### **FEBS Advanced Lecture Course**

Matrix Pathobiology, Signaling and Molecular Targets Spetses, 2-7 September, 2011

### Posters (P27-P77)

The poster session represents a vital part of the FEBS-MPST 2011 Course. All abstracts, whether or not selected for oral presentations (presented as ST1-ST26 in the program), will be on display as posters during the entire course to provide ample time for informal discussions among students, participants and lecturers. Two poster sessions and poster discussion groups (Saturday 3<sup>rd</sup> and Monday 5th) as well as two speakers' corner session to meet and discuss with invited speakers (Sunday 4<sup>th</sup> and Monday 5<sup>th</sup>) have been planned (see scientific program).

### P27: Importance of Extracellular pH in Cartilage Tissue Engineering

## Khan AA<sup>1,2</sup>, Urban JP<sup>1</sup>, Wilkins RJ<sup>1</sup>, Waldman SD<sup>2</sup>, Lee RB<sup>1</sup>

<sup>1</sup>Department of Physiology Anatomy and Genetics, University of Oxford, Oxford, Oxfordshire, United Kingdom; <sup>2</sup>Department of Chemical Engineering, Queen's University, Kingston, Ontario, Canada

## P28: Proteoglycan loss is only associated with loading-induced lesions that progress spontaneously

## **<u>B. Poulet</u><sup>1</sup>**, I.M. Khan<sup>2</sup>, C.W. Archer<sup>2</sup>, A.A. Pitsillides<sup>1</sup>

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## P29: Basement membrane and integrin gene expression during chondrocyte differentiation

### C. Müller, A. Aspberg

University of Copenhagen, Ole Maaløes Vej 5, 2200 Copenhagen, Denmark

### P30: Cell Sub-Populations in the Nucleus Pulposus of the Bovine Intervertebral Disc

### O.A. Boubriak & J.P. G. Urban

Department of Physiology, Anatomy and genetics, University of Oxford, UK

**P31**: X-linked Alport syndrome investigation in Hellenic families. G624D mutation in *COL4A5* may explain many familial hematuria cases in Greek mainland that hardly can

be diagnosed as Alport syndrome

<u>Panaviota Demosthenous</u><sup>1</sup>, Konstantinos Voskarides<sup>1</sup>, Michael Hadjigavriel<sup>2</sup>, Maria Arsali<sup>3</sup>, Charalampos Patsias<sup>3</sup>, Panos Zirogiannis<sup>4</sup>, Pavlos Goudas<sup>5</sup>, Athanasios Diamantopoulos<sup>5</sup>, Kostas Sombolos<sup>6</sup>, Christoforos Stavrou<sup>7</sup>, Efstathios Alexopoulos<sup>8</sup>, Alkis Pierides<sup>9</sup>, Constantinos Deltas<sup>1</sup>

<sup>1</sup>Department of Biological Sciences and Center for Research in Molecular Medicine, University of Cyprus, Nicosia, Cyprus, <sup>2</sup>Department of Nephrology, Larnaca General Hospital, Larnaca, Cyprus, <sup>3</sup>Department of Nephrology, Nicosia General Hospital, Nicosia, Cyprus, <sup>4</sup>Lamia Hospital, Lamia, Greece, <sup>5</sup>Renal Department, St Andrews General State Hospital, Patras, Greece, <sup>6</sup>Department of Nephrology, General Hospital G. Papanikolaou, Thessaloniki, Greece, <sup>7</sup>Evangelismos Hospital, Paphos, Cyprus, <sup>8</sup>Department of Nephrology, Aristotle University of Thessaloniki, Thessaloniki, Greece, <sup>9</sup>Department of Nephrology, Hippocrateon Hospital, Nicosia, Cyprus

**P32:**Anti-inflammatory and anti-remodeling effects of cardiac resynchronization therapy in patients with chronic heart failure

<u>Adina Stanciu<sup>1</sup></u>, Radu Vatasescu<sup>2</sup>, Corneliu Iorgulescu<sup>2</sup>, Marcel Stanciu<sup>3</sup>, Maria Dorobantu<sup>3</sup>

