enhancement of NR2B attributes such as intelligence and memory in mammals is feasible. On the other hand, to examine the effects of EE-SHT on the learning and memory in experimental mice, the passive and active avoidance responses were studied. The EE-SHT ameliorated the memory retrieval deficit induced by ethanol, but not other memory impairment in mice. EE-SHT (10, 20mg/100g, p.o.) did not affect the passive avoidance responses of normal mice in the step through and step down tests, the conditioned and unconditioned avoidance responses of normal mice in the shuttle box and lever press performance tests, and the ambulatory activity of normal mice in normal condition. However, EE-SHT was shown to significantly decrease the spontaneous motor activity during the shuttle box test, and also to prolong the sleeping time induced by pentobarbital in mice at 20mg/kg. These results suggest that EE-SHT has an ameliorating effect on memory retrieval impairment and a weak tranquilizing action.

325- gera: 145555/nd/ra

KAMIKIHI-TO, A KAMPO MEDICINE, AMELIORATES IMPAIRMENT OF SPATIAL MEMORY IN RATS. EGASHIRA N, MANOME N, KURAUCHI K, MATSUMOTO Y, IWASAKI K, MISHIMA K, SHOYAMA Y, FUJIWARA M. **phytother res.** 2007;21(2):126-9 (eng).

The present study investigated the effects of Kamikihi-to (KKT), a Kampo medicine, on impairment of spatial memory in rats using an eight-arm radial maze task. Scopolamine (0.5 mg/kg, i.p.), a non-selective muscarinic receptor antagonist, and Delta(9)-tetrahydrocannabinol (THC; 6 mg/kg, i.p.), a principal psychoactive component of marihuana, each markedly impaired the spatial memory. KKT (1 and 3 mg/kg, p.o.) significantly improved the scopolamine-induced impairment of spatial memory. KKT (30 mg/kg, p.o.) also improved significantly the THC- induced impairment of spatial memory. Moreover, KKT (3 and 30 mg/kg, p.o.) enhanced tremors induced by oxotremorine, a muscarinic M(1) receptor agonist. Taken together these findings suggest that KKT is a useful drug for treating memory deficits. Copyright (c) 2006 John Wiley & Sons, Ltd.

326- gera: 145843/di/ra

[[EFFECTS OF "WARMTH-PRODUCING NEEDLING FOR REMOVING OBSTRUCTION" ON HIPP-OCAMPAL MORPHOLOGICAL CHANGES AND LEARNING-MEMORY ABILITIES IN VASCULAR DEMENTIA RATS]]. YANG XIAO-BO, KOU SUO-TANG, YANG XIAO-BIN , ET AL. **acupuncture research.** 2007;32(1):29 (chi).

To observe the effects of "Warmth-producing Needling for Removing Obstruction" (WPNRO) on the pathomorphological changes of brain and learning-memory abilities in vascular dementia (VD) rats. Methods: A total of 50 Wistar rats were randomly divided into normal control, model, medication, needle-twirling, and WPNRO groups, with 10 cases in each group. VD model was established by repeated cerebral ischemia-reperfusion via repeated occlusion of the bilateral common carotid arteries under anesthesia (3% embutal 40 mg/kg, i. p.) . "Dazhui" (GV 14) , "Baihui"(GV 20) and "Shuigou"(GV 26) were punctured with filiform needles and stimulated with twirling technique and WPNRO technique respectively and continuously for 1 min. Animals of medication group were fed with Nimodipine (0. 0108 g/kg). The treatment was conducted once daily continu-ously for 15 days. The rats' learning and memory results were detected respectively with step-down avoidance test in the first 6 days' training and 24 h later. At the end of experiments and after decapitation, the right brain was taken, cut into sections (5 pm) and stained with H & E method for observing structural changes of hippocampus. Results: 1) Behavior reactions: compared withcontrol group, the latency for finding the safe platform and the times of error in model group increased significantly. and compared with model group. both latencies and times of error in WPNRO, needle-twirling and medication groups decreased considerably (P<0. 05, 0. 01) . In comparison with needle-twirling group, both latencies and times of error in WPNRO group were significantly fewer (P<0. 05, 0. 01) , and no significant differences were found between WPNRO and medication groups in these two indexes (P>0.05). It indicated that acupuncture particularly WPNRO could improve both learning and memory abilities in VD rats. 2) Structural changes of neurons in CA1 region of hippocampus: in normal group, the neurons arranged in order and closely, and were normal in the structure; in model group. the neurons arranged obviously in disorder, had karyopyknosis and hyperplasia in glial cells and decreased in the number. In WPNRO group, no evident cellular karyopyknosis or hyperplasia of glial cells was found, and the structure and number of cells were close to those of normal group. In acupuncture and medication groups, fewer neurons, cellular

karyopyknosis and hyperplasia of more glial cells were found. Conclusion: "Warming-producing Needling for Removing Obstruction" can significantly relieve cerebral ischemia induced disturbance of learning and memory and lessen structural injury of

327- gera: 145861/di/ra
[EFFECT OF ELECTROACUPUNCTURE ON CHANGES OF AMINO ACID NEUROTRANSMITTERS IN THE HIPPOCAMPUS OF RATS WITH SPATIAL LEARNING AND MEMORY IMPAIRMENT INDUCED BY D-GALACTOSE]. XU YING' , ZHANG ZHI-XIONG' , SHEN RONG2 , YUAN SHU- JUAN2. **shanghai journal of acupuncture and moxibustion.** 2007;26(3):38 (chi).
Objective To investigate the effect of electroacupuncture on D-galactose induced spatial learning and memory impair-ment in rats, and to study the mechanism of electroacupuncture on amino acid neurotransmitters in the hippocampus tissue of rats with spatial learning and memory impairment. Methods 24 rats were randomly divided into control group (n = 8) , model group (n = 8) and electroacupuncture group(n =8). HPLC was used to measure the contents of amino acid neurotransmitters in the hippocampus tis-sue. Results Contents of Asp , Tau and GABA in the model group were significantly decreased as compared with the control group(P < 0.05) , content of Gly decreased too, but showed no significant difference. After applying electroacupuncture, contents of Asp, Gly , and Tau increased significantly(P <0. 05). Content of Glu increased in the model group and was more higher in the electroacupuncture group (P <0.05). Conclusion Electroacupuncture could regulate effectively the contents of amino acid neurotransmitters in rat' s hippocampus with spatial learning and memory impairment induced by D-

