

## **PRESENTATIONS SUBMITTED (JULY 21<sup>TH</sup> 2003)**

### **ORAL**

#### **Immunolocalization of the P2X3 receptors and CGRP in neurons of the cochlear and vertebro-basilar arteries**

Zoltán Vass<sup>1,2</sup>, Alfred L. Nuttall<sup>2,3</sup>

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#### **The Effects of Edaravone on Endolymphatic Hydrops in Guinea Pigs**

Takeda T<sup>1</sup>, Takeda S<sup>1</sup>, Takumida M<sup>2</sup>, Kakigi A<sup>1</sup>, Sawada S<sup>1</sup>, Azuma H<sup>1</sup>,  
And Higashiyama K<sup>1</sup>

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#### **Ultrastructural Characteristics of Rat Endolymphatic Sac Ribosome-Rich Cells and Considerations on their Role in Endolymph Homeostasis**

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#### **Experimental Autoimmune Labyrinthitis-Identification of Organ Specific Autoantibody-**

Shunichi Tomiyama

Department of Otorhinolaryngology, Nippon Medical School, Tama-Nagayama Hospital. Japan.

#### **Immunodefence of the round window**

Cecilia Engmér M.D.<sup>2</sup>, Dan Bagger-Sjöbäck M.D.<sup>2</sup>, Göran Laurell M.D.<sup>2</sup> and Helge Rask-Andersen M.D.<sup>1</sup> Department<sup>1</sup> of Otorhinolaryngology Akademiska Sjukhuset, Uppsala S 751 85 Uppsala and Department<sup>2</sup> of Otolaryngology and Head & Neck Surgery, Karolinska Hospital, 17176 Stockholm, Sweden

#### **High resolution scanning electron microscopy of the human cochlea. A study using freshly fixed surgical specimens**

Glueckert Rudolf\*<sup>1</sup>, Kinnefors Anders<sup>2</sup>, Schrott-Fischer Anneliese<sup>1</sup>, Pfaller Kristian<sup>3</sup>, Rask-Andersen Helge<sup>2</sup>

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<sup>3</sup> Institute of Anatomy and Embryology; Dept of Histology and Molecular Cell Biology, University of Innsbruck, Austria

## **Deafness in radixin-deficient mice due to the degeneration of stereocilia in the cochlea hair cell**

[Shin-ichiro Kitajiri](#)<sup>1,2,3</sup>, Kanehisa Fukumoto<sup>1,4</sup>, Shojiro Kikuchi<sup>1,4</sup>, Masaki Hata<sup>5</sup>, Takayuki Nakagawa<sup>2</sup>, Tae Soo Kim<sup>2</sup>, Hiroyuki Sasaki<sup>5,6</sup>, Juichi Ito<sup>2</sup>, Sachiko Tsukita<sup>7</sup>, Shoichiro Tsukita<sup>1,3</sup>

(applicant to Spöndlin's award)

## **Chemical composition of the endolymphatic sac luminal fluid in a patient presenting with a Mondini malformation**

Vincent Couloigner<sup>1,2</sup>, Marie Teixeira<sup>1</sup>, Alexis Bozorg Grayeli<sup>1,3</sup>, Michel Kalamarides<sup>3</sup>, Alain Rey<sup>3</sup>, Olivier Sterkers<sup>1,3</sup>, Evelyne Ferrary<sup>1,3</sup>

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## **Hydrocephalus and the status of the endolymphatic membranes in paediatric temporal bones. Histopathological findings and statistical evaluation.**

[M.A. van der Gaag](#)<sup>1</sup>, M.Kron<sup>2</sup>, E.Bachor<sup>1</sup>

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<sup>2</sup> Department of Biometry and Medical Documentation, University of Ulm, Prittwitzstrasse 43, 89075 Ulm, Germany

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## **Vascular endothelial growth factor (VEGF) enhances phosphorylation of Nitric oxide synthase III (NOS III) at Ser-1177 in the mammalian cochlea.**

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Department of Otolaryngology, University of Leipzig and <sup>\*</sup>Department of Anatomy, University of Cologne.