1.Institute of Oncology "Prof. Dr.Al.Trestioreanu" Bucharest, Bucharest, Romania; 2.Clinic Emergency Hospital Bucharest, Bucharest, Romania; University "Politehnica" of Bucharest, Bucharest, Romania

P33: Matrix remodeling in relation to hemodynamic shear stress

<u>H M. Björck<sup>1,2</sup></u>, J. Renner<sup>2,3</sup>, T. Ebbers<sup>1,2</sup>, S. Nilsson<sup>4</sup>, S. Maleki<sup>5</sup>, L. Folkersen<sup>5</sup>, M. Karlsson<sup>2,3</sup>, P. Eriksson<sup>5</sup>, T. Länne<sup>1,2</sup>

<sup>1</sup>Division of Cardiovascular Medicine, Department of Medical and Health Sciences, Linköping University, Sweden; <sup>2</sup> Center for Medical Image Science and Visualization (CMIV), Linköping University, Sweden; <sup>3</sup>Division of Applied Thermodynamics and Fluid Mechanics, Department of Mechanical Engineering, Linköping University, Sweden; <sup>4</sup> Division of Drug research, Department of Medical and Health Sciences, Linköping University, Sweden; <sup>5</sup>Atherosclerosis Research Unit, Department of Medicine, Center for Molecular Medicine, Karolinska Institute, Sweden.

**P34:** Decreased fibroblast contractile activity and reduced fibronectin expression are involved in skin photoaging

Anja Knott<sup>1</sup>, Astrid Drenckhan<sup>1</sup>, <u>Stefanie Tang<sup>1</sup></u>, Katja Reuschlein<sup>1</sup>, Ralph Lucius<sup>2</sup>, Franz Stäb<sup>1</sup>, Horst Wenck<sup>1</sup>, Stefan Gallinat<sup>1</sup>

<sup>1</sup> Research & Development, Beiersdorf AG, Hamburg, Germany; <sup>2</sup> Department of Anatomy,

Christian Albrecht University Kiel, Germany

**P35:** Impaired splicing of fibronectin is associated with Thoracic Aortic Aneurysm formation in patients with Bicuspid Aortic Valve disease

<u>V. Paloschi</u><sup>1</sup>, S. Kurtovic<sup>1</sup>, L. Folkersen<sup>1</sup>, D. Wågsäter<sup>1</sup>, J. Roy<sup>2</sup>, A. Hamsten<sup>1</sup>, JB. Michel<sup>3</sup>, A. Franco-Cereceda<sup>2</sup>, and P. Eriksson<sup>1</sup>

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### P36: PRELP interacts with cells

Karin Lindblom<sup>1</sup>, Eva Bengtsson<sup>1</sup>, Dick Heinegård<sup>1</sup> and Anders Aspberg<sup>2</sup>

<sup>1</sup>Department of Clinical Sciences Lund, Lund University and <sup>2</sup>Department of Biology, University of Copenhagen

**P37:** The protease nexin-1 is associated to collagen fibers in the medial layer in aneurysms of the ascending aorta

L. F. Borges<sup>1,2</sup>, S. Mansila<sup>2</sup>, O. Meilhac<sup>2</sup>, P. S. Gutierrez<sup>3</sup> and J.B. Michel<sup>2</sup>

<sup>1</sup>Department of Morphology, ICB, University Federal of Minas Gerais, Brazil; <sup>2</sup>Inserm, U698, CHU X. Bichat, Paris, University of Paris 7 (Denis Diderot), France; <sup>3</sup>Laboratory of Pathology, Heart Institute (InCor), School of Medicine, University of São Paulo, Brazil

**P38:** Triptolide inhibits integrin-beta1/FAK/c-Src signaling pathway and STAT3mediated production of MMP2 in human cancer cells: a way to prevent invasion and metastases?