328- gera: 146505/nd/ra
PROTECTIVE EFFECTS AND MECHANISM OF TOTAL COPTIS ALKALOIDS ON A BETA 25-35 INDUCED LEARNING AND MEMORY DYSFUNCTION IN RATS. YANG ZQ, YANG SF, YANG JQ, ZHOU QX, LI SL. **chin j integr med.** 2007;13(1):50-54 (eng).
OBJECTIVE: To observe the effect of total coptis alkaloids (TCA) on beta -amyloid peptide (A beta 25-35) induced learning and memory dysfunction in rats, and to explore its mechanism. METHODS: Forty male Wistar rats were randomly divided into four groups: the control group, the model group, the TCA low dose (60 mg/kg) group and the TCA high dose (120 mg/kg) group, 10 in each. A beta 25-35 (5microl, 2 microg/microl) was injected into bilateral hippocampi of each rat to induce learning and memory dysfunction. TCA were administered through intragavage for consecutive 15 days. Morris Water Maze test was used to assess the impairment of learning and memory; concentration of malondialdehyde (MDA) in cerebral cortex was determined by thiobarbituric acid reactive substance to indicate the level of lipid peroxidation in brain tissues; activity of manganese-superoxide dismutase (Mn-SOD) in cerebral cortex was determined by xanthine-oxidase to indicate the activity of the enzyme; and NF- kappa B protein expression in cerebral cortex was measured by SP immunohistochemistry. RESULTS: (1) Morris Water Maze test showed that, during the 4 consecutive days of acquisition trials, the rats in the model group took longer latency and searching distance than those in the control group (P<0.01), which could be shortened by high dose TCA (P<0.05); during the spatial probe trial on the fifth day, the rats in the model group took shorter searching time and distance on the previous flat area than those in the control group (P<0.01), which could be prolonged after TCA treatment (for low dose group, P<0.05; for high dose group, P<0.01). (2) Analysis of cerebral cortical tissues showed that, compared with the control group, MDA level got significantly increased and Mn-SOD activity decreased in the model group (both P<0.01). After having been treated with TCA, the MDA level got significantly decreased (P<0.05 and P<0.01 respectively for low and high dose group), while relative increase of Mn-SOD activity only appeared in high dose group (P<0.05). (3) Immunohistochemistry analysis showed the protein expression of NF- kappa B got significantly increased after modeling, while high dose TCA can significantly inhibit it. CONCLUSION: TCA could improve A beta 25-35 induced dysfunction of learning and memory in rats, and its protective mechanism is associated with its actions in decreasing MDA level, increasing Mn-SOD activity

329- gera: 146565/di/ra
[EFFECT OF ACUPUNCTURE ON LEARNING-MEMORY ABILITY IN DIABETIC RATS WITH CONCOMITANT CEREBRAL ISCHEMIA-REPERFUSION INJURY]. JING XH, CAI H, SHI H, CHEN SL, LU B, JIN ZG. **acupuncture research.** 2007;32(2):105-10 (chi).
OBJECTIVE: To observe the effect of acupuncture on learning and memory ability in rats with cognition impairment due to diabetes mellitus (DM) and cerebral ischemia (CI)/reperfusion injury (CI/RI). METHODS: A total of 87 female Wistar rats were randomly divided into 5 groups: normal control, CI, DM+ sham-CI, DM+CI and DM+ CI+ acupuncture (Acup). DM model was induced by intraperitoneal injection of streptozotocin (60 mg/kg), and 3 days later CL/RI was duplicated by occlusion of the bilateral carotid arteries and reperfusion in the same rats. "Baihui" (GV 20), bilateral "Sanyinjiao" (SP 6), "Pishu" (BL 20), or GV20, bilateral "Shenshu" (BL 23) and "Zusanli" (ST 36) were punctured alternatively with filiform needles and stimulated manually. On day 10 and 30 after CI, the rats' learning-memory ability was detected by using step-down passive and active avoidance tests or Morris water maze test. At the end of the experiments, the animals anesthetized under 12% urethane (1 g/kg) were transcardially perfused with PBS fluid containing 4% paraform for sampling the brain tissue containing hippocampus region which was cut into sections (40 microm) and stained with hematoxylin and eosin (H& E) method for observing morphological changes of the hippocampus under light microscope. RESULTS: After electrical shock stimulation, the latencies of step-down passive avoidance in DM + CI group at 15 min and 24 h shortened significantly in comparison with control, CI, DM + sham-CI and DM+ CI+ Acup groups (P < 0.05, 0.01). Compared with DM + CI group, the avoidance latency of DM + CI + Acup increased significantly (P < 0.05). In active avoidance test, the training times for rats to learn making active avoidance reaction in DM + CI group were significantly more than those in DM + sham-CI, CL and DM + CI + Acup groups (P < 0.001), the active avoidance correction rate of DM + CI group decreased significantly in comparison with the other 4 groups (P < 0.01), while these two indexes of DM+ CI+ Acup group were markedly superior to those of DM + CI group (P < 0.05). In comparison with DM + CI group, the percentages of swimming time and swimming

distance in original platform quadrant vs total time and distance in DM+ CI+ Acup group were significantly higher (P < 0.05). Microscopic observation showed that the neuronal loss in the CA1 of the hippocampus was milder in DM+ CI+ Acup group than that in DM + CI group. These results displayed that in DM + CI rats, the cognitive ability declined significantly and neural injury of the brain tissue was definite, and acupuncture had a favorable effect on the animals' changes of behavior and cerebral morphology . CONCLUSION: Acupuncture therapy can ameliorate the learning - memory

330- gera: 148050/di/ra
MOXIBUSTION ENHANCED HIPPOCAMPUS NEUROGENESIS TO IMPROVE LEARNING AND MEMORY ABILITY IN AGED MEMORY DECLINE RATS (ABSTRACT). YONG TANG ET AL. **journal of alternative and complementary medicine.** 2007;13(8):912 (eng).

331- gera: 151809/di/ra
UNVEIL ALZHEIMERS(AD): TCM & JINLUO MODEL. YIFANG TIAN. **eastwest integration medicine.** 2007;5(2):10 (eng).
A pathogenic model of Alzheimer's disease has been unveiled the first time from a TCM and Jinluo point of view. The role of Yangwei mai, Yinwei mai and Chong mai as well as heart and kidney in the trigger and the development of Alzheimer's disease has been analyzed. Effective treatment strategies were also discussed.

332- gera: 151996/di/ra
CATGUT IMPLANTATION AT ACUPOINT FOR PROTECTION FROM INJURY OF SPATIAL MEMORY IN THE RAT OF CONTINUATIVE ILLUMINATION. MA BING-QUAN , TANG RONG-HUA. **world journal of acupuncture moxibustion.** 2007;17(2):25 (eng).
Objective To observe the injury of spatial memory in the rat of continuative illumination and the protection of catgut implantation at Nèiguàn (J'Th PC6) from the injury. Methods After training for 7 days in Morris's water maze of 4 quadrants, on the 8th day, 48 male Wistar rats of clear grade were randomly divided into a normal group, a model group, a melatonin (MT) group and a catgut implantation group, 12 rats each group. The spatial injury in the rats was induced by continuative and long-term (24 h and 42 days) illumina-tion, and at the same time, they were treated with catgut implantation at Nèiguan (ÇTh PC6) and intraperi-toneal injection of MT; changes of spatial memory ability and ultrastructures of the neurons of the hippocam-pus were detected by Morris's water maze and transmission electron microscope, respectively. Results The searching platform latency (SPL) in the Morris's water maze in the model group significantly prolonged as compared with that before modeling (P<0.05), and after treatment it was significantly shortened in the MT group and the catgut implantation group as compared with the model group (both P<0.05), but with no sig-nificant differences as compared with that before treatment (both P>0.05). Mitochondria, synapses, axes and vascular endothelium in the hippocampus in the model group were injured in varying degrees, but a less injury was found in the MT group and the catgut implantation group which was similar to that in the normal group. Conclusion Catgut Implantation at Nèiguan (PC6) can protect from the injury of spatial memory in the rat of continuative illumination.

