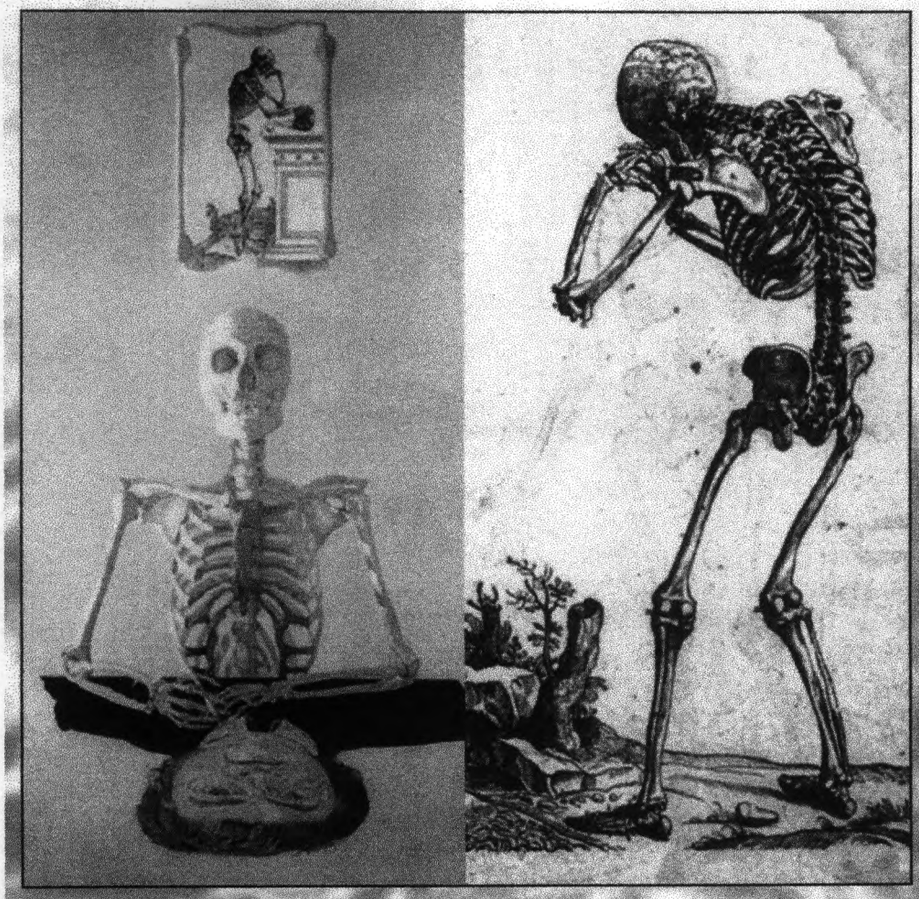
ELSEVIER

Annals of ANATOMY

Volume 196 · 2014 S1

Anatomischer Anzeiger

Official Journal of the Anatomische Gesellschaft



Supplement Issue

Abstracts 18th Congress of the International Federation of Associations of Anatomists (IFAA 2014) Anatomy from gross to molecular and digital

August 8 - 10, 2014
Beijing, China

ISSN 0940-9602
Ann. Anat.
196(2014)S1
pp. S1–S286

www.elsevier.com/locate/aanat

Papers may be sent to the Editors.
Instructions for Authors - see: www.elsevier.com/locate/aanat

♾ As of vol. 178, number 1 (1996) the paper used in this publication meets the requirements of ANSI/NISO Z39.48-1992 (Permanence of Paper).

ABSTRACTS

THE 18th CONGRESS OF THE INTERNATIONAL FEDERATION OF ASSOCIATIONS OF ANATOMISTS

BEIJING CHINA 08-10 AUGUST 2014

Edited by Yunqing Li, Changman Zhou

Organization Committee:

Bernard Moxham B.Sc., B.D.S., PhD, FHEA, FSB, FAS
Emeritus Professor of Anatomy
President of the International Federation of Associations of Anatomists (IFAA)
Cardiff School of Biosciences
United Kingdom

Friedrich Paulsen Prof. Dr. med.
Head Dept. Anatomy; FAU Erlangen, Erlangen Germany
Secretary General of IFAA

Richard L. Drake, Ph.D.
Director of Anatomy, Professor of Surgery Cleveland Clinic Lerner College of Medicine. USA Treasurer of IFAA

Yunqing Li MD.Ph.D
Professor, Chairman of Department of Anatomy, Histology and Embryology, The Fourth Military Medical University Xi'an China.
President of Chinese Society of Anatomical Sciences(CSAS).

