



## 4<sup>TH</sup> CONGRESS INTERNATIONAL SOCIETY OF GENDER MEDICINE (IGM) „SEX AND GENDER IN MEDICINE“

Berlin, November 6 - 8, 2009

The aim of the congress was to define gender research as a fascinating newly emergent field that is composed of basic research, clinical research, health care research, and teaching elements. It has different facets in different parts of the world but also a common core.

We welcomed about 250 participants from all over the world. They included delegates from Australia, Japan, China, Hong Kong, Africa, from all over Europe, Canada, the United States of America, and South America. We had invited 40 faculty members and 92 poster presentations were accepted. The field was interdisciplinary and included social sciences and history.



The meeting was held in cooperation with the **German Heart Institute (DHZB)**, in cooperation with the 6<sup>th</sup> bi-annual meeting on Mechanical Circulatory Support, or-

ganized by Prof. Roland Hetzer. One common afternoon session took place. This was a great opportunity for gender medicine to reach the community of cardiovascular surgery.



The dean of the Charité – Universitätsmedizin Berlin, **Prof. Annette Grüters-Kieslich**, opened the meeting and welcomed the guests. All participants greatly enjoyed the vibrant atmosphere and the opportunity to be part of the Berlin community celebrating the 20<sup>th</sup> anniversary of the fall of the Wall.

### Keynote Lecture

**Londa Schiebinger, Stanford**, elaborated her concept to approach gender issues,

- 1<sup>st</sup>: fix the researchers,
- 2<sup>nd</sup>: fix the institution, and
- 3<sup>rd</sup>: fix the knowledge.

This means that increasing the number of female researchers is important but it alone will not lead to significant success. We need to improve at the same time the acceptance of female researchers by the universities and to close the knowledge gap on sex/gender issues.





## Definition, Impact and Support of Gender Medicine throughout the World



**Masako Matsuda, Yamaguchi**, approached risk factors in Japanese women and men. She also reported on the management of cardiovascular diseases in Japanese women and touched on the problems of female Japanese doctors.

**Virginia Miller, Rochester**, gave the view of the *Organization for Study of Sex Differences*. The OSSD has made great achievements in establishing funding strategies for gender research and developing a concept to address the gender areas

to improve health.

**Sabine Oertelt-Prigione, Berlin**, presented a German approach. A systematic literature search aims to exhibit the significant quantitative and qualitative variations that exist in the analysis of sex/gender differences in clinical sub-specialities. It will close knowledge gaps and will assemble the dispersed body of evidence in gender medicine.



## From Bench to Bedside – by International Society of Gender Medicine (IGM)

**Vera Regitz-Zagrosek** asked “Are gender aspects helpful in medicine and heart failure management”. She started from the clinical differences that are obvious in heart failure, e.g. diastolic heart failure in women vs. systolic heart failure in men, significant differences in management and response to therapies in women and men. Basic research in female animals is neglected. Remedies could include systematic teaching of gender medicine. The development of a European curriculum for gender medicine is underway.

**Marek Glezerman, Tel Aviv**, talked about sex differences in intra-uterine life and showed how female

and male twin features affect the respective partners.

**Jeanette Strametz-Juraneck, Vienna**, claimed that more women should be included in large clinical trials focusing on the specific role of estrogens and optimal blood pressure target values in the female population to fight the increasing hypertension associated morbidity and mortality in women.

**Maria Grazia Modena, Modena**, discussed the impact of sex hormones on the heart, Research on estrogens has to continue because the potentially positive signals are not yet completely understood, and are so far not fully exploited.

## Common Session

The Friday afternoon was devoted to a common session between gender researchers and cardiac surgeons. The talk by **Hannah Valentine, Stanford**, showed that only 20% of heart transplant recipients are women, even though the number of patients with acute heart failure is similar in women and men. Female sex was a risk factor for mortality after heart transplant that was diminished by improved immunosuppression.

**Roland Hetzer, Berlin**, demonstrated, based on the large patient numbers of the DHZB, that the early success after MCS implantation is similar in males and females. However, women more frequently need bi-ventricular assist devices than men, which may be an indication of more severe clinical condition before VAD implantation.

**Doris Taylor, Minneapolis**, reported about sex differences in stem cell function. Female cells are fitter than male cells and they are positively influenced by estrogens.



**George Sopko, NIH**, developed the ideas of the NIH on studying the role of estrogen and estrogen receptors in the modulation of cardiovascular outcomes. Furthermore he illustrated possible future directions in stem cell research in the cardiovascular field.

**Wolfram Zimmermann, Göttingen**, demonstrated that parthenogenic oocyte-derived stem cells have enormous capacities to develop into cardiomyocytes and therefore represent a very promising cell source in cell-based organ repair.

**Brigitte Stiller, Freiburg**, discussed the treatment of fulminant myocarditis, which frequently requires the use of ventricular assist devices. Fifty percent of patients recover under optimal MCS therapy and can be weaned successfully.





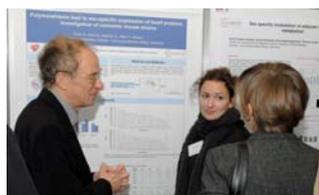
## Integration of Gender Medicine in Clinical Practice

**Walter Malorni, Rome:** primary cultured cells ex-vivo can maintain their sexual features for a few passages enabling new scenarios in pre-clinical studies in pathogenesis and pharmacology. **Giovannella Baggio, Padua:** prevention for cardiovascular disease in women is scanty and guidelines are obtained from populations that do not exist in the real world. **Flavia Franconi, Sassari,** underlined the issue of enrolling women in all facets of clinical studies and performing gender analysis in all clinical studies to make the results more relevant for the general population.