333- gera: 148108/di/ra
[CLINICAL OBSERVATION ON CATGUT IMPLANTATION AT ACUPOINT FOR TREATMENT OF ALZHEIMER'S DISEASE]. ZHOU YL, JIA JP. **chinese acupuncture and moxibustion.** 2008;28(1):37 (chi).
OBJECTIVE: To observe clinical therapeutic effect of catgut implantation at acupoint on Alzheimer's disease (AD). METHODS: Twenty-six cases with mild-moderate AD were divided into an acupoint catgut implantation group and a control group by sample-paired method. The acupoint catgut implantation group were treated with cat-gut implantation at Shenmen (HT 7), Zusanli (ST 36), Fenglong (ST 40) and Taixi (KI 3), and the control group with the same manipulation at the same acupoints with no catgut implanted, once each month, for 6 months. Mini- Mental State Examination (MMSE), Activity of Daily Living (ADL) and Alzheimer's Disease Assessment Scale- Cognitive Section (ADAS-Cog) scores were recorded before and after treatment and analyzed statistically. RESULTS: After treatment, the score of MMSE significantly increased (P < 0.01), the score of ADAS-Cog significantly decreased (P < 0.01) and the score of ADL did not significantly change in the acupoint catgut implantation group; compared with the control group, the score of MMSE in the acupoint catgut implantation significantly increased (P < 0.01), the score of ADAS-Cog significantly decreased (P < 0.05) and the score of ADL did not significantly change in the acupoint catgut implantation. CONCLUSION: Acupoint catgut implantation therapy increases cognitive function of the patient of AD, which provides a new therapeutic method for aged AD.

334- gera: 148605/di/ra
PROGRESS OF STUDY ON TREATMENT OF ALZHEIMER ' S DISEASE WITH ACTIVE INGREDIENTS OF CHINESE HERBAL MEDICINES. ZHAO Jing-kun and WANG De-shen. **chinese journal of integrated traditional and western medicine.** 2008;28(2):177 (chi).
In order to advance the treatment of Alzheimer's disease with active ingredients of Chinese herbal medicines and the research on these ingredients and their effective targets in treating the disease , the relative representative literatures published in recent years were reviewed and summarized in this paper.

335- gera: 148709/di/ra
[EFFECT OF GENGNIANCHUN RECIPE ON LEARNING MEMORY FUNCTION AND HIPPOCAMPAL CHOLINERGIC SYSTEM IN OVARIECTOMIZED RATS]. ZHAO FAN-GUI, WANG WEN-JUN, ZHOU WEN-JIANG, ET AL. **chinese journal of integrated traditional and western medicine.** 2008;28(3):234 (chi).
Objective To evaluate the effect of Gengnianchun Recipe (GNC) on learning memory function and its regulatory effect on hippocampal cholinergic system in ovariectomized rats. Methods Female rats 10 –12 months old were randomized into 5 groups , the sham-operation group , the model group treated with normal saline , the positive control group treated with Nilestriol, and the two GNC groups treated with high and low dose GNC respectively. A little fat around ovary was cut in the sham-operation group. The treatment lasted for 12 weeks after ovariectomy. Changes of learning memory function were tested by Morris water maze ; serum level of estradiol (E,) was measured by chemical fluorescent

method ; hippocampal acetylcholinesterase (AChE) mRNA was determined with Real-time PCR; and the activities of acetylcholine (ACh) , AChE and choline acetyltransferase (ChAT) in hippocampus were detected by immunohistochemistry respectively. Results Twelve weeks after ovariectomy, serum E, and learning memory function markedly decreased in the ovariectomized rats (P <0. 01 , P < 0. 05) . Nilestriol and high dose GNC showed an effect in improving the symptoms of learning memory functional deprivation and elevating the activities of hippocampal ACh , AChE and ChAT (all P < 0. 05) . Conclusion GNC can improve learning memory function of ovariectomized rats, and its mechanism might be realized by regulating the cholinergic system in hippocampus.

336- gera: 148895/di/ra

NEUROPROTECTION AND ENHANCEMENT OF SPATIAL MEMORY BY HERBAL MIXTURE HT008-1 IN RAT GLOBAL BRAIN ISCHEMIA MODEL. KIM YT, YI YJ, KIM MY, BU Y, JIN ZH, CHOI H, DORÉ S, KIM H. **the american journal of chinese medicine.** 2008;36(2):287 (eng).

To investigate whether HT008-1, a prescription used in traditional Korean medicine to treat mental and physical weakness, has a neuroprotective effect on a rat model of global brain ischemia and an enhancing effect against memory deficit following ischemia. Global brain ischemia was induced for 10 min by using 4-vessel occlusion (4- VO). HT008-1 was orally administered at doses of 30, 100, and 300 mg/kg respectively twice at 0 and 90 min after ischemia. The effect on memory deficit was investigated by using a Y-maze neurobehavioral test 4 days after brain ischemia, and the effect on neuronal damage was measured 7 days after ischemia. The mechanism of action was studied immunohistochemically using an anti-CD11b (OX-42) antibody. The oral administration of HT008-1 at 100 and 300 mg/kg significantly reduced hippocampal neuronal cell death by 49% and 53%, respectively, compared with a vehicle-treated group, and also improved spatial memory function in the Y-maze test. Immunohistochemically, HT008-1 inhibited OX-42 expression in the hippocampus. The effects of HT008-1 were more pronounced than those of its individual herb components. The herbal mixture HT008-1 protects the most vulnerable CA1 pyramidal cells of the hippocampus and enhances spatial memory function against global brain ischemia; an anti-inflammatory effect may be one of the mechanisms of action.

337- gera: 149223/nd/ra

IN VITRO PRODUCTION OF HUPERZINE A, A PROMISING DRUG CANDIDATE FOR ALZHEIMER'S DISEASE. MA X, GANG DR. **phytochemistry.** 2008;jun 5:x (eng).