Y. Malyutina, V. Mosina, V. Kudryavtsev, A. Kabakov

Medical Radiology Research Center, Obninsk, 249036, Russian Federation

P39: Aggrecanases in colorectal cancer

## Filou S<sup>1</sup>, Bounias D<sup>2</sup>, Stavropoulos M<sup>2</sup>, Kyriakopoulou D<sup>2</sup>, Vynios DH<sup>1</sup>

<sup>1</sup>Division of Organic Chemistry, Biochemistry & Natural Products, Department of Chemistry and <sup>2</sup>Department of Surgery, University Hospital, University of Patras, 26500 Patras, Greece

P40: Syndecan-1 and -2 cooperation in the migration and proliferation of a fibrosarcoma cell line

Bálint Péterfia<sup>1</sup>, Krisztina Szabadkai<sup>1</sup>, Tibor Füle<sup>1</sup>, Kornélia Baghy<sup>1</sup>, Katalin Dobos<sup>1</sup>,

# Alexandra Fullár<sup>1</sup>, Fang Zong<sup>2</sup>, Katalin Dobra<sup>2</sup>, András Jeney<sup>1</sup>, Sándor Paku<sup>1</sup>, Ilona Kovalszky<sup>1\*</sup>

<sup>1</sup> 1st Department of Pathology and Experimental Cancer Research, Semmelweis University, Budapest, Hungary; <sup>2</sup> Department of Laboratory Medicine, Division of Pathology, Karolinska Institutet, SE-141 86 Huddinge, Stockholm, Sweden

P41: Dual effects of unique dermatan sulfates from ascidians on tumor invasion: inhibition of epithelial-mesenchymal transition and hematogeneous metastasis

## Eliene Kozlowski<sup>1</sup>, Lubor Borsig<sup>2</sup> and Mauro Pavão<sup>1</sup>

<sup>1</sup>Lab. de Bioquímica e Biologia Celular de Glicoconjugados, HUCFF and Instituto de Bioquímica Médica, Universidade Federal do Rio de Janeiro, Rio de Janeiro, RJ 21941-590, Brazi; <sup>2</sup>Zurich Center for Integrative Human Physiology and Institute of Physiology,

University of Zurich, CH-8057 Zurich, Switzerland.

P42: Studies on novel mammalian endo-type chondroitin sulfate hydrolases

### T. Kaneiwa, A. Miyazaki, S. Mizumoto, K. Sugahara, S. Yamada

Hokkaido University Graduate School of Life Science

## P43: Novel therapies to target inflammatory driven processes in cancer and chronic lung disorders

### Emil Tykesson

Experimental Medical Science, Faculty of Medicine, Lund

### P44: The role of decorin in hepatocarcinogenesis

<u>Kornélia Baghy</u><sup>1,2</sup>, Alexandra Fullár<sup>1</sup>, Bálint Péterfia<sup>1</sup>, Zsolt Horváth<sup>1</sup>, Renato V. Iozzo<sup>3</sup>, Ilona Kovalszky<sup>1</sup>

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<sup>3</sup>Department of Pathology, Anatomy, and Cell Biology, and the Cancer Cell Biology and Signaling Program, Kimmel Cancer Center, Thomas Jefferson University, Philadelphia, PA, USA

P45: Alterations in overused supraspinatus tendon: a possible role of glycosaminoglycans and HARP/Pleiotrophin in early tendon pathology

## M. Attia<sup>1</sup>, A. Scott<sup>2</sup>, LJ. Soslowsky<sup>3</sup>, MC. Tassoni<sup>4</sup>, S. Menashi<sup>1</sup>, I. Martelly<sup>1</sup>

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<sup>2</sup> Centre for Hip Health and Mobility, Department of Physical Therapy, University of British Columbia, Vancouver, BC, Canada

<sup>3</sup> McKay Orthopaedic Research Laboratory, University of Pennsylvania, Philadelphia, PA, USA

P46: Small leucine rich proteoglycans in the vertebral column of Atlantic salmon (*Salmo salar L.*) individuals displaying spinal fusions

