



第二屆張安德中醫藥國際貢獻獎 頒獎典禮暨得獎學人講座

The Second Cheung On Tak International Award for
Outstanding Contribution to Chinese Medicine
Award Presentation Ceremony-cum-Award Winner's Lecture

2014 年 3 月 26 日 (星期三) 下午 4 時至 6 時
香港浸會大學逸夫校園 郭鍾寶芬女士康體文娛中心二樓
劉佐德伉儷多用途會堂

26 March 2014, Wednesday, 4:00 p.m. to 6:00 p.m.
Mr. and Mrs. Lau Chor Tak Multi-purpose Hall
Level 2, Madam Kwok Chung Bo Fun Sports and Cultural Centre
Shaw Campus, Hong Kong Baptist University



香港浸會大學
HONG KONG BAPTIST UNIVERSITY



張安德中醫藥國際貢獻獎
CHEUNG ON TAK
INTERNATIONAL AWARD
for Outstanding Contribution
to Chinese Medicine

School of 中醫藥學院
Chinese Medicine



張安德中醫藥國際貢獻獎

Cheung On Tak International Award for Outstanding Contribution to Chinese Medicine

傳統中醫藥在世界各地急速發展，在多個國家的醫療保健制度中所擔當的角色日益重要。香港浸會大學中醫藥學院自2011年起設立中醫藥國際貢獻獎，旨在表揚在推動中醫藥國際化或在中醫藥研究領域取得具突破性及獲國際認可的成就的科學家和學者，藉此促進中醫藥的現代化和國際化，同時亦推動中醫藥的發展，惠澤全球。

厚蒙張安德慈善基金慷慨捐獻，香港浸會大學中醫藥學院得以設立此獎項，特以「張安德中醫藥國際貢獻獎」命名，以彰善舉。

「張安德中醫藥國際貢獻獎」每兩年頒發一次，每屆頒發獎項予一至二位學者，每屆獎金總額為港幣50萬元。

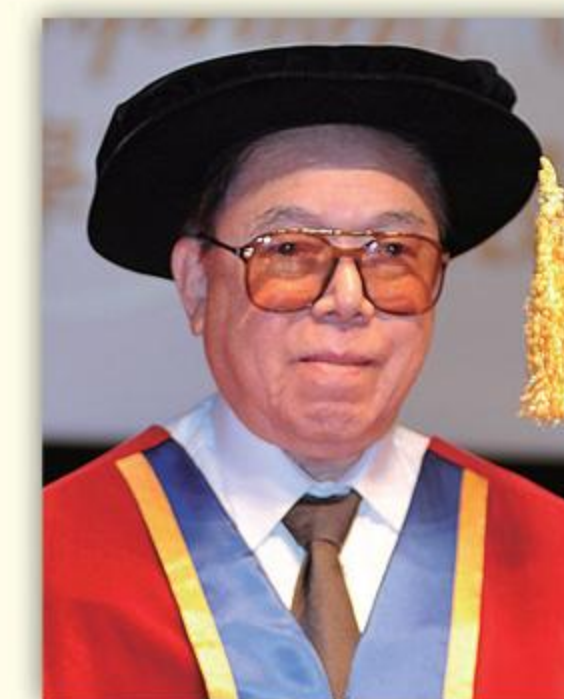
The School of Chinese Medicine of the Hong Kong Baptist University established the Cheung On Tak International Award for Outstanding Contribution to Chinese Medicine in 2011. The Award aims to recognize scientists and scholars with outstanding contribution to the internationalization of Chinese medicine, or breakthroughs and internationally recognized achievements in Chinese medicine research, for the purpose of promoting the modernization and internationalization of Chinese medicine and advancing the development of Chinese medicine.

Established with a generous donation from the Cheung On Tak Charity Foundation, the Award is named in honour of Mr. Cheung On Tak.

The Award is conferred biennially on one to two scholars and carries a total prize money of HK\$500,000.