Alzheimer's disease (AD) is growing in impact on human health. With no known cure, AD is one of the most expensive diseases in the world to treat. Huperzine A (HupA), a anti-AD drug candidate from the traditional Chinese medicine Qian Ceng Ta (Huperzia serrata), has been shown to be a powerful and selective inhibitor of acetylcholinesterase and has attracted widespread attention because of its unique pharmacological activities and low toxicity. As a result, HupA is becoming an important lead compound for drugs to treat AD. HupA is obtained naturally from very limited and slowly growing natural resources, members of the Huperziaceae. Unfortunately, the content of HupA is very low in the raw plant material. This has led to strong interest in developing sources of HupA. We have developed a method to propagate in vitro tissues of Phlegmariurus squarrosus, a member of the Huperziaceae, that produce high levels of HupA. The in vitro propagated tissues produce even higher levels of HupA than the natural plant, and may represent an excellent source for HupA.

338- gera: 149277/di/ra

THE INFLUENCES OF EA ON ET IN PLASMA AND THE LEARNING AND MEMORY ABILITIES OF VASCULAR DEMENTIA RATS. YING SHAO, YANQIAN FU, LIHUA QIU, AND CHUNZHI TANG. **international journal of clinical acupuncture.** 2008;17(1):31 (eng).

Objective: To observe the effect of electroacupuncture on ET in plasma as well as the learning and memory abilities on vascular dementia (VD) rats. Method: The VD rats were modeled following the method of global ischemia reperfusion by 4-vascular occlusion (4-vo). Morris water tests were used for the behavioral study. The ET in plasma was measured by radioimmunoassay (RIA). Results: The content of ET in the plasma of the model group was higher than that in the other groups (P < 0.01). The animals required more escape time than those in the control group (P < 0.01) and they did not swim more times in the platform quadrant than in the others in the Morris water tests (P > 0.05). In the electroacupuncture and the medication groups, the animals reduced the escape time overall and they swam in platform quadrant more than in the other three quadrants (P < 0.01). The content of ET in plasma was obviously decreased (P < 0.01). Conclusion: Electroacupuncture can regulate the content of ET in plasma and improve the learning and memory abilities of VD model rats.

339- gera: 149496/nd/ra

ANTI-ACETYLCHOLINESTERASE ACTIVITIES OF TRADITIONAL CHINESE MEDICINE FOR TREATING ALZHEIMER'S DISEASE. LIN HQ, HO MT, LAU LS, WONG KK, SHAW PC, WAN DC. **chem biol interact.** 2008;jun 20:x (eng).

Alzheimer's disease (AD) is a neurodegenerative disease characterized by progressive memory loss and cognitive impairment. It is the most common type of dementia in the ageing population due to a severe loss of cholinergic neurons in selected brain area. At present, acetylcholinesterase inhibitors (AChEI) are the first group of drugs approved by the FDA to treat mild to moderate Alzheimer's disease. Most of these drugs such as huperzine and galanthamine are originally isolated from plants. In this study, the AChE inhibitory activities from extracts of Chinese medicinal herbs that have traditionally been prescribed to treat insomnia and brain function disorders were examined in a 96-well plate assay based on Ellman's method. Both ethanol and aqueous extracts of 26 traditional Chinese medicinal herbs were tested. Inhibitory effects were expressed as the percentage of inhibition. For the herbal extracts that were shown to exert a significant inhibition, dose-dependent inhibitory assays were also performed. Ethanol and aqueous extracts of six herbs were found to have high AChE inhibitory activities in a dose- dependent manner. The IC(50) of these herbal extracts on inhibition of AChE are at around 5-85mum/ml. The results of this study indicate that there is a great potential to search for novel usage of these medicinal herbs for the treatment of AD.

340- gera: 149715/di/ra
EFFECTS OF ELECTROACUPUNCTURE ON PLASMA AND CEREBRAL SOMATOSTATIN AND 13-EP CONTENTS AND LEARNING-MEMORY ABILITY IN VASCULAR DEMENTIA RATS. SHAO YING, LAI XIN-SHENG , GONG YU-ZHAO,ET EL. **acupuncture research.** 2008;33(2):98 (chi).
Objective To observe the effect of electroacupuncture (EA) on learning-memory ability of vascular dementia (VD) rats, and the simultaneous changes of plasma and cerebral somatostatin (SS) and (3-endorphin (EP) contents. Methods Forty-one SD rats were randomly divided into control (n = 8) , model A (n = 8, no treatment) and B •(n =8, intragastric perfusion of 15% saline) , EA (n=9) and medication (n=8, intragastric perfusion of Nimoldipine, 12 mg/kg) groups. VD model was established by using modified 4-vessels occlusion method. EA (150 Hz, 1— 2 mA) was applied to "Baihui" (GV 20), "Dazhui" (DU 14) , "Pishu" (BL 20) and "Shenshu" (BL 23) for 20 min, once daily for 15 days. Morris water maze tests were conducted for evaluating the rats' learning-memory ability. The contents of SS and 13-EP in plasma and brain tissue were measured by radioimmunoassay (RIA). Results In comparison with sham-operation group, the escape latency (EL) prolonged significantly and the target-platform crossing times decreased remarkably (P<O. 01) in model group B. In comparison with model group B, EL shortened and target- platform crossing times increased both significantly in EA and medication groups (P<0. 01). Plasma and cerebral SS, and cerebral 13-EP contents of model groups A and B were significantly lower than those of sham-operation group(P<O. 01)9 while plasma 13-EP level had no obvious change (P>0. 05). Plasma and cerebral SS, and cerebral p-EP contents in both EA and medication groups were considerably higher than those in model groups A and B (P<0. 01). No significant differences were found between EA and medication groups in EL, target-platform crossing times, plasma and cerebral SS and 13-EP levels, and betweenW*IBIA5T, 2008 4 A M33t sR2nj • 99 • model group A and model group B in plasma and cerebral SS and (3-EP levels (P>0. 05). Conclusion EA can raise plasma and cerebral SS and cerebral (3-EP levels, and improve the learning-memory ability in VD rats.

341- gera: 149799/di/ra
EFFECT OF TIANMA GOUTENG DECOCTION WITH SUBTRACTIVE INGREDIENTS AND ITS ACTIVE CONSTITUENTS ON MEMORY ACQUISITION. HO SC, HO YF, LAI TH, LIU TH, SU SY, WU RY. **the american journal of chinese medicine.** 2008;36(3):593 (eng).
Accumulating evidence indicates that the high blood pressure (BP) is a potent risk factor for dementia in the elderly. In line with this theory, we had found the mixture of Chinese herbs (TGD) which were traditionally used to treat hypertension, could enhance the cognitive function. The aim of this study was to decrease the number of herbs used from 11 (TGD) to 4 herbs (TGDS) and further to search the active constituents. After administering a dose of 10 g/kg of TGDS0 to ICR mice, no cholinergic symptoms of lacrimation, salivation, emesis, eyeclosure, increased respiration and fibrillation were observed. All the mice survived without any deaths after 24 hours and 7 days. No changes were observed in control and experimental groups on locomotor activity (no stimulant or sedative effects). It was also revealed that TGDS could prolong the step-through latency at the dose of 1.0 and 2.5 g/kg on passive avoidance tasks in mice. This result was the same as the previous study. The active constituents which enhanced the memory acquisition were discovered in the butanol layer and ethyl acetate layer after the extraction.