Mona E. Pedersen a\*#, Elisabeth Ytteborg", Harald Takle",, Grethe Enersen#, Grete Baeverfjord" Achim Kohler#, Kirsten O. Hannesson#

#Nofima Mat AS, N1430 Ås, Norway, "Nofima Marin AS, N1432 Ås, N6600 Sunndalsøra, Norway

P47: Expression of the small leucine-rich proteoglycans (SLRPs) in Atlantic cod (*Gadus morhua* L.) skeletal muscle was altered in fish on a high-starch diet

<u>Tingbø<sup>a</sup>\*, MG</u>; Pedersen, ME<sup>a</sup>; Kolset, SO<sup>b</sup>; Grøndahl, F<sup>c</sup>; Enersen, G<sup>a</sup>; Hannesson, KO<sup>a</sup>

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P48: Identification of genes associated to syndecan-1 overexpression and silencing by microarray analysis in mesothelioma cells

T. Szatmári, F. Zong, F. Mundt, A. Hjerpe and K. Dobra

Department of Laboratory Medicine, Karolinska Institutet, Stockholm, Sweden

P49: Expression of syndecan-4 and correlation with metastatic potential in testicular germ cell tumours

<u>V.T. Labropoulou<sup>a</sup></u>, A.D. Theocharis<sup>b</sup>, S.S. Skandalis<sup>c</sup>, A. Pepe<sup>b</sup>, P. Ravazoula<sup>d</sup>, P. Perimenis<sup>e</sup>, N.K. Karamanos<sup>b</sup>, H.P. Kalofonos<sup>a</sup>

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P50: Hyaluronan Synthase 2 Promotes Breast Cancer Cell Invasion by Suppression of

### **Tissue Metalloproteinase Inhibitor 1**

### B. Bernert, H. Porsch, A. Ruusala and P. Heldin

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**P51:** Role of hyaluronan and tumour-associated antigen in human breast and ovarian cancer

<u>M.L. D'Angelo, E</u>. Karousou, M. Viola, D.Vigetti, P. Moretto, S. Deleonibus, G. De Luca, A. Passi

Department of Experimental Biomedical and Clinical Sciences, University of Insubria, Varese, Italy

P52:Towards the Synthesis of a Tetrasaccharide Partial Sequence of Hyaluronan

### S. Rigol, L. Xia, A. Giannis

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### P53: UDP-Sugars regulate Has2 expression

<u>Jokela, Tiina A.</u><sup>1</sup>, Makkonen, Katri M.<sup>1,2</sup>, Oikari, Sanna<sup>1</sup>, Kärnä, Riikka<sup>1</sup>, Carlberg, Carsten<sup>2</sup>, Tammi, Raija H.<sup>1</sup>, Tammi, Markku, I.<sup>1</sup> <sup>1</sup>School of Medicine, Institute of Biomedicine, and <sup>2</sup> Department of Bioscience, University of Eastern Finland, Kuopio, Finland

### P54: Serum Hyaluronidases in colorectal cancer

<u>C. Kolliopoulos<sup>1</sup></u>, D. Bounias<sup>2</sup>, M. Stavropoulos<sup>2</sup>, D. Kyriakopoulou<sup>2</sup>, D. H. Vynios<sup>1</sup>

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### **P55:** Hyaluronidases and hyaluronan synthases in nasal polyps

# <u>I. – E. Triantaphyllidou<sup>1</sup></u>, E. Tserbini<sup>1</sup>, A. Hatziri<sup>1</sup>, S. Filou<sup>1</sup>, T. Panogeorgou<sup>2</sup>, N. S. Mastronikolis<sup>2</sup>, S. Naxakis<sup>2</sup>, P.D. Goumas<sup>2</sup> and D.H. Vynios<sup>1</sup>

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### P56: IQGAP1 in CD44 signaling: molecular mechanisms and cellular effects

### Inna Kozlova, Aino Ruusala, Oleksandr Voytyuk, Spyros Skandalis and Paraskevi Heldin

Ludwig Institute for Cancer Research, Uppsala University, Biomedical Centre, Box 595, SE-751 24 Uppsala, Sweden.