Changman Zhou MD.Ph.D
Professor in Department of Anatomy and Histology at Peking University Health Science Center, China.
Currently Vice-President and General Secretary of CSAS.

Ming Zhang MB, MMed, PhD
Clinical Anatomist, Department of Anatomy, University of Otago, New Zealand.

Local Scientific Committee:

Content

Foreword

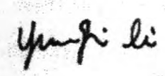
The 18th Congress of the International Federation of Associations of Anatomists (IF scheduled for August 8-10, 2014 in Beijing, China. On behalf of the organizing com and the Chinese Society for Anatomical Sciences (CSAS), I would welcome you to this Congress. The congress will be hosted by the CSAS and will take place at the International Conference Centre, Beijing Continental Grand Hotel, Beijing, China conference centre and hotel are located in the Beijing Olympic Park. A wide ra accommodations are available around the Park, from budget accommodation up to hotels to suit all tastes and requirements.

The theme of the Congress will be ***Anatomy, from gross to molecular and digita*** IFAA Congress, as always, aims to bring together anatomists and other scientists around the globe to present and debate the latest and best research on ana histology, morphology, cell biology, developmental biology, anthropology and di morphology during the coming 4 years. It will provide an opportunity for networking delegates.

Beijing, as the Capital of China with an over 5,000 years civilization history, has cou historic and scenic spots, such as the Great Wall, Forbidden City, Summer Palace, T of Heaven, etc. You may have had a glimpse of her breathtaking beauty during the 2008 Olympic Games. The 2014 IFAA Congress will provide you an unforge opportunity to experience it by yourself. We will organize a wide range of a half day day tours for your family during the conference. We will also arrange pre-/post-confe tours for you and your family to visit various tourist attractions around China.

We look forward to the pleasure of greeting you at what promises to be an excitin fruitful meeting.

See you in Beijing! See you in 2014!



Professor Yunqing Li, MD, PhD.
President of Chinese Society for Anatomical Sciences
Professor of Anatomy
Head of Department of Anatomy, The Fourth Military Medical University, Xi'an, PR China
Email: deptanat@fmmu.edu.cn

Medicine, Shahid Chamran University, Ahvaz, Iran
[4]Department of Clinical Sciences, Faculty of Veterinary Medicine, Shahid Chamran University, Ahvaz, Iran
**kkhazaeil@gmail.com*

Fluoroquinolones changes in the articular cartilage especially with high doses and more than two weeks use. So, due to relatively excessive use of enrofloxacin in the sheep flocks, this study was done to investigate the effects of enrofloxacin on cellular and molecular changes in growing lamb articular cartilage to evaluate some possible mechanisms involved these changes. Twelve ,2 month – old male lambs divided in three groups: control group received only normal saline; therapeutic group received 5mg/kg enrofloxacin subcutaneously, daily, for 15 days and toxic group received 35 mg/kg enrofloxacin as the same manner as therapeutic group. Twenty four hours after the last dose, the animals were euthanaized and their stifle joints were dissected. Sampling from distal femoral and proximal tibial exterimities were done quickly for further histological and molecular studies. Collagen-п content was studied with avidin- biotin immunohistochemistry method in different groups. Expression of Sox9 and caspase-3 was evaluated by Real – time PCR. Immunohistochemistrical changes were included decreases of matrix proteoglycans, carbohydrates and Collagen-п in toxic group. Some of these changes were observed in therapeutic group with less intensity in comparison to toxic group. Enrofloxacin were significantly decreased (P 0.05) Sox9 expression in therapeutic and toxic groups compared to control group. But caspase -3 expression in toxic group significantly increased (P=0.0001) with comparison to other groups, while between control and therapeutic groups, there were no significant differences. So, it can be concluded that enrofloxacin increases apoptosis in chondrocytes and decreases their numbers. Enrofloxacin use in growing lambs even at recommended therapeutic dose, is not completely safe on articular cartilage. moreover higher doses of enrofloxacin induce sever changes in lamb articular cartilage.