342- gera: 149927/di/ra
[EFFECT AND MECHANISM OF JIANNAO YIZHI DECOCTION ON LEARNING AND MEMORY IN RATS WITH SIMILAR ALZHEIMER'S DISEASE]. ZHANG SL, YANG XJ, LIU TF, ET AL. **chinese journal of integrated traditional and western medicine.** 2008;28(6):529 (chi).
OBJECTIVE: To observe the effect of Jiannao Yizhi Decoction (JNYZD) on learning and memory in rats with similar Alzheimer's disease (AD), and to investigate its possible mechanism. METHODS: The composite AD rat model was established by injecting aggregated Abeta25-35 into the lateral cerebral ventricle of senile rats, and all the modeled rats were divided into 5 groups, the model group, the Donepezil group, the high-, middle-, and low- dose JNYZD group. All rats, except those in the model group, were treated respectively with Donepezil and JNYZD at the daily dose of 0.525 mg/kg, 42.4 g/kg, 21.2 g/kg, 10.6 g/kg for 21 days. The ability of learning and memory of rats in different groups was tested using Morris water maze, and the activity of acetylcholine esterase (AchE) and butyrocholin esterase (BehE) in serum were determined, too. RESULTS: The escape latent period was shorter in all medicated group than in the model group (P<0.01 or P<0.05), and it was insignificantly different among all medicated groups (P>0.05). A decreasing trend of AchE and BchE activity presented in the high- and middle-dose JNYZD groups, but insignificant difference was shown as compared these indexes respectively with those in the Donepezil group. Furthermore, the improvement of learning and memory in similar AD rats was insignificantly different between the Donepezil group and the JNYZD groups (P>0.05). CONCLUSION: JNYZD can improve the learning and memory ability of similar AD rats by influencing the activity of cholinesterase.

343- gera: 149964/di/ra
PANAX NOTOGINSENG BURK ATTENUATES IMPAIRMENT OF LEARNING AND MEMORY FUNCTIONS AND INCREASES ED1, BDNF AND BETA-SECRETASE IMMUNOREACTIVE CELLS IN CHRONIC STAGE ISCHEMIA- REPERFUSION INJURED RATS. CHUANG CM, HSIEH CL, LIN HY, LIN JG. **the american journal of chinese medicine.** 2008;36(4):685 (eng).
Panax Notoginseng Burk (PN) has been reported to improve blood circulation, as well as learning and memory functions. The purpose of the present study was to investigate the effect of PN on learning and memory functions in chronic cerebral infarct rats. A cerebral infarct animal model was established by blocking the blood flow of both common carotid arteries and right middle cerebral artery for 90 min followed by reperfusion for 4 weeks. PN (0.5 g/kg) was administered orally 3 days per week for 4 weeks, whereas the control group provided bait and water only. The learning and memory functions were estimated by measuring how successful rats were able to negotiate an 8- arm radial maze test; the test was performed after operation once a week for 4 weeks. Finally, the rats were sacrificed and their brains were removed. The brains were sectioned and analyzed for ED1, glial

fibrillary acid protein (GFAP), nuclear factor-kappaB, and brain derivative neurotrophin factor (BDNF) and beta-secretase by immunostaining. Cerebral infarct rats given PN were able to successfully navigate the 8-arm radial maze test four weeks after cerebral infarction. PN also increased ED1, BDNF and beta-secretase immunoreactive cells, but did not increase GFAP and NF-kappaB immunoreactive cells. PN attenuated the reduction in learning and memory functions induced by cerebral infarction in cerebral ischemia-reperfusion injured rats; it also increased the amount of activated microglia and BDNF. These data suggest that the effect of PN, at least in part, is closely related to the increase in BDNF that was generated by activated microglia. The effect that PN has on astrocytes, NF-kappaB and beta-secreatase immunoreactive cells requires further study.

344- gera: 150062/nd/ra
CHINESE HERBAL MEDICINE FOR MILD COGNITIVE IMPAIRMENT AND AGE ASSOCIATED MEMORY IMPAIRMENT: A REVIEW OF RANDOMISED CONTROLLED TRIALS. MAY BH, YANG AW, ZHANG AL, OWENS MD, BENNETT L, HEAD R, COBIAC L, LI CG, HUGEL H, STORY DF, XUE CC. **biogerontology.** 2008;aug 21:x (eng).
This review assesses the effectiveness and safety of Chinese herbal medicines (CHM) for Mild Cognitive Impairment (MCI) and Age Associated Memory Impairment (AAMI). Electronic searches of English and Chinese databases and hand searches of Chinese journal holdings were conducted. Randomised controlled trials comparing orally administered CHM with placebo, no intervention or other therapy were considered. Ginkgo biloba was excluded. Ten trials met inclusion criteria. Eight different CHM were investigated. Methodological quality was assessed using the Jadad scale and five studies scored three or above. Two studies compared CHM with placebo and eight with another intervention. This review found an overall benefit on some outcome measures for the eight CHMs involved in the 10 RCTs but methodological and data reporting issues were evident. Meta-analysis of three studies found the effects of the CHMs were at least equivalent to piracetam on Mini-Mental State Examination

345- gera: 150071/nd/ra
KIHI-TO, A HERBAL TRADITIONAL MEDICINE, IMPROVES ABETA(25-35)-INDUCED MEMORY IMPAIRMENT AND LOSSES OF NEURITES AND SYNAPSES. TOHDA C, NAITO R, JOYASHIKI E. **bmc complement altern med.** 2008;8(1):49 (eng).

346- gera: 150236/co/ra
ELECTROACUPUNCTURE RESTORES LEARNING AND MEMORY IMPAIRMENT INDUCED BY BOTH DIABETES MELLITUS AND CEREBRAL ISCHEMIA IN RATS. JING XH, CHEN SL, SHI H, CAI H, JIN ZG. **neurosci lett.** 2008;aug 3:x (eng).
Previous investigations have demonstrated that electroacupunctural stimulation can ameliorate primary and secondary symptoms such as peripheral neuropathy and diabetic encephalopathy in diabetic rats. In this study, we investigated whether electroacupuncture could improve learning and memory which was typically impaired in diabetic rats with cerebral ischemia. Furthermore, we investigated the mechanisms underlying its effects using passive avoidance test, active avoidance test, Morris water maze and electrophysiology. Electroacupuncture increased the step-down latency in passive avoidance test and accurate rate in active avoidance test, decreased the escape latency in Morris water maze. After electroacupuncture treatment, the long-term potentiation (LTP) impaired by both diabetes and cerebral ischemia was restored significantly. These results suggest that electroacupuncture can ameliorate learning and memory capacity impaired by hyperglycemia and ischemia. LTP

