Preclinical innovation: Latest news in future treatment of erectile dysfunction

**Location:** Room 14b (ICM, Level 1)

**Chairs:** F. Fusco, Naples (IT)
A. Muneer, London (GB)

**Aims and objectives of this presentation**

The session will include animal studies with stem cell based interventions for erectile dysfunction. Furthermore, latest news in regeneration of pelvic nerves and the role of endothelial and smooth muscle in erectile dysfunction will be presented. The audience will walk away with an idea of what may lie ahead in the world of andrology.

Poster viewing of 20 minutes. Presentations will take place on stage. Standard presentations are 2 minutes in length, followed by 2 minutes for discussion.

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**Combination therapy using human adipose-derived stem cells on the cavernous nerve and low-energy shockwaves on the corpus cavernosum in a rat model of postprostatectomy erectile dysfunction**

*By:* Kwon O., Choi J.B., Park Y.H., Cho H.J., Ha U-S., Hong S.H., Kim S.W., Lee J.Y.

*Institutes:* Seoul St. Mary’s Hospital, Dept. of Urology, Seoul, South Korea

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**Tissue sealing sheet attenuates erectile dysfunction after nerve-sparing surgery in a rat model**


*Institutes:* Tohoku University Graduate School of Medicine, Dept. of Urology, Sendai, Japan

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**Damage and repair processes of cavernous nerve after crushing injury in rat model - evidence of transmission electron microscopy in correlation with serial intracavernous pressure and molecular histological change**

*By:* Wu Y-N.¹, Liao C-H.², Shang H-S.³, Chiang H-S.¹

*Institutes:* ¹Fu Jen Catholic University, Graduate Institute of Basic Medicine, New Taipei City, Taiwan, ²Fu Jen Catholic University, School of Medicine, New Taipei City, Taiwan, ³Tri-Service General Hospital, Dept. of Clinical Pathology, Taipei City, Taiwan

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**Ganglion cell size after bilateral cavernous nerve resection and reconstruction**

*By:* May F.¹, Buchner A.², Brinkmann K.³, Weidner N.³, Stief C.³, Matiasek K.³

*Institutes:* ¹Private Practice, Dept. of Urology, Dachau, Germany, ²Ludwig-Maximilians-University, Dept. of Urology, Munich, Germany, ³Ludwig-Maximilians-University, Dept. of Clinical and Comparative Neuropathology and Clinical Veterinary Medicine, Munich, Germany, ⁴Ruprecht-Karls-University, Dept. of Spinal Cord Injury Centre, Heidelberg, Germany

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**Osteopontin is an important player in endogenous neuroregeneration after cavernous nerve injury**

*By:* Weyne E.¹, Matsui H.², Hannan J.³, Fabio C.⁴, Liu X.³, Van Der Aa F.¹, Bivalacqua T.³, Albersen M.¹

*Institutes:* ¹UZ Leuven, Dept. of Urology, Leuven, Belgium, ²Johns Hopkins, Dept. of Urology, Baltimore, United States of America, ³East Carolina University, Dept. of Physiology, Greenville, United States of America, ⁴San Raffaele, Dept. of Urology, Milan, Italy

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**Improvement of erectile function by suppression of corporal fibrosis with LIM-kinase2 inhibitors in a rat model of cavernous nerve injury**

*By:* Jung G.¹, Kim B.S.¹, Song W.H.¹, Park J.¹, Park K.¹, Kim S.W.¹, Paick J-S.¹, Ryu K.H.³, Cho S.Y.², Jeong H.², Son H.², Cho M.C.²

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SDF-1 treatment facilitates axonal regeneration from the major pelvic ganglion in a dose-dependent fashion
By: Sopko N., Matsui H., Kates M., Xiaopu L., Bivalacqua T.
Institutes: The Johns Hopkins School Of Medicine, Dept. of Urology, Baltimore, United States of America

Effects of eupatilin on the contractility of corpus cavernosal smooth muscle through nitric oxide independent pathways
Institutes: 1Ajou University School of Medicine, Dept. of Urology, Suwon-Si, South Korea, 2Samsung Medical Center, Sungkyunkwan University School of Medicine, Dept. of Urology, Seoul, South Korea, 3Seoul National University College of Medicine, Dept. of Physiology, Seoul, South Korea

Effect of the BKCa channel opener LDD175 on the erectile function of in vivo diabetic rat model
By: Lee S.W., Sung H.H., Chae M.R., Kang S.J., Han D.H., Park J.K., Lee S.W.
Institutes: 1Samsung Medical Center, Sungkyunkwan University School of Medicine, Dept. of Urology, Seoul, South Korea, 2Chonbuk National University School of Medicine, Dept. of Urology, Jeonju, South Korea

Treatment of diabetes mellitus-induced erectile dysfunction using endothelial progenitor cells genetically modified with human telomerase reverse transcriptase
Institutes: 1Tongji Hospital, Tongji Medical College, Huazhong University of Science and Technology, Dept. of Urology, Wuhan, China, 2Tongji Hospital, Tongji Medical College, Huazhong University of Science and Technology, Dept. of Geriatrics, Wuhan, China

Erectile dysfunction correlates with hyperhomocysteinemia: International Index of Erectile Function (IIEF) and penile Doppler ultrasound evaluation
Institutes: Sapienza Rome University Policlinico Umberto I, Dept. of Urology, Rome, Italy

Sub-albuginean adipocyte accumulation is associated with erectile dysfunction: First clinical evidence and pathophysiological implications
By: Vinay J., Sarquella J., Sanchez J., Algaba F., Gallegos I., Rojas-Cruz C., Palma C.
Institutes: 1Fundació Puigvert, Dept. of Andrology, Barcelona, Spain, 2Fundació Puigvert, Dept. of Pathology, Barcelona, Spain, 3University of Chile Clinical Hospital, Dept. of Pathology, Santiago, Chile, 4University of Chile Clinical Hospital, Dept. of Urology, Santiago, Chile, 5FOSCAL, Clinica Carlos Ardila Lulle, Dept. of Urology, Bucaramanga, Colombia

Simvastatin treatment improves endothelial function in the corpus cavernosum in uremic apolipoprotein E deficient mice
By: Ivanovski O., Nikolov I., Davceva O., Petrushevska G.
Institutes: 1Medical Faculty, University ss Cyril and Methodius, Dept. of Urology, Skopje, Macedonia, 2Medical Faculty, University ss Cyril and Methodius, University Clinic of Nephrology, Skopje, Macedonia, 3Medical Faculty, University ss Cyril and Methodius, University Clinic of Clinical Biochemistry, Skopje, Macedonia, 4Medical Faculty, University ss Cyril and Methodius, Dept. of Pathology, Skopje, Macedonia

A novel therapeutic strategy for patients with premature ejaculation: Possibility of electrical stimulation of dorsal penile nerves
By: Kimura Y., Saitoh C.
Institutes: Astellas Pharma Inc., Evolving Medical Solutions, Tsukuba-Shi, Japan