### P57: Isoforms of HA-receptor in laryngeal cancer

V. Takouli<sup>1</sup>, N. S. Mastronikolis<sup>2</sup>, T. A. Papadas<sup>2</sup>, P. D. Goumas<sup>2</sup>, D. H. Vynios<sup>1</sup>

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## **P58:** Studies on the functional role of CD44-iASPP complex as a key regulator of cell growth and apoptosis

<u>O. Voytyuk</u><sup>\*</sup>, S. Skandalis<sup>\*</sup>, I. Kozlova, B. Bernet, C-H. Heldin and P. Heldin

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### **P59:** The interplay between breast cancer & endothelium in cancer progression

## Gialeli Ch.<sup>1</sup>, Viola M.<sup>2</sup>, Passi A.<sup>2</sup>, Karamanos N.K.<sup>1</sup>

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## **P60:** Growth Factors and Signaling Pathways Involved in the Amniotic Fluid-Induced Proliferation of Human Skin Fibroblasts

## H. Pratsinis<sup>1</sup>, S. Chrissouli<sup>1</sup>, V. Velissariou<sup>2</sup>, A. Anastasiou<sup>2</sup>, D. Kletsas<sup>1</sup>

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### P61: Lumican modulates TGF-β2 signaling to regulate osteosarcoma cell adhesion

<u>A. Berdiaki</u><sup>1</sup>, D. Nikitovic<sup>1</sup>, M. Mytilineou<sup>1</sup>, A. Zafiropoulos<sup>1</sup>, N.K. Karamanos<sup>2</sup> and G. N. Tzanakakis<sup>1</sup>

<sup>1</sup> Histology/Embryology laboratory, Medical School, University of Crete, Heraklion, Crete, Greece;<sup>2</sup> Laboratory of Biochemistry, Department of Chemistry, University of Patras, Greece. P62: PTH induces osteosarcoma cell migration through FGF-2/Biglycan signaling axis

G. Datsis<sup>1</sup>, <u>A. Berdiaki<sup>1</sup></u>, D. Nikitovic<sup>1</sup>, M. Mytilineou<sup>1</sup>, G.N. Tzanakakis<sup>1</sup>

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**P63:** HS-chains modulate TGFB2 signaling in both SMAD- dependent and -independent manner to regulate fibrosarcoma cell adhesion

<u>K. Kouvidi<sup>1</sup></u>, A. Banos<sup>1</sup>, D. Nikitovic<sup>1</sup>, E. Fthenou<sup>1</sup>, G. Chatzinicolaou<sup>1</sup>, M. Mytilineou<sup>1</sup>, G.N. Tzanakakis<sup>1</sup>

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P64: Hyaluronan as regulator of the differential responses of fetal and adult dermal fibroblasts to TGF- $\beta$ 

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**P65:** Low molecular weight heparin through PKCa-mediated changes in actin cytoskeleton organization modulates melanoma motility

Georgia Chalkiadaki<sup>1</sup>, <u>Dragana Nikitovic<sup>1</sup></u>, Aikaterini Berdiaki<sup>1</sup>, Nikos K. Karamanos<sup>2</sup> and George N. Tzanakakis<sup>1</sup>

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**P66:** Invasion of breast cancer cells is related to the PDGF-R mediated expression of heparan sulfate proteoglycans

<u>C. J. Malavaki<sup>1</sup></u>, A. Roussidis<sup>1</sup>, D. Kletsas<sup>2</sup>, T. Tsegenidis<sup>1</sup>, A. D.Theocharis<sup>1</sup>, G. N. Tzanakakis<sup>3</sup>, N.K. Karamanos<sup>1</sup>

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P67: Migration of ERb(+) breast cancer cells is depended on EGFR and IGF-IR signaling and expression of syndecans-2 and -4