347- gera: 150241/di/re
ELECTROACUPUNCTURE RESTORES LEARNING AND MEMORY IMPAIRMENT INDUCED BY BOTH DIABETES MELLITUS AND CEREBRAL ISCHEMIA IN RATS. JING XH, CHEN SL, SHI H, CAI H, JIN ZG. **neurosci lett.** 2008;aug 3:x (eng).
Previous investigations have demonstrated that electroacupunctural stimulation can ameliorate primary and secondary symptoms such as peripheral neuropathy and diabetic encephalopathy in diabetic rats. In this study, we investigated whether electroacupuncture could improve learning and memory which was typically impaired in diabetic rats with cerebral ischemia. Furthermore, we investigated the mechanisms underlying its effects using passive avoidance test, active avoidance test, Morris water maze and electrophysiology. Electroacupuncture increased the step-down latency in passive avoidance test and accurate rate in active avoidance test, decreased the escape latency in Morris water maze. After electroacupuncture treatment, the long-term potentiation (LTP) impaired by both diabetes and cerebral ischemia was restored significantly. These results suggest that electroacupuncture can ameliorate learning and memory capacity impaired by hyperglycemia and ischemia. LTP

348- gera: 150278/di/ra
TAI CHI CHUAN IN THE MANAGEMENT OF PARKINSON'S DISEASE AND ALZHEIMER'S DISEASE. KLEIN PJ. **med sport sci.** 2008;52:173-81 (eng).
BACKGROUND: Parkinson's disease (PD) and Alzheimer's disease (ALZ) represent later-life onset neurodegenerative disorders that gradually rob those afflicted of their quality of life. PURPOSE: This chapter offers practice-based recommendations on how instruction and practice of Tai Chi Chuan (TCC) can be adapted for individuals with PD and those with ALZ. RESEARCH EVIDENCE: Practice of TCC is widely advocated as an exercise option in PD; however, little validating research exists. Even less is known about feasibility of applications of TCC for individuals with ALZ. CLINICAL IMPRESSIONS: The slow, rhythmic pace of functionally based exercises, internal organ stimulation, flexibility maintenance, balance-training effects, and general health benefits of TCC and Tai Chi-like exercise practice have clinical relevance for both conditions. Falls prevention, tremor reduction and motor control may be of most importance in management of PD. Behavioral and general health benefits as well as slowing of functional and cognitive decline are considerations with ALZ. RECOMMENDATIONS: Strategies of exercise adaptation include use of Tai Chi-like exercise for individuals with ALZ and those in middle or late stages of PD as well as providing instructional resources and training for caregivers and exercise aides to facilitate practice as a part of daily life.

349- gera: 150353/nd/ra

IN VITRO PRODUCTION OF HUPERZINE A, A PROMISING DRUG CANDIDATE FOR ALZHEIMER'S DISEASE. MA X, GANG DR. **phytochemistry.** 2008;69(10):2022-8 (eng).
Alzheimer's disease (AD) is growing in impact on human health. With no known cure, AD is one of the most expensive diseases in the world to treat. Huperzine A (HupA), a anti-AD drug candidate from the traditional Chinese medicine Qian Ceng Ta (Huperzia serrata), has been shown to be a powerful and selective inhibitor of acetylcholinesterase and has attracted widespread attention because of its unique pharmacological activities and low toxicity. As a result, HupA is becoming an important lead compound for drugs to treat AD. HupA is obtained naturally from very limited and slowly growing natural resources, members of the Huperziaceae. Unfortunately, the content of HupA is very low in the raw plant material. This has led to strong interest in developing sources of HupA. We have developed a method to propagate in vitro tissues of Phlegmariurus squarrosus, a member of the Huperziaceae, that produce high levels of HupA. The in vitro propagated tissues produce even higher levels of HupA than the natural plant, and may represent an excellent source for HupA.

350- gera: 150808/di/ra
EFFECTS OF EMBEDDING CATGUT AT BAIHUI ACUPOINT(DLI20) ON THE ABILITY OF LEARING MEMORY AND THE ACTIVITIES OF SOD NO IN RATS WITH VASCULAR DEMENTIA. WANGYAN WU, CUEN-HUA- DE. **journal of clinical acupuncture and moxibustion.** 2008;24(6):47 (chi).

351- gera: 150923/di/re
ACUPUNCTURE PROTECTED CEREBRAL MULTI-INFARCTION RATS FROM MEMORY IMPAIRMENT BY REGULATING THE EXPRESSION OF APOPTOSIS RELATED GENES BCL-2 AND BAX IN HIPPOCAMPUS. WANG T, LIU CZ, YU JC, JIANG W, HAN JX. **physiol behav.** 2008;oct 9:x (eng).
Vascular dementia (VaD) is the second most common cause of dementia in the world today. In this paper, we observed the effect of acupuncture on memory impairment, apoptosis and expression of Bcl-2 and Bax in hippocampus of cerebral multi-infarction rats. The results indicated that acupuncture significantly improved memory impairment induced by cerebral multi-infarction, as evaluated by shortened escape latency and increased swimming time in the target quadrant. Meanwhile, based on the observation in hippocampal CA1 region through methods of the terminal deoxynucleotidyl transferase nick end labeling (TUNEL), immunohistochemistry and in situ hybridization, acupuncture decreased the number of apoptotic cells and expression of the proapoptotic Bax gene, on the contrary, it increased expression of the antiapoptotic gene Bcl-2. The result of the research suggested that acupuncture can exert antiapoptotic effect through counter-regulating Bcl-2 and Bax gene expression.

352- gera: 150980/di/ra
KIHI-TO, A HERBAL TRADITIONAL MEDICINE, IMPROVES ABETA(25-35)-INDUCED MEMORY IMPAIRMENT AND LOSSES OF NEURITES AND SYNAPSES. TOHDA C, NAITO R, JOYASHIKI E. **bmc complement altern med.** 2008;aug 16(8:49 (eng).
BACKGROUND: We previously hypothesized that achievement of recovery of brain function after the injury requires the reconstruction of neuronal networks, including neurite regeneration and synapse reformation. Kihi-to is composed of twelve crude drugs, some of which have already been shown to possess neurite extension properties in our previous studies. The effect of Kihi-to on memory deficit has not been examined. Thus, the goal of the present study is to determine the in vivo and in vitro effects of Kihi-to on memory, neurite growth and synapse reconstruction. METHODS: Effects of Kihi-to, a traditional Japanese-Chinese traditional medicine, on memory deficits and losses of neurites and synapses were examined using Alzheimer's disease model mice. Improvements of Abeta(25-35)-induced neuritic atrophy by Kihi-to and the mechanism were investigated in cultured cortical neurons. RESULTS: Administration of Kihi-to for consecutive 3 days resulted in marked improvements of Abeta(25-35)-induced impairments in memory acquisition, memory retention, and object recognition memory in mice. Immunohistochemical comparisons suggested that Kihi-to attenuated neuritic, synaptic and myelin losses in the cerebral cortex, hippocampus and striatum. Kihi-to also attenuated the calpain increase in the cerebral cortex and hippocampus. When Kihi-to was added to cells 4 days after Abeta(25-35) treatment, axonal and dendritic outgrowths in cultured cortical neurons were restored as demonstrated by extended lengths of phosphorylated neurofilament-H (P-NF-H) and microtubule-associated protein (MAP)2-positive neurites. Abeta(25-35)-induced cell death in cortical culture was also markedly inhibited by Kihi-to. Since NF-H, MAP2 and myelin basic protein (MBP) are substrates of calpain, and calpain is known to be involved in Abeta-induced axonal atrophy, expression levels of calpain and calpastatin were measured. Treatment with Kihi-to inhibited the Abeta(25-35)-evoked increase in the calpain level and decrease in the calpastatin level. In addition, Kihi-to inhibited Abeta(25-35)-induced calcium entry. CONCLUSION: In conclusion Kihi-to clearly improved the memory impairment and losses of neurites

