

IVF treatment supported by Chinese Herbal Medicine

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Scientific research on the herbs' function used by Mr. Politi

In this study a few interesting matters have been raised, as follows:

- There are some published clinical trials investigating the efficacy of Chinese herbal medicine (CM) on female infertility with fewer studies on herbal medicine to improve sperm quality/quantity.
- Providing convincing evidence is more difficult than for most other disorders since the successful outcome is ultimately measured by the conception of a healthy child.
- Analysis and standardization of CM formula is complicated as the majority of the formulas are a complex mixture of any number of individual components.
- Isolating active compounds is similarly complex and any therapeutic efficacy of traditional CM may be related to synergism of the ingredients with potentially many different effects contributing to the overall response.
- The result of the metabolism of these compounds, the product, may be responsible for the resultant activities.

Research on herbs function as used by Mr. Politi and supported by the scientific literature:

Dipsaci asperi - *Dipsaci Radix* is the dried root of *Dipsacus asper* Wall. It has been used in Korean herbal medicine to treat bone fractures. In this study, Kim et al., (2011) examined the effect of the dichloromethane fraction of *Dipsaci Radix* (DR(DM)) on the osteoblastic differentiation of human alveolar bone marrow-derived Mesenchymal Stem Cells. There was a significant increase in the alkaline phosphatase (ALP) activity and protein expression of bone sialoprotein (BSP) and osteocalcin (OC) in response to DR(DM) as compared to control. In addition, roots of *Dipsacus asper* have been used as a tonic, an analgesic and anti-inflammatory agent to treat

threaten abortion, in blood-circulation promoting activities and it also evidently inhibited the spontaneous contraction of pregnant rat uterus in vivo (as cited by Zhang et al., (2003) and Zhao and Shi (2011)). This is in accordance with Mr. Politi's formula ***Prenatal HS*** that uses this herb as a key ingredient in the treatment of infertility, warms the uterus by supporting it and is used during pregnancy as means for helping in the formation of bones in the fetus.

Angelicae Sinensis, Radix - Danggui Buxue Tang (DBT), which consists of two herbs: *Radix angelicae sinensis* (RAS) and *Radix astragali* (RA), has been used for "regulating and enriching blood" for hundreds of years, and its clinical efficacies are well established. It is used to raise the "Qi" and nourish the "Blood" of the individual. RAS root is used to invigorate the blood circulation in the treatment of menstrual disorders (Song et al., 2004, Zheng et al., 2010). Formulas based on Angelica Sinensis are used as hematic and blood-activating medicine, adopted for clinical use in China and Japan (as cited by Tang et al., 2010). Essential oils from Angelica Sinensis showed that the inhibitory activity on mice uterine contractions *in vitro* (Tang et al., 2010). This is in accordance with Mr. Politi's formula ***Prenatal HS*** that uses this herb to warm the blood supply to the uterus.

Poria cocos - Poria cocos is a main ingredient in many CM drug combinations that is effective in prolonging pregnancy until delivery and protecting fetus carrying allogenes that would otherwise induce maternal rejection. This herb is known for its therapeutic effect against recurrent spontaneous abortion and other abnormal pregnancies and suggested as an immunosuppressant for treatment in organ transplantation (Zhang et al., 2004). This is in accordance with Mr. Politi's formula ***Woman's FSH Support*** that uses this herb to remove excess fluid accumulated in the lower abdomen through urination. This excess fluid cools the uterus and may result in failed implantation.

Cinnamomum cassia bark - Cinnamomum cassia bark and twigs of this plant are used as a traditional Chinese herbal medicine to improve blood circulation. Kim et al., (2010) found the most active anti-platelet constituents of C. cassia. This is in accordance with Mr. Politi's formula ***Woman's FSH Support*** that uses Aconitum carmichaeli root prep and Cinnamomum cassia bark to warm the blood and the uterus walls and lining.

Aconitum carmichaeli - Aconitum carmichaeli have been recognized as being effective for the treatment of a "peripheral uncomfortable feeling of cold". Yamada et

al., (2005) showed that this compound improved peripheral tissue blood flow in rats. This is in accordance with Mr. Politi's formula **Woman's FSH Support** that uses *Acconitum carmichaeli* root prep and *Cinnamomum cassia* bark to warm the blood and the uterus walls and lining.

Cinnamomum cussia bark, *Poria cocos* and *Paeonia suffmticosa* root bark - Combination of herbs including *Cinnamomum cussia* bark, *Poria cocos* and *Paeonia suffmticosa* root bark are used in the treatment of gynecological disorders such as hypermenorrhea, dysmenorrhea and infertility. Sakamoto et al., (1988) showed that administration of a remedy including these herbs reduced levels of luteinizing hormone (LH), follicle-stimulating hormone (FSH) and estradiol (E₂) in immature rats. In further studies Sakamoto et al., (1988) further showed that herbs including also this combination are responsible for shrinking of uterine myomas. This is in accordance with Mr. Politi's formula **Woman's FSH Support** that uses these herb combinations for reducing high FSH.

Cornus officinalis fruit - contains high levels of Anthocyanins with antioxidants and anti-inflammatory properties (Seeram et al., 2002). Mr. Politi's formula **Woman's FSH Support** uses this herb to help with embryo implantation.

