5th BULGARIAN ACUPUNCTURE CONGRESS
SOFIA 26-28 OCTOBER 2012

SCIENTIFIC BASIS OF VETERINARY ACUPUNCTURE

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ITALIAN VETERINARY ACUPUNCTURE SOCIETY 
ITALIAN VETERINARY ACUPUNCTURE CLINICAL CENTRE 

www.siav-itvas.org
Prof. Li Xiaoming:

“CHINESE PEOPLE HAS INVENTED ACUPUNCTURE, BUT WESTERN PEOPLE WILL DEMONSTRATE ITS VALIDITY”
TREATMENT ACUPUNCTURE POINTS ARE SELECTED ON THE BASIS OF THE TRADITIONAL INDICATION REGARDING THEIR ENERGY AS WELL AS EXPERIMENTAL EVIDENCE.

Their action manifest itself at different levels:

- Antalgic
- Anti-inflammatory
- Neuroendocrine
- Trophic
- Vasomodulator activity

Integrated system that elicits specific functional responses.
SCIENTIFIC BASIS OF VETERINARY ACUPUNCTURE

ANTALGIC EFFECT
IT INVOLVES 4 LEVELS:
1) SEGMENTARY – SPINAL LEVEL:
   Melzack and Wall (1965)
   “GATE CONTROL SYSTEM”

   ACUPUNCTURE
   ↓
   Aβ FIBRES (myelinated, group II, diameter 6 - 11µ, velocity 30 – 72 m/sec)
   ↓
   GABA NEURON
   ↓
   BLOCK of the PAIN CONDUCTION at PRE SYNAPTIC LEVEL
   (Roland Substance)
1) SEGMENTARY – SPINAL LEVEL:

Bowsher (1990): ACUPUNCTURE

\[ \downarrow \]

A \( \delta \) FIBRES: (myelinated, group III, diameter 1 – 5 \( \mu \), velocity 4 - 30 m/sec)

\[ \downarrow \]

ENKEPHALIN / DINORPHIN NEURON

\[ \downarrow \]

BLOCK of the PAIN CONDUCTION at POST SYNAPTIC LEVEL

(Roland Substance)
2) MESENCEPHALON: ACUPUNCTURE
   \[\downarrow\]
   ENKEPHALIN NEURON
   \[\downarrow\]
   RETICULAR FORMATION
   \[\downarrow\]
   SEROTONIN INHIBITOR SYSTEM  NORADRENALINE INHIBITOR SYSTEM
   \[\downarrow\]
   SEROTONIN  NORADRENALINE
   \[\downarrow\]
   BLOCK of the PAIN CONDUCTION
2) MESENCEPHALON: Liu et alii (1997)

ACUPUNCTURE
↓
PAG
↓
ANGIOTENSIN
↓
B RECEPTORS
↓
BLOCK of the PAIN CONDUCTION
3) DIENCEPHALON:

ACUPUNCTURE

↓

β-ENDORPHIN

↓


↓

SCOPOLAMINE — DOPAMINE — SEROTONIN

C17H21NO4   C6H3(OH)2-CH2-CH2-NH2   C10H12N2O

ENDOGENOUS OPIOIDS

↓

ANALGESIC ACTION
4) CORTICAL:

ACUPUNCTURE
↓
SOMATOSENSORY AREA I
SOMATOSENSORY AREA II
↓
PYRAMIDAL WAY
EXTRAPYRAMIDAL WAY
↓
BLOCK of the
NOCICEPTION REACTION
Meyer (1981)
NALOXONE BLOCKS THE ANALGESIA BY ENDORPHIN

Zhang (1972) - Pomerant e Sjolund (1975)
ACUPUNCTURE ↓
β-ENDORPHIN ↓
ANALGESIA
Han Jisheng (1979)

MORE ACUPUNCTURE SESSIONS
↓
β-ENDORPHIN
LOWER QUANTITY/FREQUENCY HIGHER
↓
EXTENDED PAIN ATTENUATION
WELLBEING
Becker - Reichmanis (1975)