張安德慈善基金

Cheung On Tak Charity Foundation



「張安德慈善基金」由張安德先生於1992年創辦，宗旨為促進教育、宗教及醫療服務的發展，扶危解困，回饋社會，造福社群。張先生是著名工業家，曾任萬寶置業有限公司及安德企業有限公司顧問，一向熱心公益，致力履行社會責任，曾在多個工商及社區團體擔任職務，包括潮僑塑膠廠商會會長和主席、香港潮州商會會董、香港仔街坊福利會社會服務中心榮譽會長、南區反吸毒運動委員會主席、香港張氏宗親會會長等。2011年，張先生獲香港浸會大學頒授榮譽大學院士銜。

「張安德慈善基金」自成立以來慷慨捐資，熱心支持本港的教育事業，曾先後捐資多間大學，積極推動本地高等教育的教研與發展。

The Cheung On Tak Charity Foundation was set up by renowned industrialist Mr. Cheung On Tak in 1992 to advance the development of education, religion and medical services. Formerly consultant of Man Po Investment Company Limited and On Tak Enterprise Company Limited, Mr. Cheung is well-known for his philanthropy and commitment to serving the community. He has an impressive record of services in trade and industrial as well as community organizations, such as President and Chairman of The Chiu Chau Plastic Manufacturers Association Company Limited, Director of the Hong Kong Chiu Chow Chamber of Commerce, Honorary President of the Aberdeen Kai-fong Welfare Association Social Service Centre, Chairman of the Southern District Anti-drug Campaign and President of the Hong Kong Cheung Shi Clansmen's Association. In 2011, he was awarded Honorary University Fellowship by Hong Kong Baptist University.

Over the years, the Foundation has contributed generously to the education sector and has given substantial support to the teaching, research and development initiatives at numerous universities in Hong Kong.



第二屆評審委員會

Panel of Adjudicators of the Second Award

主席

陳凱先教授
中國科學院院士



Chairman

Professor Chen Kaixian
Academician, Chinese Academy of Sciences

成員（按英文姓氏的字母順序排列）

Members (in alphabetical order by last name)

陳可冀教授

中國科學院院士
著名中西醫結合專家
第一屆「張安德中醫藥國際貢獻獎」得獎人



Professor Chen Keji
Academician, Chinese Academy of Sciences
Renowned expert in integration of Chinese and Western medicine
Award Winner of the First Cheung On Tak International Award for Outstanding Contribution to Chinese Medicine

陳新滋教授

中國科學院院士
香港浸會大學校長



Professor Albert Sun-Chi Chan
Academician, Chinese Academy of Sciences
President and Vice-Chancellor, Hong Kong Baptist University

梁秉中教授

香港中文大學中醫中藥研究所臨床研究中心主任
植物化學與西部植物資源持續利用國家重點實驗室夥伴實驗室主任



Professor Leung Ping-Chung
Director, Centre for Clinical Trials on Chinese Medicine, Institute of Chinese Medicine, The Chinese University of Hong Kong
Director, State Key Laboratory of Phytochemistry and Plant Resources in West China (Partner Laboratory in The Chinese University of Hong Kong)

呂愛平教授

香港浸會大學中醫藥學院院長、黃英豪博士中醫藥講座教授



Professor Lu Aiping
Dean, School of Chinese Medicine and Dr. Kennedy Y.H. Wong Endowed Chair of Chinese Medicine, Hong Kong Baptist University

蘇國輝教授

中國科學院院士
香港大學醫學院解剖學系講座教授兼系主任



Professor So Kwok-Fai
Academician, Chinese Academy of Sciences
Chair Professor and Head, Department of Anatomy, The University of Hong Kong

伍焜玉教授

台灣中央研究院院士
台灣國家衛生研究院院長



Professor Kenneth Kun-Yu Wu
Academician, Academia Sinica of Taiwan
President, National Health Research Institutes of Taiwan

黃英豪博士

香港浸會大學中醫藥學院諮詢委員會主席



Dr. Kennedy Ying-Ho Wong
Chairman, Advisory Committee of School of Chinese Medicine, Hong Kong Baptist University

第二屆張安德中醫藥國際貢獻獎得獎人

Winner of the Second Cheung On Tak International Award for Outstanding Contribution to Chinese Medicine



韓濟生院士 Professor Han Ji-Sheng

韓濟生院士為中國科學院院士、北京大學醫學部神經科學研究所名譽所長，從事針刺麻醉原理研究近五十載。他在針刺鎮痛領域長期持續研究所得成果獲國內外學者的普遍認同。

Academician of Chinese Academy of Sciences;
Honorary Director of Neuroscience Research Institute,
Peking University Health Science Center