IFAA2014-2-011
The Histopathologic appearance of the pancreatic islet in hyperglicaemia

[illegible]ryati Darwin, Muhamad Farid, Delmi sulastri

[illegible]partemnt Histology, Faculty of Medicine Andalas [illegible]versity, Padang-Indonesia.
**ervatidarwin@fk.unand.ac.id*

Hyperglycemia is a crucial factor in the development of diabetic nephropathy because of its effects on glomerular and might cause renal damage. To determine the effect of hyperglycemia on pancreatic islet, we examined the pancreatic tissues from the four groups of male Swiss Albino mice, induced by different doses of glucose. Morphometric analysis on Haematoxilin-eosin stained pancreatic sections showed that the area and diameter of islet were higher in group G1 but lower in group G2 and G3 ($p<0.05$). The islet cells count was higher in group G2 and G3 ($p<0.05$). However, there was no significant difference on islet cells count between Kontrol group and group G1 ($p>0.05$). Islet density was slightly higher in all treated group ($p<0.05$). The result suggest that hyperglycemia caused significant changes in histopathological features of mice pancreatic islet.

IFAA2014-2-012
Ameliorative effect of ginkgo biloba on neurodegeneration caused by fluoride

R Jetti[1], C.V Raghuveer[2], M.R Chamallamudi[3], Somayaji[1], P.B Billakanti[4]

[1]Department of Anatomy, Melaka Manipal Medical [illegible] Manipal University, Manipal, India; [2]Department of [illegible] Pathology, Yenepoya Medical College, Yenepoya U[illegible] Mangalore, India; [3]Department of Pharmacology, M[illegible] college of Pharmaceutical Sciences, Manipal Univer[illegible] Manipal, India; [4]Department of Anatomy, Kasturba [illegible] College, Manipal University, Manipal, India
**raghujetti@yahoo.co.in*

Excessive consumption of fluoride through drinking other sources leads to skeletal and dental fluo addition to bones and teeth soft tissues and major o also affected by fluoride toxicity.In the present attempted to investigate the structural cha hippocampus followed by fluoride exposure and t the ameliorative effect of Ginkgo biloba against neu caused by fluoride.Animals were randomly divided groups (n=6 in each group), Control, Fluoride+Vehicle (F+V), Fluoride+Ginkgo biloba Control animals received plain tap water; all the oth received 100ppm fluoridated water for 30 days. In F+GB groups received 100mg/kg body weight of gi and Ginkgo biloba respectively for 15 days. A experimental period animals were euthanized brain s processed and stained with cresyl violet staining. wa sections free from artefacts were selected for [illegible] mean number of viable neurons. The fluoride gro reduction in the mean number of viable neurons com control, whereas more viable neurons were found biloba treated group in comparison to fluoride gro the Ginkgo biloba may be an alternate therapeu[illegible] treat fluorosis victims.

IFAA2014-2-013
3D scanning of unsectioned adult optic [illegible] with a CLARITY method by laser scanning confocal microscopy

Sen Lin, Bingyin Su

Dept.of Anatomy and Histo-Embryology, De[illegible] Regeneration Key Lab of Sichuan Province, Chengdu Medical College, Chengdu, China.
**lsroger@163.com*

Studying axon in the central nervous [illegible] hampered by current histological and [illegible] because they provide only partial information [illegible] reactions. The optic nerve(ON) crush model is [illegible] be a classic model for studying CNS. In this [illegible] C57BL/6 mice were anesthetized and the ON was [illegible] 5s to observe a clear cut, however do not [illegible] Animals with permanent ischemia were excluded [illegible] by embedding ON in hydrogel monomers, [illegible] thermally triggered initiators into tissue [illegible]

IFAA2014-10-016
Withdraw.

IFAA2014-10-018
Hydrogen peroxide impairs the proliferation of bone marrow stem cells and their endothelial differentiation independent of reactive oxygen species generation

Yuan Xiao, Xin Li, Yuqi Cui, Lingjuan Liu, Jia Zhang, Patrick Liu, Hong Liu, Guanglong He, Zhenguo Liu

Davis Heart & Lung Research Institute and Division of Cardiovascular Medicine, the Ohio State University Wexner Medical Center, Columbus, Ohio, USA
*zhenguo.liu@osumc.edu