TRAUMA

↓

ELECTRIC IMPULSES – DIRECT CURRENT

↓

THEY BLOCK THE REPARATORY PROCESS

↓

ACUPUNCTURE

↓

POLARITY CHANGE
LUN HUAN CHIAO TI FA TECHNIQUE

WOUND HEALING BY ACUPUNCTURE
WOUND CARE IN VETERINARY MEDICINE - WORKSHOP
LUN HUAN CHIAO TI FA TECHNIQUE
SCIENTIFIC BASIS OF VETERINARY ACUPUNCTURE

IMMUNOREGULATING ANTI-INFLAMMATORY EFFECTS

Tykochinskaia (1960) - Omura (1975)

ACUPUNCTURE

↓

INCREASE IN ANTIBODIES and in PHAGOCYTOSIS

➢ ZUSANLI – QUCHI

↓

INCREASE IN SERUM ANTIBODIES

➢ SANYINJIAO

↓

T LYMPHOCYTES PRODUCTION
SCIENTIFIC BASIS OF VETERINARY ACUPUNCTURE

IMMUNOREGULATING
ANTI – INFLAMMATORY EFFECTS

HIGHER NEUTROPHILS ACTIVITY

INCREASE IN ANTIBODY IN VACCINATED ANIMALS

[β-ENDORPHIN]
SCIENTIFIC BASIS OF VETERINARY ACUPUNCTURE

ANTIALLERGIC ACTION

- INCREASE IN ENDOGENOUS ACTH
- REDUCTION IN E IMMUNOGLOBULINE
- REDUCTION IN EOSINOPHILS

ANTIPYRETIC ACTION

β-ENDORPHIN NORADRENALINE
ACUPUNCTURE → ACTH → INCREASE IN CORTISOL

CHENGFU → HYDROCORTISONE

ADAPTATION SYNDROME → INCREASE IN ALARM REACTION
NAVICULAR DISEASE
IN ADVANCED FORMS
↓
LASERPUNCTURE
↓
SIGNIFICANT
ANTI-INFLAMMATORY
ANALGESIC EFFECTS
↓
IT PROMOTES:
TISSUE GROWTH
INCREASES CIRCULATION
INCREASE MICROCIRCULATION

NAVICULAR DISEASE
LASER STIMULATION
↓
A MARKED DROP (±50%)
IN LEVELS OF
ENDOGENOUS CORTISOL
↓
LOWER STATE
OF STRESS
PRODUCED
IN ALL OF HORSES

Production of the Endogenous Cortisol by Laserpuncture;
Italian Journal of TCM
SCIENTIFIC BASIS OF VETERINARY ACUPUNCTURE

NEUROENDOCRINE REGULATION

ACUPUNCTURE

\[ \downarrow \]

NORMALIZATION of T3 – T4 (THYROID HORMONES)

Moxa on ZUSANLI \( \rightarrow \) INCREASE IN INSULIN

ZHONGWAN

\[ \downarrow \]

INCREASE IN INSULIN

DECREASE IN GLYCEMIA
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NEUROENDOCRINE REGULATION

XINSHU
↓
INCREASE IN URINE VOLUME
DECREASE IN SODIUM EXCRETION
INCREASE IN ALDOSTERONE

XIAOCHANGSHU
↓
DECREASE IN URINE VOLUME
DECREASE IN SODIUM EXCRETION
INCREASE IN ALDOSTERONE
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NEUROENDOCRINE REGULATION