韓濟生院士生於1928年，浙江省蕭山市人，生理學家，博士研究生導師，博士後指導教師。1952年畢業於上海醫學院醫學系，在大連醫學院生理高級師資班進修(1952-1953)後，先後在哈爾濱醫科大學(1953)、北京衛生幹部進修學院(1956)、北京中醫學院(1961)、北京醫學院(北京大學醫學部前身，1962至今)等單位的生理系任教。1979年由講師直接晉升為教授。1983至1993年任北京醫科大學生理教研室主任，1987年創建北京醫科大學神經科學研究中心，並被選為瑞典隆德皇家科學院國際院士。1993年創建衛生部神經科學重點實驗室主任，任神經科學研究所所長，同年當選為中國科學院院士(生命科學與醫學學部)。現為北京大學醫學部神經科學研究所名譽所長，北京大學醫學部神經生物學系教授，兼任北京神經科學會名譽理事長，中華醫學會疼痛學分會終身名譽主任委員;《生理科學進展》雜誌名譽主編，《中國疼痛醫學雜誌》主編，《中國藥理學通報》、《中國中西醫結合雜誌》(英文版)、《中國藥物濫用防治雜誌》等編委，曾任國務院學位委員會學科評議組成員，中國博士後科學基金會理事會醫學組長。

韓院士1965年開始從事針灸原理研究，1972年開始從中樞神經化學角度系統研究針刺鎮痛原理，發現針刺可刺激體內的鎮痛系統，釋放出阿片肽、單胺類神經遞質等，發揮鎮痛作用；不同頻率的電針可釋放出不同種類阿片肽，而針效的優劣取決於體內鎮痛和抗鎮痛兩種力量的消長。韓院士研製出「韓氏穴位神經刺激儀(HANS)」，對治療疼痛和海洛因癮有良效。從1987至2000年連續13年獲美國國立衛生研究院(NIH)R01科研基金研究針刺鎮痛原理。從2004至2009年獲NIH重點科研基金，與哈佛大學合作研究針刺戒毒原理，期間兼任哈佛大學精神病學科兼職教授。2007年擔任中國科學技術部《基於臨床的針麻鎮痛的基礎研究(973)》首席科學家；2011年於結題時由於他的成果被評為「優秀」，因此科技部決定予以繼續支持。在國內外雜誌及專著上發表論文500餘篇，近年致力於轉化醫學研究，探索韓氏儀在孤獨症(自閉症)、輔助生育(包括試管嬰兒)等方面的應用，並獲得衛生部行業大基金資助，正在多間中心進行大樣本的臨床試驗和推廣。



在醫學教學方面，韓院士於1992年獲北京醫科大學授予獎勵優秀教師的「桃李獎」；主編中文專著9冊，包括《神經科學綱要》(1993年)，《神經科學原理》(1999年)，《神經科學》(2008年)；《針刺鎮痛的神经化學原理》(第一卷1987年；第二卷1997年；第三卷2007年)；英文生理學教科書；《疼痛學》教科書(2012年)。

韓院士自1979年以來曾到訪27個國家和地區的100餘所大學和研究機構，演講209次，並多次擔任國際學術會議主席和大會報告人(如1994年國際藥理學會大會，參加人次4,000餘人；2010年國際疼痛大會，參加人次6,000餘人)。從1990至2002年任世界衛生組織(WHO)科學顧問；從1991至2003年任美國國立衛生研究院(NIH)顧問，獲國際腦研究組織與美國神經科學基金會聯合頒發的「傑出神經科學工作者獎學金」(1985年)，國際疼痛研究會(IASP)教育委員會委員(從1991至1995年)和中國分會會長(從1989至2008年)，2012年獲「國際疼痛學會IASP」終身榮譽會員稱號；2007年任國際神經肽協會中國分會主席，擔任兩屆國際麻醉性藥物研究學會(INRC)執委會委員；2012年任國際標準化機構(ISO)第249技術委員會(TC249)第4工作組(WG4)，包括電針儀在內的中醫醫療設備中方註冊專家，擔任「電針儀」(Electroacupuncture Stimulator)專案負責人，負責制定電針儀的最新國際標準。