Cell therapy with bone marrow mesenchymal stem cells (MSCs) remains a viable option for tissue repair and regeneration. One of the major challenges for cell-based therapy is the limited survival of the cells after in vivo administration. Although the exact mechanism(s) for impaired in vivo cell survival remains to be defined, oxidative stress is considered to be involved in the process of in vivo cell damage. The present study was to investigate the effect of hydrogen peroxide (H2O2) on bone marrow stem cells and their endothelial differentiation and the underlying mechanisms in vitro. Methods and Results: Rat bone marrow multipotent adult progenitor cells (MAPCs) were treated with H2O2 (with the final concentration from 0 to 50 uM) with or without the antioxidant N-acetylcysteine (NAC, 1 mM). H2O2 generated a significant amount of reactive oxygen species (ROS) in the culture system as measured with electron paramagnetic resonance spectroscopy, substantially inhibited the proliferation, Oct-4 expression, and endothelial differentiation of MAPCs, and induced the apoptosis of MAPCs in a dose-dependent manner. The phosphorylation levels of p38 and p53 were significantly increased in the cells treated with H2O2, while no significant changes in the expression and activation of Akt and ERK1/2 were observed. ROS production from H2O2 in the culture system was completely blocked by NAC (1 mM). However, NAC treatment didn't prevent H2O2-induced apoptosis, and inhibition of cell proliferation and endothelial differentiation of MAPCs. Conclusion: H2O2 exposure increased the apoptosis of MAPCs and inhibited their proliferation, Oct-4 expression, and endothelial differentiation with a mechanism independent of ROS generation in vitro. The effects of H2O2 on rat MAPCs might be mediated through p38 and/or p53-related signaling pathway(s).

IFAA2014-10-019
Effect of bone marrow – mesenchymal stem cell on the expression of metalloproteinase-1 matrix and type I collagen in burn healing

Yanwirasti Yanwirasti, Gusti Revilla, Nur Afrainin Syah

Department of Anatomy, Faculty of Medicine Andalas University, Padang, Indones.
*yanwirasti@yahoo.com

This study aimed at determining the effect of Bone Marrow Mesenchymal Stem Cell (BM-MSC) on the expression of metalloproteinase-1 matrix and type I collagen in rat wound healing. This research was an experimental research, the post-test only control design, using 24 Wistar rats. The rats were divided into 3 groups: control (no burn), treatment I (full thickness burn administered Phosphate Buffer Saline (PBS), and treatment II (full thickness burn administered BM-MSC 2x106 cells/ml subcutaneous). On day 14, skin tissues were taken to see the expressions of metalloproteinase-1 matrix and type I collagen by immunohistochemical staining. The results were analyzed by ANOVA test and Post Hoc Bonferroni. The expression of metalloproteinase-1 matrix increased in treatment I. The increase was different significantly compared to the increase that occurred in control and treatment II. There was no significant difference between the control group and treatment II. The expression of type I collagen increased in treatment II. The increase was different significantly compared to the increase occurred in treatment I. However, there was no significant difference between treatment II and control. Thus, this study showed the administration of BM-MSC can increase the expression of type I collagen and decrease the expression of metalloproteinase-1 matrix.

IFAA2014-10-020
Synergistic effect of peripheral blood mononuclear cells (PBMCs) and bone marrow bm- derived mesenchymal stem cell (BM-MSC) on the percentage of integrin α2β1 in full thickness burn in rats

Gusti Revilla[1], Eryati Darwin[2], Fedik A. Rantam[3], Yanwirasti Yanwirasti[1]

[1]Anatomy Department of Medical Faculty Andalas University, Padang, Indonesia; [2]Histology Department of Medical Faculty Andalas University, Padang, Indonesia; [3]Laboratory Institute of Tropical Disease (ITD) Airlangga University, Surabaya, Indonesia.
*gustirevillaelok@yahoo.com

Using both Bone Marrow-stem cell (BM-MSc) and peripheral blood mononuclear cells (PBMCs) from allogenic donors as part of the therapy to heal the burn wound seems to give positive prospect for the future treatment. In this experiment, PBMC and rat BM- derived from mesenchymal stem cell were used as the therapy model. Immunocytochemistry was used as the method to characterize the phenotype of MSC, it was also used to express the integrin α2β1. The rats with burn wound were divided into 2 kinds of group; the first group of rats was selected to control the use of PBS; while second group of rats was used as the treatment object that was medicated by the applying the combination of both BM-MSC and PBMC. Stem-cells subcutaneously administered dose applied to each rat was around of 2 x 106 cells. The result showed that can increase the percentage of integrin α2β1 and this result statistically showed significant differences (p=0.037). This research proves that the combination of BM-MSC and PBMC stem cell served can accelerate the healing process in the burn wound on rats through increasing the percentage of