### Maria-Ioanna Ellina, Anastasios Tsonis, Zoi Piperiggou, Nikos K. Karamanos

Department of Chemistry, Laboratory of Biochemistry, University of Patras, Greece

## P68: Purification and characterization of recombinant blood coagulation factor XIII from different species

### Andreas Heil<sup>1,2</sup>, Johannes Weber<sup>1</sup>, Ralf Pasternack<sup>1</sup>, Martin Hils<sup>1</sup>

<sup>1</sup>Zedira GmbH, Darmstadt, Germany; <sup>2</sup> Matrix Biology & Tissue Repair Research Group, School of Dentistry, Cardiff University, UK

P69: Simultaneous analysis of heparan sulfates, chondoroitin/dermatan sulfates and hyaluronan disaccharides by glycoblotting assisted sample preparation followed by a single ZIC HILIC chromatography

### Kayo Araki, Yasuhiro Takegawa, Naoki Fujitani, Yasuro Shinohara

Laboratory of Medical and Functional Glycomics, Graduate School of Advanced Life Science, Frontier Research Center for Post-Genome Science and Technology, Hokkaido University, Sapporo 001-0021 (Japan)

P70: Influence of the molecular composition of blood plasma on ELISA-based immunoassays

### Gaspare Benenati, Bruce Caterson and John Harwood

School of Biosciences, Cardiff University, Cardiff CF10 3TL, United Kingdom

**P71:** Fluorophore-Assisted Carbohydrate Electrophoresis as a useful tool to assay HA oligosaccharides

### <u>N. Afratis<sup>1</sup></u>, A. Giannis<sup>2</sup> and N.K.Karamanos<sup>1</sup>

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P72: Analysis of chondroitin sulfate disaccharides in cell culture media using Fluorophore-Assisted Carbohydrate Electrophoresis and effects of pharmacological inhibitors in synthesis and sulfation pattern

### Ch. Markellou, A. Asimakopoulou and N.K. Karamanos

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P73: Identification and characterization of hyaluronan oligosaccharides by capillary

### electrophoresis

## E.C. Mazarakioti<sup>1</sup>, C. J. Malavaki<sup>1</sup>, C. Markellou<sup>1</sup>, A. Passi<sup>2</sup>, N.K. Karamanos<sup>1</sup>

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P74: Chondroitin Sulfate – a Major Glycosaminoglycan in Brittle Stars

<u>Rashmi Ramachandra</u><sup>1</sup>, Ramesh Babu Namburi<sup>1</sup>, Olga Ortega-Martinez<sup>2</sup>, Sam Dupont<sup>2</sup>, Michael Thorndyke <sup>2</sup>, Ulf Lindah1<sup>1</sup>, Dorothe Spillmann<sup>1</sup>

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<sup>2</sup> Department of Marine Ecology, University of Gothenburg, The Sven Lovén Centre for Marine Sciences, Kristineberg, Fiskebäckskil, Sweden.

**P75:** Molecular Characterization of *Saccharomyces cerevisiae* Extracellular Matrix and Yeast Response to Different Sizes of Hyaluronan

### J. Carvalho<sup>1</sup>, <u>F. Faria-Oliveira<sup>1</sup></u>, Célia Ferreira<sup>1</sup>and C.Lucas<sup>1</sup>

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**P76:** Proteolytic processing of TMEFF2 – a novel regulatory mechanism in prostate cancer?

# <u>K. Gawel<sup>1</sup></u>, V. Ellis<sup>2</sup>, G. Velasco<sup>3</sup>, C. Lopez-Otin<sup>3</sup>, Z. Poghosyan<sup>4</sup>, A. Ager<sup>5</sup> and V. Knäuper<sup>1</sup>

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### P77: The small leucine-rich proteoglycan populations in human intervertebral discs

Sharon Owen<sup>1,2</sup>, Bruce Caterson<sup>3</sup>, Peter Roughley<sup>4</sup>, Stephen Eisenstein<sup>1</sup> & Sally Roberts<sup>1,2</sup>

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