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## **Gender medicine: Pride and Prejudice**

by the University Centre for Gender Medicine Studies of the University of Ferrara

On Saturday afternoon, 6 October 2018, almost two hundred people including students, health professionals, journalists and the public in general interested in the topic, were witnesses to the fast-paced series of scientific conversations in Ted Talk style, with which the University Centre for Studies on Gender Medicine of the University of Ferrara described the contents and methods of its work.

After the greetings of the delegate of the Rector of the University of Ferrara, Luigi Grassi (director of the Department of Biomedical and Surgical and Specialist Sciences), the director of the Centre of Referral of gender medicine of the National Institute of Health and external member of the University Centre, Alessandra Carè (biologist specialized in Medical Genetics) described the Italian reality, identifying subjects, research and training groups active on gender medicine and found that, thanks to the Ferrara-born Senator Paola Boldrini, present in the hall, Italian Law no. 3 requires, the only case in Europe, the application of gender medicine in clinical practice, in the training of health professionals and university students and identifies the Italian National Institute of Health as an implementing entity.

Marco Falzetti (engineer), director of APRE, the Agency for the Promotion of European Research, outlined European funding opportunities to support research and actions for gender medicine. A video presentation by Julian Little (Professor of Human Genomic Epidemiology, University of Ottawa, Canada) illustrated how, alongside the growing focus on personalised and precision medicine, the Canadian health care system is promoting gender medi-

cine with gender-related recommendations in national guidelines and clinical practices.

Tiziana Bellini (associate professor of Biochemistry\*) recalled how the University Centre of Ferrara, of which she is director, is unique at the national level and how at the specialisation course in Medicine and Surgery in Ferrara a model has been developed to include the sex/ gender approach in the academic objectives of the degree course, a model recommended to all universities by the Permanent Conference of Presidents of Degree Courses in Medicine. The objective was to demonstrate how gender medicine allows directing the comparative attention between men and women toward an increasingly personalised appropriateness of care.

The opening of the novel "Pride and Prejudice" by Jane Austen allowed Fulvia Signani (psychologist, in charge of Gender Sociology\*) to affirm how rules, roles and relations of, and between, groups of women and men contribute to making gender a socially constructed category, less and less a "natural" factor and more and more a cultural issue, which is to be studied, known, and mastered in all its manifestations and "traps" to free the path of diagnosis and treatment from sexual prejudices and gender.

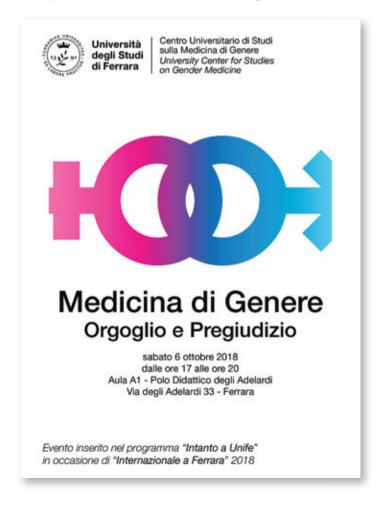
Roberta Piva (associate professor of Biochemistry\*) focussed on the skeleton and considered that knowledge of the molecular mechanisms that cause deterioration is the basis for designing effective gendertargeted therapeutic approaches. Scientific evidence has shown that men have stronger bones and joints and greater tissue regenerative capacity, which are characteristics that protect them until later in life than women with osteoporosis and osteoarthritis. These are pathologies that, due to a series of prejudices and misinformation, men underestimate considering them as feminine prerogatives, but that also pharmacological research has neglected for the male-related aspects. The invitation to basic research

to distinguish by sex the isolated cells from the biopsies is useful, so as to be able to study their peculiar characteristics and reactions.

Barbara Bramanti (associate professor of Physical and Molecular Anthropology\*), in reporting the data of the important international research project MedPlag (ERC AdG 324249), proposed that the higher mortality rates for plague among males in some populations can be attributed more to gender, specifically to the social and occupational role, than to sex. Recalling that epidemic diseases are still a permanent threat, she said that the plague is not, as is believed, eradicated, with recent examples in Madagascar (2017-18, almost 2700 cases with 239 deaths) and the United States (39 cases and 5 deaths from 2010 to 2015).