CONTROL ON GASTRIN
INHIBITION ON ACID SECRETION
↓
PREVENTION OF GASTRITIS

DIRECT STIMULATION OF GH
↓
MUSCLE – SKELETAL DISEASES
<table>
<thead>
<tr>
<th>ACUPOINT</th>
<th>FUNCTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>BL 1 <em>(Jingming)</em></td>
<td>Stimulation of epiphysis – hypothalamus - hypophysis</td>
</tr>
<tr>
<td>BL 23 <em>(Shenshu)</em></td>
<td>Regulation of hematic flow in uterine arteries</td>
</tr>
<tr>
<td>BL 67 <em>(Zhiyin)</em></td>
<td>Stimulation of the uterus Correction the fetal malposition Induction of parturition</td>
</tr>
<tr>
<td>PC 6 <em>(Neiguan)</em></td>
<td>Activation of Hypothalamus and Amygdala</td>
</tr>
<tr>
<td>SP 6 <em>(Sanyinjiao)</em></td>
<td>Secretion of 17 – β – Estradiol Stimulation of myometrium</td>
</tr>
<tr>
<td>KI 9 <em>(Zhubin)</em></td>
<td>Anti-abortifacient eugenics promote parturition</td>
</tr>
<tr>
<td>ACUPOINT</td>
<td>FUNCTION</td>
</tr>
<tr>
<td>---------------</td>
<td>--------------------------------------------------------------------------</td>
</tr>
<tr>
<td>LV 3 (<em>Taichong</em>)</td>
<td>Stimulation of the myometrium</td>
</tr>
<tr>
<td>LI 4 (<em>Hegu</em>)</td>
<td>Activation of the sympathetic system at the Kidney level</td>
</tr>
<tr>
<td></td>
<td>Activation of Hypothalamus</td>
</tr>
<tr>
<td></td>
<td>Induction of parturition</td>
</tr>
<tr>
<td>ST 36 (<em>Zusanli</em>)</td>
<td>Dopamine increase in the cerebral section and cortex</td>
</tr>
<tr>
<td></td>
<td>Activation of Hypothalamus and Accumbes nucleus (<strong>modulation of limbic system</strong>)</td>
</tr>
<tr>
<td>CV 12 (<em>Zhongwan</em>)</td>
<td>Reduction of glycaemia</td>
</tr>
<tr>
<td>CV 17 (<em>Shanzhong</em>)</td>
<td>Secretion of the Prolactine</td>
</tr>
<tr>
<td>GV 20 (<em>Baihui</em>)</td>
<td>Euphoriant effect</td>
</tr>
</tbody>
</table>
ITALIAN VETERINARY ACUPUNCTURE CLINICAL CENTER
BOLOGNA - ITALY
MUSCULAR SYSTEM

STRIATED MUSCLE

↓

DECREASE IN FIBRILLATION INCREASE IN MOTOR POTENTIAL INCREASE IN POLYPHASES POTENTIAL

↓

IMPROVEMENT IN NEURO MUSCLE FUNCTION

↓

PARESIS / PARALYSIS
MUSCULAR SYSTEM

SMOOTH MUSCLE

↓

STOMACH PERISTALTIS
ESOPHAGEAL PROBLEMS
ALLERGIC ASTHMA
EFFORT ASTHMA

NEIGUAN → ARRHYTHMIA
UNEVEN PULSE RATE

HEGU → PROMOTES URINATION

ZHONGLIAO → NEUROLOGICAL (TRAUMA) BLADDER
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VASOMOTOR TROPHIC ACTION

↓

NERVOUS and BIOHUMORAL MECHANISM

↓

CONTROL ON BLOOD CIRCULATION

↓

IMPROVEMENT OF THE TISSUE TROPHISM
SCIENTIFIC BASIS OF VETERINARY ACUPUNCTURE

NEEDLE
↓
MICROTRAUMA
↓
12th HAGEMAN FACTOR
↓
MICROCOAGULATION
↓
PLASMIN – QUININE - COMPLEMENT
↓
MASTZELLEN
INCREASE OF THE TISSUE PERFUSION
MYORELAXATION

RECURRENT STIMULATION → INCREASE LOCAL ANSWER
ACUPOINT

HORNY LAYER MORE SUBTIL
MORE NUMBER OF SENSITIVE CORPUSCLES
FREE NERVE ENDINGS
BLOOD and LYMPHATIC VESSELS
MASTZELLEN

- REDUCED ELECTRIC IMPEDANCE OF THE SKIN
- INCREASE OF THE SKIN TEMPERATURE
- INCREASE OF THE SENSITIVITY AT PRESSURE
ACUPOINT