353- gera: 150989/nd/ra
THE EFFECTS OF AN HERBAL MEDICINE BU-WANG-SAN ON LEARNING AND MEMORY OF OVARIECTOMIZED FEMALE RAT. LI H, LI SL, GONG L, WANG JL, LI YZ, WU ZH. **j ethnopharmacol.** 2008;117(3):427-32 (eng).
ETHNOPHARMACOLOGICAL SIGNIFICANCE: Bu-Wang-San (BWS) is a traditional Chinese herbal medicine for the treatment of learning and memory impairment. The effect of BWS on neuroprotection and how BWS increases CA1 dendritic spine synapse density in menopaused women was investigated in the model of ovariectomized (OVX) rats. MATERIALS AND METHODS: Sixteen OVX rats were divided into two groups, the OVX group and OVX+BWS group. After 3 months, Morris water maze was used to assess spatial acquisition and spatial retention. Swim time, swim distance, swim speed, quadrant time and platform crossing were recorded. The ultrastructure of the pyramidal cell and spine synapse density were examined by transmission electron microscopy (TEM). RESULTS: In the spatial acquisition and spatial retention phase of testing, BWS group functioned significantly better than control group. Ultrastructural observation of the hippocampal CA1 region of OVX group showed swelling of mitochondria, the broken and reduced cristas and even crista dissolution; however, the mitochondria were protected well in BWS group. In

addition, BWS significantly increased spine synapse density. CONCLUSIONS: These results suggested that BWS could improve cognitive ability of menopause-induced learning and memory impairment. The positive effect of BWS on rat learning and memory was associated with increase of spinal synapse density and protection of mitochondrial function of the pyramidal cell in hippocampal CA1 region from menopause-induced injury.

354- gera: 150998/co/ra
ACUPUNCTURE PROTECTED CEREBRAL MULTI-INFARCTION RATS FROM MEMORY IMPAIRMENT BY REGULATING THE EXPRESSION OF APOPTOSIS RELATED GENES BCL-2 AND BAX IN HIPPOCAMPUS. WANG T, LIU CZ, YU JC, JIANG W, HAN JX. **physiol behav.** 2008;oct 9:x (eng).
Vascular dementia (VaD) is the second most common cause of dementia in the world today. In this paper, we observed the effect of acupuncture on memory impairment, apoptosis and expression of Bcl-2 and Bax in hippocampus of cerebral multi-infarction rats. The results indicated that acupuncture significantly improved memory impairment induced by cerebral multi-infarction, as evaluated by shortened escape latency and increased swimming time in the target quadrant. Meanwhile, based on the observation in hippocampal CA1 region through methods of the terminal deoxynucleotidyl transferase nick end labeling (TUNEL), immunohistochemistry and in situ hybridization, acupuncture decreased the number of apoptotic cells and expression of the proapoptotic Bax gene, on the contrary, it increased expression of the antiapoptotic gene Bcl-2. The result of the research suggested that acupuncture can exert antiapoptotic effect through counter-regulating Bcl-2 and Bax gene expression.

355- gera: 151097/di/ra
[CORRELATION ANALYSIS ON CHANGES BETWEEN COGNITIVE ABILITY AND BRAIN FMRI AFTER ACUPOINT THREAD EMBEDDING IN ALZHEIMER'S DISEASE PATIENTS]. ZHOU YL, HAN HY, JIA JP. **chinese journal of integrated traditional and western medicine.** 2008;28(8):689 (chi).
OBJECTIVE: To explore the mechanism of acupoint thread embedding (ATE) in treating Alzheimer's disease (AD) by means of brain functional magnetic resonance imaging (fMRI). METHODS: Twenty-six patients with mild to moderate AD were assigned to the tested group and the control group in pairing, 13 in each group. ATE was performed in patients of the tested group at Shenmen (HT7), Fenglong (ST40), Taixi (KI3) and Zusanli (ST36) acupoints, once every month for 6 times in total; but for patients of the control group only sham operation was done at the same acupoints. The correlation between cognitive ability and fMRI were assessed by comparing the scores of Mini-Mental State Examination (MMSE) and Alzhemer's Disease Assessment Scale-Cognitive section (ADAS-Cog), monitored at two time points, namely, in one week before starting treatment and 1 week after terminating 6-month treatment. Furthermore, fMRI was detected to obtain the data of the cerebral blood oxygen content before treatment and 6 months after completing the 6-month therapeutic course. Correlation analysis was conducted on the obtained data using software SPM. RESULTS: After treatment, changes of MMSE score significently increased in the test group ($P < 0.01$) and decreased in the control group ($P < 0.01$), and ADAS-Cog decreased in the test group ($P < 0.01$) and increased in the control group ($P < 0.05$), showing statistical significance between the two groups ($P < 0.01$, $P < 0.05$). The activated regions related with the change of MMSE were mainly inferior frontal gyrus, middle frontal gyrus, superior frontal gyrus, transverse temporal gyrus, on the left cerebrum and superior frontal gyrus, middle frontal gyrus, precentral gyrus, hippocampal gyrus, cingulate gyrus, postcentral gyrus, paracentral lobule on the right cerebrum; those related with change of ADAS-Cog were superior frontal gyrus, middle frontal gyrus, fusiform gyrus, inferior temporal gyrus, hippocampal gyrus on the left cerebrum, and superior frontal gyrus, middle frontal gyrus, precentral gyrus, fusiform gyrus, transverse temporal gyrus, postcentral gyrus, middle occipital gyrus on the right cerebrum. CONCLUSION: ATE could improve the cognitive ability of AD patients, its possible mechanism may be through the activation on the cognition related regions of frontal,

356- gera: 151105/di/ra
FIGHTING WITH ALZHEIMER'S DISEASE AND KAMPO MEDICINE. ARAI H. **kampo medicine.** 2008;59(5):683 (jap).
Alzheimer's disease (AD) research from 1984 disclosed that there is 10-20 years of time for transition from normal brain to Alzheimer's disease brain. Therefore, AD is a disease with long "Mibyo" phase. Since treat' men t effect in AD could be partial and limited, we need to consider prevention or "Youjou" not to develop AD more seriously. Amyloid imaging with PET can be promising in the visualization of amyloid burden or Mibyo state. Several medicinal herbs have a potent anti-amyloid aggregation effect as a new class of disease.modifying drug. Yi-Gan-San which has been originally described in Ming dynasty in China is efficacious in improving behavioral and psychological symptoms of dementia without developing falls or extra-pyramidal adverse effects. Multi-potent traditional medicine doctor with not only practicing traditional medicine alone, but they can also get insights on Western-medicine and collecting information from abroad is warranted.