他的主要科研成果概述如下：

- 針刺可以提高正常人體和動物的痛閾，也可在有疼痛症狀的人體和動物產生鎮痛作用。
- 針刺鎮痛的物質基礎，主要是可引起中樞神經系統製造和釋放特定的化學物質，產生鎮痛效果，並闡明頻率依賴的神經通路。
- 創制了韓氏穴位神經刺激儀(HANS)，用帶有自粘性的皮膚電極置於穴位表面，代替針灸針，將精確定量的電刺激施加於穴位，產生特定的治療效果。
- 特定頻率的HANS可用於治療藥物依賴，包括身體依賴和精神依賴，可顯著降低海洛因的復吸率。該成果記錄於美國《物質濫用教科書》第4版(2005年)和第5版(2011年)韓院士撰寫的Acupuncture專章。
- HANS可以改善孤獨症患兒(自閉症)的症狀，其機制可能與增加催產素和加壓素的製造有關。
- 特定頻率的HANS可顯著增加試管嬰兒的成功率，由30%增加至50%。
- 韓院士曾訪問27個國家或地區，進行200餘場學術報告。韓院士及其科研團隊對闡明針灸機理及促進針刺療法走向世界發揮了重要作用，也推動了神經科學和疼痛醫學基礎研究的發展。

Professor Han Ji-Sheng was born in 1928 in Xiaoshan, Zhejiang Province of China. He graduated from the Shanghai Medical College in 1952, specialized as a physiologist in Dalian Medical College (1952 - 1953) and served in Harbin Medical University (1953), Beijing College of Traditional Chinese Medicine (1961), and Beijing Medical College (now Peking University Health Science Centre, 1962 to date). 1979 saw his promotion from Lecturer to Professor. He served successively as Director of the Department of Physiology (1983 - 1993), Director of the Neuroscience Research Institute (1993 - 2010), and Honorary Director of the Institute (1993 to date) of the Peking University Health Science Centre (formerly Beijing Medical College). Professor Han was elected academician of the Chinese Academy of Sciences in 1993. He founded in 1989 the Chinese Association for Pain Medicine, which became the Society of Pain Medicine under the auspices of the Chinese Medical Association in 1992. He also founded the *Chinese Journal of Pain Medicine* in 1995, a monthly journal in Chinese with English abstracts.

Professor Han has been engaged in neurobiological research on acupuncture mechanisms since 1965. He found that acupuncture and electroacupuncture (EA) produced analgesic effect through the activation of the endogenous anti-nociceptive mechanisms mediated by opioid peptides and neurotransmitters, such as monoamines. EA of different frequencies can increase the release of different kinds of neuropeptides. The effectiveness of EA analgesia depends on the balance between opioids and the anti-opioids in the central nervous system. He designed the device named Han's Acupoint Nerve Stimulator (HANS), which has been widely used in clinical practice for pain management as well as for the treatment of drug dependence. Professor Han won funding from the National Institute of Drug Abuse, NIH, USA for the study of neurobiological mechanisms of acupuncture analgesia for 13 consecutive years from 1987 to 2000. He has also won numerous grants from the National Natural Science Foundation of China, the Ministry of Health and the Ministry of Science and Technology of China for nearly half a century. Currently, his translational research has broadened from the field of pain control and drug addiction to the use of HANS for the treatment of autism and assisted reproductive medicine with considerable success.

Professor Han has devoted considerable time and efforts to teaching. He edited an influential neuroscience textbook in Chinese (first edition in 1993, second edition in 1999 and the third edition in 2008) and a textbook *Pain* in Chinese (2012).



程序

Proceedings

Professor Han has visited 27 countries and areas since 1979. He has given over 200 lectures including plenary lectures in International Union of Pharmacological Sciences (1994 in Montreal, 2006 in Beijing) and International Association for the Study of Pain (2010, Montreal). Notably, he gave the first lecture in the Consensus Conference on Acupuncture sponsored by NIH in 1997, which marked the acceptance of acupuncture as a medical technique with scientific evidence and clinical effectiveness in the Western world, endorsed by NIH, USA. He also served as scientific consultant of the NIH (from 1991 to 2003) and the World Health Organization (WHO, 1990 - 2002). Professor Han was named honorary life member of the International Association for the Study of Pain (IASP) in 2012. He is the only honorary IASP member in China. Recently, he has been appointed by the International Standard Organization (ISO) to lead the drafting of the international standard for electroacupuncture stimulator.