## Gender in Cardiovascular Function (DFG RG 1054)

This session was organised by the recently founded DFG research group on sex differences in myocardial hypertrophy. **Dorothy Vatner, Newark** discussed mechanisms of gender and cardiovascular differences in longevity in non-human primates. **Jean-Francois Arnal, Toulouse,** discussed estrogen receptor modulation and vascular protection. Selective estrogen receptor modulators stimulating ER-alpha with minimal activation of the ER-alpha activator function I domain could retain beneficial vascular actions by minimizing the sexual effects. **Jean-Jacques Mercadier, Paris,** analyzed gender aspects in cardiac arrhythmia. **Michael Bader, Berlin** looked at androgen receptors in cardiovascular regulation. **Jane Reckelhoff, Jackson,** discussed sex differences in hypertension and searched for the reasons why hypertension in animal models, as in humans, is always greater in male than in female animals.

## Poster Session I



## Pilot Project Gender Medicine (PPGM; BMBF)

PPGM analyzes sex and gender differences in major clinical syndromes. Proponents from all over the world presented their views. **Ronald Ma, Hong Kong,** analyzed the increasing prevalence of diabetes in female Chinese patients. **Kathryn Sandberg, Washington,** discussed sex chromosome and gonadal hormone effects in angiotensin-II dependent hypertension. **Matthias Endres, Berlin,** described a number of risk factors and risk factor profiles that differ in female and male patients with stroke.

## Sex/Gender Research in North America – from OSSD – and the World

**Noel Bairey Merz, Los Angeles,** introduced sex/gender differences in the cardiovascular system and analyzed data from the large ongoing WISE project. **Karen Berkley, Tallahassee,** discussed sex/gender differences in pain. Some painful conditions differ in women and men and some therapies, whether drug, somatic or situational, appear to have greater efficacy in one sex than in the other. Reconciling sex and gender: The interaction of biology and society was discussed by **Gillian Einstein, Toronto.** **Meir Steiner, Hamilton,** spoke about depression and cardiovascular disease. He mentioned several landmark studies asking whether treating depression will prevent cardiac events and whether this will be more effective in women than in men. **Joy Johnson, Vancouver** and **Blye Frank** National Institute of Gender in Health in Canada, discussed future directions in gender, sex and health research in Canada. Finally, **XiaoHan Fan, Beijing,** discussed sex differences in risk factor and blood pressure response to four antihypertensive drugs in Chinese patients.

## Gender Differences in Drugs and Devices

**Duska Dragun, Berlin,** opened this session: Females are more likely to donate kidneys worldwide but receive far fewer kidney transplantations than men and particularly fewer living kidney transplantations. The impact of sex on vascular diseases and implications was discussed by **Saralyn Mark, Washington;** and sex differences in drugs and devices by **Katie O'Callaghan, Rockville,** who presented the views of the FDA. The FDA/CDRH Center for Devices and Radiological Health recommends increased inclusion of women and more robust analysis of potential sex differences in clinical trials of cardiovascular devices. **Roman Siddiqui, Hanover,** presented a novel female sex-specific genetic mechanism in AIDS.



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'Sex and Gender in Medicine'



### Free Communications

Gender aspects in complimentary medicine were discussed by **Claudia Witt, Berlin**, and in psychosocial treatment of patients with coronary heart disease by **Gerdi Weidner, Tiburon**. The novel estrogen receptor GPR30 was introduced by **Matthias Barton, Zurich**. **Denise Hilfiker-Kleiner, Hanover**, presented a landmark study on peripartum cardiomyopathy with the option for a new therapy by bromocriptine administration.

### Gender in Health Care – Euroheart Policy

**Karin Schenck-Gustafsson, Stockholm**, and **Marco Stramba-Badiale, Milan**, discussed the management of cardiovascular disease in women. **Margarethe Hochleitner, Innsbruck**, explained gender aspects in health care in Austria and **Magnus Baumhäkel, Homburg**, discussed the impact of physician gender on treatment of heart failure in Germany and concluded that female physicians treat it better. Finally **Ann-Maree Nobelius, Melbourne**, discussed a global network to integrate gender competence into medical education.

### Poster Session II

94 posters with excellent science were presented in altogether six poster sessions devoted to



- **Metabolic diseases**
- **Healthcare**
- **Basic research**
- **Health psychology**
- **Cardiovascular diseases**
- **Mixed topics.**



All sessions were well participated and fruitful discussions conducted at every poster.

By common vote of the participants and the poster session chairs six posters were elected and awarded poster prizes, of EUR 500.-- each.



The congress adjourned in high spirits with the promise to meet again in the year 2010 in Israel with Marek Glezerman as host. Some of the participants might meet before in a **Summer School on Gender Medicine in Berlin, September 22-25, 2010** hosted by the GiM.

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Next events:

- Summer School 'Gender in Medicine' in Berlin on September 22-25, 2010
- 5<sup>th</sup> International Congress on Gender Medicine in Israel 2010