## **β<sub>1</sub>-Adrenergic Receptors in the inner ear of the Gerbil**

[C. Fauser](#), P. Wangemann

Department of Anatomy & Physiology, Kansas State University, Manhattan, KS 66506, USA (applicant to Spöndlin's award)

## **The Search for a Pill to Prevent Noise-Induced Hearing Loss (NIHL)**

Daisuke Yamashita<sup>1</sup>, Jochen Schacht<sup>1</sup>, Ilmari Pyykko<sup>2</sup>, Ulf Rosenhall<sup>3</sup>, Ann-Cathrine Lindblad<sup>5</sup>, Toshio Yamashita<sup>5</sup>, [Josef Miller](#)<sup>1,3</sup>

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FINLAND <sup>3</sup>Karolinska Hospital, Stockholm, SWEDEN <sup>4</sup>Karolinska Institute,

Stockholm, SWEDEN <sup>5</sup>Kansai Medical University, Osaka, JAPAN

## **The glucocorticoid receptors modulate the sensitivity of the cochlea to acoustic trauma.**

**Yeasmin Tahera<sup>1</sup>**, Peter Johansson<sup>1</sup>, Zhao Bian<sup>1</sup>, Pontus Stierna<sup>2</sup>, Lars Fredelius<sup>3</sup> and Barbara Canlon<sup>1</sup>

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## **Free radicals and inner ear disorders – basic research and clinical trials**

Masaya Takumida<sup>1</sup> and Matti Anniko<sup>2</sup>

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## **Sphingosine-1-phosphat (S1P) induces Vasospasms of the Spiral Modiolar Artery that are partly mediated through activation of Rho kinase**

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## **Rapid calcium-dependent replenishment of the synaptic ribbon with vesicles mediates recovery from short-term adaptation at the hair cell afferent synapse.**

Maria A. Spassova<sup>\*</sup>, Michael Avissar<sup>†</sup>, Adam C. Furman<sup>†</sup>, Mark A. Crumling<sup>\*†</sup>, James C. Saunders<sup>†</sup>, and Thomas D. Parsons<sup>\*†‡</sup> <sup>\*</sup>Department of Clinical Studies – New Bolton Center, School of Veterinary Medicine, <sup>†</sup>Department of Otorhinolaryngology: Head and Neck Surgery, School of Medicine, University of Pennsylvania, Philadelphia, PA 19104

## **I.2 Partial cloning, expression and localization of K<sup>+</sup> channel subtypes KCNQ2 and 3 in guinea pig and rat cochleae**

G. Liang,<sup>1,2</sup> M. Ulfendahl,<sup>1,2</sup> Z. Jin<sup>1,2</sup> and L. Järleback<sup>1,2</sup>

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## **Differential transcriptional control of cochlear ion channels and receptors dependent on the onset of expression**

Marlies Knipper, Harald Winter, Thomas Weber, Iris Köpschall, Karin Rohbock, Hans Peter Zenner, Ulrike Zimmermann

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## **The presynaptic protein Bassoon is required for synchronous synaptic transmission at the hair cell ribbon synapse**

Darina Khimich<sup>1</sup>, Regis Nouvian<sup>1,2</sup>, Michel Eybalin<sup>2</sup>, Wilko Altrock<sup>3</sup>, Susanne tom Dieck<sup>3</sup>, Eckart Gundelfinger<sup>3</sup> and Tobias Moser<sup>1</sup>

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### **Uptake of cholesterol into cochlear structure of the Mpv17-/- mouse and its wild type.**

Angela-M. Meyer zum Gottesberge<sup>1</sup>, G. Kappert<sup>2</sup>, T. Massing<sup>1</sup>, H. Felix<sup>3</sup>

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### **A large Indonesian kindred with Autosomal Dominant Hearing Loss linked to DFNA2: A clinical and audiometrical approach**

Rikkert L. Snoeckx<sup>1</sup>, Erik Fransen<sup>1</sup>, Bulantrisa Djelantik<sup>2</sup>, Paul Coucke<sup>3</sup>, Patrick J Willems<sup>4</sup>, Paul Van de Heyning<sup>5</sup>, Floris Wuyts<sup>5</sup>, Guy Van Camp<sup>1\*</sup>

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### **Restoration of auditory primary neurons by transplantation of embryonic stem cells of mice**