The research achievements of Professor Han can be summarized as follows:

- Acupuncture can increase the pain threshold (decrease pain sensitivity) of normal humans and animals, and induce analgesic effect in patients with acute or chronic pain, and in animal models with various pain problems.
- One of the mechanisms of acupuncture analgesia is that acupuncture may increase the production and release of neurochemical substances such as opioid peptides and some neurotransmitters in the central nervous system that could lower the pain sensitivity. The nerve pathways activated by electroacupuncture of different frequencies have been identified at least partly.
- An electronic medical device has been invented to improve the technique of electroacupuncture by using self-sticky electrodes placed on the skin of the acupoints to replace the needles so that electrical stimulation can be delivered to the acupoints precisely and easily to achieve desired therapeutic effect. The device was named Han's acupoint nerve stimulator (HANS).
- HANS of different frequencies can be used for the treatment of drug abuse, including physical dependence and psychic dependence for morphine and heroin, and to prevent the relapse of heroin abuse. This has been shown in a chapter (Acupuncture) written by Professor Han in the Comprehensive Textbook of Substance Abuse (4th Ed. 2005; 5th Ed. 2011).
- HANS can improve the symptoms of autistic patients. The underlying mechanism of action may be related to the increased production of endogenous oxytocin and arginine vasopressin, the two neurohormones implying for social activities.
- HANS of specific frequency was reported by Han's team to significantly increase the success rate of invitro fertilization and embryo transfer (IVF-ET, or "test tube baby") from 30% to 50%.
- Professor Han and his group have made significant contributions to the understanding of acupuncture mechanisms and to promoting the use of acupuncture all over the world.

頒獎典禮 Award Presentation Ceremony

歡迎辭 Welcoming Remarks

香港浸會大學校長 陳新滋院士
Professor Albert S.C. Chan, JP
President and Vice-Chancellor of Hong Kong Baptist University

得獎學人簡介 Introduction of Award Winner

評審委員會主席 陳凱先院士
Professor Chen Kaixian
Chairman of Panel of Adjudicators

頒發獎項 Presentation of Award

張安德慈善基金創辦人、香港浸會大學榮譽院士 張安德先生
香港浸會大學校董會暨諮議會主席 鄭恩基先生
Mr. Cheung On Tak
Founder of the Cheung On Tak Charity Foundation and
Honorary Fellow of Hong Kong Baptist University
Mr. Cheng Yan Kee, JP
Chairman of the Council and the Court of Hong Kong Baptist University

得獎學人感言 Award Winner's Speech

韓濟生院士
Professor Han Ji-Sheng

支票捐贈儀式

Cheque Presentation for the Donation by Cheung On Tak Charity Foundation

致送紀念品 Presentation of Mementos

得獎學人講座 Award Winner's Lecture

針刺研究的轉化醫學 Translational Medicine of Acupuncture Research



講座摘要

Synopsis

針刺研究的轉化醫學

Translational Medicine of Acupuncture Research

針刺是中國的一種傳統醫學。目前在臨床上有手撚針、電針、經皮穴位電刺激等多種應用形式。

1958年中國開始出現針刺麻醉，而我們在1965年開始研究針刺鎮痛的原理。正常人針刺合穀穴，撚針30分鐘，引起痛閾升高，有明確的緩慢升高時程，然後緩慢回復，提示有某種內源性化學成分參與的跡象。隨後發現，用電針代替手撚針，可得到同樣的痛閾變化規律。在應用不同頻率的電針方面，低頻(2赫茲)電針可引起中樞神經系統產生和釋放腦啡肽和內啡肽，而高頻(100赫茲)電針則會引起強啡肽加速釋放。如果用高頻和低頻交替的疏密波，則可引起腦啡肽、內啡肽和強啡肽的同時釋放，產生協同鎮痛效應。根據研究所得的結果，研發了韓氏穴位神經刺激儀(HANS)，能產生優化的鎮痛效果。

1990年，發現了HANS的新用途，可用於治療吸食海洛因引起的強烈藥物依賴，包括身體依賴(停藥時出現戒斷症狀)和精神依賴(心癮發作和復吸)，這兩種藥物依賴均很難治療的。大量研究證明，100赫茲電刺激可有效降低戒斷症狀，2赫茲可降低心癮和減少復吸，而2赫茲和100赫茲交替的疏密波則對兩者均有效。這些研究成果在Williams & Wilkins出版社出版的《國際物質濫用教科書》第4版(2005年)和第5版(2011年)韓濟生撰寫的「針刺療法」專章中有詳細記載。