357- gera: 152430/di/ra
PROTECTIVE EFFECTS AND MECHANISM OF PUERARIN ON LEARNING-MEMORY DISORDER AFTER GLOBAL CEREBRAL ISCHEMIA-REPERFUSION INJURY IN RATS. WU HQ, GUO HN, WANG HQ, CHANG MZ, ZHANG GL, ZHAO YX. **chinese journal of integrative medicine.** 2009;15(1):54-9 (eng).
OBJECTIVE: To observe the effect of puerarin on the learning-memory disorder after global cerebral ischemia- reperfusion injury in rats, and to explore its mechanism of action. METHODS: The global cerebral ischemia- reperfusion injury model was established using the modifified Pulsinelli four-vessel occlusion in Sprague-Dawley rats. Rats were intraperitoneally injected with puerarin (100 mg/kg) 1 h before ischemia and once every 6 h afterwards. The learning-memory ability was evaluated by the passive avoidance test. The dynamic changes of the cell counts of apoptosis and positive expression of Bcl-2 in the hippocampus CA1 region were determined by the TUNEL and immunohistochemical methods, respectively. RESULTS: (1) Compared with the reperfusion group, the step through latency (STL) in the passive avoidance test in the puerarin group was prolonged significantly

(P<0.01). (2) The apoptotic neurons were injured most severely on the 3rd day in the hippocampal CA1 region after global ischemia and reperfusion. In the puerarin group, the number of apoptotic cells decreased at respective time points after ischemia-reperfusion (P<0.01). (3) The level of positive expression of Bcl-2 varied according to the duration of reperfusion and the peak level occurred on day 1 in the hippocampal CA1 region after global cerebral ischemia. Compared with the reperfusion group, the expression of Bcl-2 in the puerarin group was up- regulated at the respective time points after ischemia reperfusion (P<0.01), reaching the peak on day 1. CONCLUSIONS: Puerarin could improve the learning-memory ability after global cerebral ischemia and reperfusion in rats. The protective mechanism might be related to the effect of inhibiting or delaying the cell apoptosis through up-regulating the expression of Bcl-2 after ischemia and reperfusion.

358- gera: 152685/di/ra
EFFECTS OF ELECTROACUPUNCTURE ON THE ABILITY OF LEARNING AND MEMORY IN RATS WITH ISCHEMIA-REPERFUSION INJURY. GE LIN-BAO. **journal of acupuncture and tuina science.** 2009;7(1):3-7 (eng).

359- gera: 153071/di/ra
[PROGRESS IN THE RESEARCH ON MULTI-TARGET-DIRECTED DRUGS AGAINST ALZHEIMER'S DISEASE]. LIU RT, LÜ QJ. **yao xue xue bao.** 2009;44(3):258-63 (chi).
Alzheimer's disease (AD) is a chronic neurodegenerative disorder and one of the earliest sings of AD is deficit in short term memory. Till now, the pathogenesis of AD has not been elucidated and the present one-drug-one-target paradigm of anti-AD-drug treatment seems not to be effective in clinic. Multi-target-directed anti-AD-drugs are those agents that may act on two or more targets implicated in AD. Based on the brief introduction of progress in the development of present anti-AD-drugs, the paper mainly focused on the advances in the field of multi-target- directed drug development both home and abroad, especially those studies on selective estrogen receptor

360- gera: 153322/nd/re
ACUPUNCTURE FOR ALZHEIMER'S DISEASE: A SYSTEMATIC REVIEW. LEE MS, SHIN BC, ERNST E. **int j clin pract.** 2009;63(6):874-9 (eng).
Acupuncture is often used as a treatment for dementia and is claimed to be effective in improving intelligence. AIMS: The objective of this review is to assess the clinical evidence for or against acupuncture as a treatment for Alzheimer's disease (AD). METHODS: We searched the literature using 17 databases from their inception to August 2008, without language restrictions. We included all randomised clinical trials (RCTs) of needle acupuncture to treat human patients suffering from AD. Methodological quality was assessed using the Jadad score. RESULTS: Three RCTs met all inclusion criteria. Two RCTs assessed the effectiveness of acupuncture on cognitive function compared with drug therapy. Their results suggested no significant effect in favour of acupuncture [n = 72, weight mean difference (WMDs), -0.55; 95% confidence intervals (CIs) -1.31 to 0.21, p = 0.15, heterogeneity: tau(2) = 0, chi(2) = 0.048, p = 0.49, I(2) = 0%]. Two RCTs tested acupuncture for activities of daily living (ADL). One RCT reported favourable effects of drug therapy compared with acupuncture for ADL, while the other failed to so. The meta-analysis of these data showed significant effects of drug therapy compared with acupuncture (n = 72, WMD, - 1.29; 95% CIs: -1.77 to -0.80, p < 0.001, heterogeneity: tau(2) = 0, chi(2) = 0.17, p = 0.68, I(2) = 0%). CONCLUSION: Even though the number of studies is small, the existing evidence does not demonstrate the effectiveness of acupuncture for AD.

361- gera: 153468/di/ra
[A STUDY OF THE EFFECT OF ACUPUNCTURE PRETREATMENT ON LEARNING AND MEMORY ABILITIES IN VASCULAR DEMENTIA RATS]. MENG PEI-YAN, SUN GUO-JIE,MAO JUAN-JUAN,. **shanghai journal of acupuncture and moxibustion.** 2009;28(5):293 (chi).
To investigate the effects of electroacupuncture at Baihui(GV20), Shenshu(BL23) and Housanli(ST36) on learning and memory abilities in vascular dementia (VD) rats. Methods SD rats were randomly allocated to normal, sham operation, model and electroacupuncture pretreatment groups. A rat model of VD was made by a modified thread- occlusion method. The effects of electroacupuncture at Baihui(GVZO), Shenshu(BL23) and Housanli(ST36) on Monis water maze learning and memorizing abilities were investigated in the VD rats. Results The average escape latent period in a water maze test lengthened in the model group of rats and had a statistically significant difference compared with the sham operation group (P< 0.01). The average escape latent period shortened in the electroacupuncture pretreatment group of rats and had a statistically significant difference compared with the model group (P<0.01). There was a statistically significant difference in the orientation navigation test achievement between the electroacupuncture pretreatment group and the model group (P<0.01).

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