Phellodendron bark - A formula which is composed of *phellodendri* cortex (*Phellodendron* bark) is described as eliminating heat, excreting dampness in traditional Chinese medical literatures as cited by Kong et al., (2004). This is in accordance with Mr. Politi's formula **Man's Herbal Support** that is used to cool the testis.

Rehmania root, *Phellodendron* bark, *Moutan* bark - Tempest et al., (2008) investigated for relevant biochemical activity Chinese Medicine for the Treatment of Male Infertility. They studied various individual herbs including *Rehmania* root, *Phellodendron* bark, *Moutan* bark and Licorice root. Out of these herbs *Rehmania* root, *Phellodendron* bark, *Moutan* bark showed high antioxidant activity. Especially *Phellodendron* bark showed a very strong antioxidant activity with strong hydroxyl radical scavenging effect, and also was found to be capable of scavenging superoxide radicals and in addition inhibit lipid peroxidation. Antioxidant activity may play a role in stabilizing the sperm membrane and prevent/reduce lipid peroxidation of the sperm plasma membrane that may result in sperm dysfunction and cell death. Additionally, flavonoids from *Prunella* spike have significant antioxidant activities (Zhang and

Mingming Hu, 2011). These herbs are used with Mr. Politi's formula *Man's Herbal Support* for generally improving sperm quality.

Licorice root - Licorice root showed a very high oestrogenic activity. Oestrogen has a role in the male reproductive endocrine pathway; it is believed to operate through negative feedback mechanisms. The use of such herbs may counteract excess oestrogen found in the body through diet/environment or through altering the negative feedback mechanisms resulting in the increased production of testosterone and LH as seen in this study (Tempest et al., 2008). Mr. Politi uses this herb in *Man's Herbal Support* formula to harmonise the function of the herbs in the formula.

Achyranthes root - The protein isolated from the alcoholic extract of the root of *Achyranthes aspera* (Ap) possess spermicidal activity and, the mechanism of action seems to be by acting on the membrane integrity (Anuja et al., 2010). The entire root, stem and leaf extracts of plant possess estrogenic, antibacterial and anti-inflammatory effects (Zhang et al., 2011). This herb is used with Mr. Politi's formula *Man's Herbal Support* through negative feedback mechanisms, where the output of a system acts to oppose changes to the input of the system.

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Herbal Support ingredients - Latin and Common Names

Table 1: Latin and Common Names of each of the individual herbs for IVF Embryo Implantation Herbal Support termed **Prenatal HS**

Latin Names	Common Names
<i>Poriae Cocos, Scerotium</i>	Poria
<i>Coicis Lachryma –jobi, Semen</i>	Poria Core
<i>Poriae Cocos, Pararadicis</i>	Coicus Seed
<i>Angelicae Sinensis, Radix</i>	Angelica Sinensis (Dong Quai)
<i>Ligustici Waichii, Radix</i>	Ligusticum
<i>Radix Dipsaci Asperi</i>	Dipsacus
<i>Eucommiae Ulmoidis, Cortex</i>	Eucomia

* IUI Herbal Support termed **First Step** same ingredients as Embryo Implantation Herbal Support termed **Prenatal HS**

Table 2: Latin and Common Names of each of the individual herbs for **Woman's FSH Support**

Latin Names	Common Names
<i>Rehmanniae Glutinosaea</i>	Rehmania glutinosa root prep
<i>Corni Officialis, Fructus</i>	Cornus officinalis fruit
<i>Dioscoreae Oppositae, Radix</i>	Dioscorea opposite rhizome
<i>Aismatis Pantago-Aquaticae, Rhisoma</i>	Alisma orientalis rhizome
<i>Moutan Radicis, Cortex</i>	Paeonia suffruticosa root bark
<i>Poriae Cocos, Sclerotium</i>	Poria cocos fungus
<i>Aconiti Carmichaeli Praeparata, Radix</i>	Acconitum carmichaeli root prep
<i>Cinnamomi Cassiae</i>	Cinnamomum cassia bark

Table 3: Latin and Common Names of each of the individual herbs for Natural Fertility Herbal Support termed **Parents' Herbal Support**

Latin Names	Common Names
<i>Poriae Cocos, Pararadicis</i>	Coicus Seed
<i>Angelicae Sinensis, Radix</i>	Angelica Sinensis (Dong Quai)
<i>Ligustici Waichii, Radix</i>	Ligusticum
<i>Eucommiae Ulmoidis, Cortex</i>	Eucomia

* Egg Donation Herbal Support termed **Optimal Uterine Support** same ingredients as Natural Fertility Herbal Support termed **Parents' Herbal Support**

Table 4: Latin and Common Names of each of the individual herbs for Improve Sperm Herbal Support termed **Man's Herbal Support**

Latin Names	Common Names
<i>Rehmanniae Glutinosaea</i>	Rehmania root
<i>Moutan Radicis, Cortex</i>	Moutan bark
<i>Poligoni Multiflori, Radix</i>	Fleeceflower root
<i>Prunellae Vulgaris, Spica</i>	Prunella spike
<i>Phellodendri, Cortex</i>	Phellodendron bark
<i>Glycyrrhizae Uralensis, Radix</i>	Licorice root
<i>Achyranthis Bidentatae, Radix</i>	Achyranthes root