由2008年以來，我們試圖將HANS應用於治療其他難治的神經系統疾病，其中包括孤獨症(自閉症)。孤獨症的發病率逐年升高，美國的發病率在新生兒中已超過1%。中國尚無嚴格統計數字，但也不低於0.5%。為4至6歲孤獨症患兒進行HANS治療，每天一次(30分鐘)，每週5次，連續12周，可使患兒孤獨症症狀(包括語言功能和社交互動能力)顯著改善；與此同時，血液中兩種與社交有關的神經肽(催產素和精氨酸加壓素)含量有明顯升高。論文發表於2012年美國「發育障礙研究」雜誌上。

由2007年起我們開始關注生殖醫學中難治和常見的疾病，而近年不孕症的發病率逐年增高，已超過適齡婦女為10%。輔助生殖-受精卵移植(IVF-ET，試管嬰兒)是其中一種有效的解決方案；但由於費用高而成功率太低(僅為30%-35%)，妨礙了其推廣應用。我們在文獻檢索及臨床摸索的基礎上，在309位應試婦女中，於移植前24小時及即時移植後，在特定穴位上應用HANS治療各一次，發現可使成功率由29%提高至50%，這是一項非常重大的突破，而論文發表於2011年美國「懷孕與不孕」雜誌上。關於HANS治療不孕症的原理，已有進一步的認識，一方面可降低婦女的緊張情緒，增加子宮內膜的血液供應，同時還可加強子宮內膜對受精卵的接受(容納)度。目前正在進行大規模雙盲對照臨床研究，對穴位特異性和電刺激參數特異性進行深入研究。

針刺療法是中國傳統醫學中一個主要組成部分。要將針刺療法推廣應用，被全世界患者所共用，需要從三個轉化醫學的範疇繼續努力：一是改進針刺方法，具有可重複性，並便於操作；二是找出針對某種疾病的最佳穴位和最佳針刺手法(用手撚針)或電刺激參數(用電針或經皮電刺激)；三是闡明其作用機理。

Acupuncture is an ancient healing art that originated in China. It is now being applied clinically in various forms, including manual needling, electroacupuncture (EA), and more recently, transcutaneous electrical acupoint stimulation (TEAS).

We started to study the effectiveness of acupuncture for pain control in 1965. In normal human subjects, manual acupuncture on Hegu point produced a significant increase of the pain threshold with slow onset and slow decay, suggesting the involvement of some humoral factors. Further studies revealed that electrical stimulation can be used to replace the needle manipulation. The method was named electroacupuncture (EA). Using the EA method, it was found that low frequency (2 Hz) stimulation on the acupoints increased the production and release of enkephalins and endorphins in the central nervous system, whereas high frequency (100 Hz) EA increased the release of dynorphins. An alternative mode of stimulation entitled dense-and-disperse mode (DD, 2 Hz alternating with 100 Hz) increased the release of both encephalins and dynorphins, resulting in a synergistic analgesic effect. These studies resulted in the discovery of a device entitled Han's Acupoint Nerve Stimulator (HANS), which is most effective for the management of pain conditions.

In 1990, a new application of HANS was revealed for the treatment of heroin abuse. Heroin abuse results in physical dependence (withdrawal syndrome) and psychic dependence (craving and relapse to drug), which are very difficult to get rid of. A series of studies revealed that 100 Hz was effective for ameliorating withdrawal syndrome and 2 Hz for the removal of craving and relapse, while the DD mode of stimulation was effective for both. These findings have been recognized in the International Text of Substance Abuse published by Williams and Wilkins in 2005 and 2011.

In recent years, we have tried to broaden the use of EA and TEAS for the treatment of autism. In a clinical trial, HANS treatment was used for autistic patients aged from four to six, 30 minutes per day, five days a week for 12 weeks. The regime produced a remarkable improvement of the key symptoms, including the ability of language and the skills of social interactions. The clinical improvement was accompanied by an increase in blood level of oxytocin and arginine-vasopressin, the two neuropeptides known to facilitate social interactions (*Res Develop Disabil*, 2012).

Concerning the high prevalence of infertility (over 10%) in young couples, in vitro fertilization and embryo transfer (IVF-ET) are preferable choice to solve the problem, but the low rate of success (around 30% - 35%) prevented it from popular application. Use of HANS in eligible women has resulted in an increase of success rate from 29% to 50% (*Fertility Sterility*, 2011). Further studies have revealed the optimal parameters and effective acupoints for stimulation. The mechanisms of action are related with decrease of mental stress and the facilitation of blood flow and increased acceptance of endometrium for implanted embryo.

The translational study of acupuncture has a great future to clarify the mechanisms of the thousand-year-old technique to meet current medical needs at affordable costs.