Kothbauer e Schwartz (1990)

BEI SHU POINTS
(REFLEXION AREAS OF SOMATIC PAIN DERIVING FROM INTERNAL ORGANS)

↓

DIAGNOSTIC and THERAPEUTIC EMPLOYMENT
EMBRYOLOGY

GASTRULA: ECTODERM
↓
C.N.S.
EPIDERMIS
↓
LINK BETWEEN ENERGETIC CHANNELS and INTERNAL ORGANS
↓
ZANG / FU ORGANS DERIVE FROM SAME EMBRYONAL PATTERN
ENGRAMS

COOPERATION SCHEME OF THE NERVOUS BUNDLES AT NCS LEVEL

↓

TRACES OF INFORMATIVE CONTENTS

↓

NEUROGRAMMA

↓

MEMORY
SCIENTIFIC BASIS OF VETERINARY ACUPUNCTURE

ENGRAMS

HIPPOCAMPUS
AMYGDALA
PAG
CEREBELLAR CORTEX
CEREBELLAR NUCLEUS

GABA
ADRENALINE
NORADRENALINE
SEROTONIN

PERSISTENT
or
RECURRENT
or
SEASONAL
DISEASES
**LI 4 (HEGU)**

- It acts on Hypothalamus
- Accumbens nucleus
- Gyrus cinguli
- Hippocampus

**ST 36 (ZUSANLI)**

- It increases Dopamin
- It acts on Hypothalamus
- Arced nucleus
- Limbic system
- It favours vasodilatation of the cerebral hemispheres
SP 6 (SANYINJIAO)
IT PRODUCES T LYMPHOCYTES

PC 6 (NEIGUAN)
IT ACTS ON AMYGDALA
STAR SHAPED GANGLION
RETICULAR SUBSTANCE
HYPOTHALAMUS

GV 20 (BAIHUI)
EUPHORIANT EFFECTS
SCIENTIFIC BASIS OF VETERINARY ACUPUNCTURE

ENGRAMS RECODING

TUINA

推拿
SCIENTIFIC BASIS OF VETERINARY ACUPUNCTURE

ENGRAMS RECODING

↓

FASCIA

↓

MECHANICAL – NEUROLOGICAL FUNCTIONS

ACUPUNCTURE

TUINA

CYTOSKELETON RESHAPING (Langevin H.M. 2006)

↓

INFORMATION FLOW BY MECHANICAL STIMULI

↓

TENSEGRITY (INTEGRITY TENSIONAL SYSTEM)
TECHNETIUM (SURVEYING BY $\gamma$ RAY)
(It derives from Molybdenum bombarded by Deuterium 2H)

PATHWAYS OF ENERGETIC CHANNELS
SQUID

SUPERCONDUCTING QUANTUM INTERFERENCE DEVICE

is a remarkably sensitive detector of minute magnetic fields. It consists of a superconducting loop with two Josephson Junctions.

The extreme sensitivity of SQUIDs as magnetometers makes them ideal for studies in medicine, such as magnetoencephalography, the measurement of neural activity inside human and animal brains.
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PET  Positron Emission Tomography

QIGONG – TAI JI QUAN - TCM:

EEG → INCREASE OF THE $\alpha$ WAVES (8 - 12 Hz)

COHERENCE BETWEEN BRAIN ELECTRIC ACTIVITY and EARTH MAGNETIC ACTIVITY
SCIENTIFIC BASIS OF VETERINARY ACUPUNCTURE

QUANTUM INTERPRETATION
↓
ALL OF BIOLOGICAL SYSTEMS HAVE RELATIONSHIP WITH MIND

PHYSIOLOGICAL – BIOCHEMICAL – ENDOCRIN PROCESSES ARE SUBTENDED TO SUB ATOMIC PHENOMENONS (ENTANGLEMENT)

MEDICINE LIKE SELF CARE:
HABITAT (οίκος - MACROCOSM) ↔ PERSON (MICRO COSM)
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много благодаря !!

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