Silvia Sara Canetto (professor of Health and Social Psychology and Counselling, Colorado State University, USA, and Pontifical Universidad Católica of Peru) reported that male suicide is interpreted through gender stereotypes. For example, male suicide is considered, erroneously, rare and erroneously seen as a response to predominantly economic and social problems. However, in Italy too, men commit suicide more than women, and especially for relational problems. Therefore, "gender lenses" are needed to understand and reduce the phenomenon of male suicide.

"Love does not always do well": this is the provocation by Gloria Bonaccorsi (researcher and teacher of Gynaecology and Obstetrics\*) who, dealing with sexually transmitted diseases (STDs), highlighted the differences in epidemiology and in the sequelae in the two sexes. In particular, with reference to HPV infections, which is the most common viral STD, the data show that the prevalence of infection is much higher in men and not influenced by



age, while, in women, the infection is less prevalent, risk reduces with age, but high-grade HPV-related lesions, such as cervical dysplasia and cervical cancer of the cervix, the subject of screening programmes to date, are much more frequent. Hence the need for research into the anatomical and biological differences of infection in both sexes and for gender-oriented preventive programmes aimed at reducing infection.

Donato Gemmati (associate professor of Medical Genetics\*) with "Mind the gap!" considers gender differences in prognosis after myocardial infarction. The stereotype that attributes heart attack to the male sex is no longer valid. One third of all deaths among women are attributable to this condition. The exclusion of women from clinical pharmacological trials in the cardiovascular field leaves them today orphans of valid therapies. A historical overview shows a reduction in the time of hospitalisation and mortality, but a woman with a heart attack today is much more likely to die than a man. The inclusion of women in clinical studies will contribute to the recognition of personalised therapies with major effects on survival.

Do drugs prefer men or women? Katia Varani (associate professor of Pharmacology\*) stated that the question is part of the path of gender pharmacology, which detects and explains differences in the efficacy and safety of drugs depending on an individual's gender. Women are the largest drug users from fertile age, they are also more prone to adverse reactions and the cyclical hormone variability typical of women and the use of contraceptives interfere with the efficacy of drugs. More pre-clinical and clinical trials from a gender perspective will be needed, encouraging the appropriate use of pharmacological therapy for better health protection for both genders, and precisely developing tailormade pharmacotherapy.

With the unusual title "L'alieno dentro di me" (The Alien in Me) Michele Rubini (medical genetics researcher\*) presented the phenomenon of foetal microchimerism that is reported in women with rheumatological diseases that have a high prevalence in women, such as rheumatoid arthritis, systemic lupus erythematosus, Sjögren's syndrome and systemic sclerosis. In affected women, the finding in the anatomical districts affected by the pathology of foetal cells originating from previous pregnancies suggests their possible involvement in the pathogenesis or clinical evolution of the disease, with a possible impact in the field of prevention and therapeutic treatment.

Rosa Maria Gaudio (researcher and professor of Forensic Medicine\*) explained on video the start of an interdisciplinary study on gender violence, to obtain a model for reporting the effects of violence on women, as well as on men, also including forms of different crimes such as attempted murder or incitement to suicide. The model will be able to allow an equal comparison with other countries and will be based on news and health data, as well as data from judicial authorities, aimed at ascertaining the effective "gender" nature of violence. Research may also be useful in suggesting the much-needed preventive actions of the phenomenon.

The effects of gender and sexual differences on men's and women's lifestyles have been described by Lamberto Manzoli (professor of Hygiene and Public Health\*) who offered some examples: physical activity and eating fruit reduce cardiovascular risks (CVD) by 52% and 42% in women respectively and by 23% and 26% in men, while obesity increases CVD risk in women more than in men. The US guidelines, published in 2018, on the maximum thresholds of alcohol consumption confirm the need to differentiate between men (max. 196 g of alcohol a week) and women (max 98 g). For the latter, there are long-term consequences of related diseases, while for men the risks are mainly accidents and injuries.

The round table saw a discussion on the topics of the day between Guglielmo Pepe (journalist and blogger on health issues) and Walter Malorni (communication manager of the portal www.issalute. it) who touched some of the aspects of the concepts illustrated above. Describing the activities of the Italian National Institute of Health in the field of communication, the latter proposed viewing short videos on topics of gender medicine, but also on news that are likely to become the subject of more fake news in health and healthcare.

The music performances by the saxophone quartet of Frescobaldi Conservatory in Ferrara gave a touch of swing to the afternoon with music by Iturralde, Nyman, Gershwin, Joplin and Piazzolla.

\*University Centre for Gender Medicine Studies of the University of Ferrara.

http://www.unife.it/centri/gender-medicine/it/