Takayuki Nakagawa<sup>1</sup>, Tae-Soo Kim<sup>1</sup>, Tsuyoshi Endo<sup>1</sup>, Tatsunori Sakamoto<sup>1,2</sup>, Fukuichiro Iguchi<sup>1</sup>, Yasushi Naito<sup>1</sup>, Yoshiki Sasai<sup>2</sup>, Juichi Ito<sup>1</sup>

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### **Requirements for FGF-3 and FGF-10 during Inner Ear Formation**

Victor Vendrell<sup>1</sup>, Yolanda Alvarez<sup>1</sup>, Maria Teresa Alonso<sup>1,2</sup>, Laura Cecilia Zelarayan<sup>1</sup>, Pablo Chamero<sup>1,2</sup>, Thomas Theil<sup>3</sup>, Shigeaki Kato<sup>4</sup>, Dieter Riethmacher<sup>1</sup> and Thomas Schimmang<sup>1</sup>

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### **Regulation of cell proliferation in developing auditory epithelia of mice**

Shinji Takebayashi<sup>1</sup>, Takayuki Nakagawa<sup>1</sup>, Ken Kojima<sup>1</sup>, Tae-Soo Kim<sup>1</sup>, Tomoko Kita<sup>1,2</sup>, Tsuyoshi Endo<sup>1</sup>, Fukuichiro Iguchi<sup>1</sup>, Youyi Dong<sup>3</sup>, Juichi Ito<sup>1</sup>

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### **Transplantation of neural stem cells into mouse inner ear for restoration of spiral ganglions**

Tetsuya Tamura<sup>1</sup>, Takayuki Nakagawa<sup>1</sup>, Tsuyoshi Endo<sup>1</sup>, Fukuichiro Iguchi<sup>1</sup>, Ichiro Tateya<sup>1</sup>, Tae-Soo Kim<sup>1</sup>, Ken Kojima<sup>1</sup>, Tomoko Kita<sup>1,2</sup>, Shinji Takebayashi<sup>1</sup>, Yasushi Naito<sup>1</sup>, Ryoichiro Kageyama<sup>3</sup>, Juichi Ito<sup>1</sup>

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### **Hair cell restoration by cell transplantation**

Juichi Ito, Takayuki Nakagawa, Ken Kojima, Ichiro Tateya, Fukuichiro Iguchi, Tsuyoshi Endo, Tae-Soo Kim, Yasushi Naito

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### **The control of neurite extension from spiral ganglion neurons: implications for rehabilitation of hearing loss**

Allen F. Ryan<sup>1,2</sup>, Kwang Pak<sup>1</sup>, Lina M. Mullen<sup>1</sup>, Dominik Brors<sup>3</sup>, Christoph Aletsee<sup>3</sup>, Stefan Dazert<sup>4</sup>.

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Dept. of Otorhinolaryngology, University of Bochum, Bochum, Germany

### **Distribution and fate of autologous bone marrow stromal cells transplanted into the cochlea of gentamicin-treated chinchillas**

Yasushi Naito<sup>1</sup>, Tatsuo Nakamura<sup>2</sup>, Takayuki Nakagawa<sup>1</sup>, Fukuichiro Iguchi<sup>1</sup>, Tsuyoshi Endo<sup>1</sup>, Kiyohiro Fujino<sup>1</sup>, Tae-Soo Kim<sup>1</sup>, Yasuyuki Hiratsuka<sup>1</sup>, Tetsuya Tamura<sup>1</sup>, Shin-ichi Kanemaru<sup>1</sup>, Yoshihiko Shimizu<sup>2</sup>, Juichi Ito<sup>1</sup>

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### **Insulin-like growth factor i is required for survival of transit-amplifying neuroblasts and differentiation of otic neurons**

Gorospe I., Camarero G., Leon Y. and Varela-Nieto I.

Instituto de Investigaciones Biomédicas Alberto Sols, Consejo Superior de Investigaciones Científicas (CSIC)-Universidad Autónoma de Madrid (UAM).

### **Homeobox gene *Six1* is required for correct patterning of otic vesicle**

Hidenori Ozaki and Kiyoshi Kawakami

Center for Molecular Medicine, Jichi Medical School, Minamikawachi, Kawachi, Tochigi, JAPAN 329-0498

### **Regionalisation and morphogenesis of auditory structures in the inner ear of the chicken: A study of cadherin expression in the chicken embryo.**

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### **Multipotent otic progenitor cells cultured in three-dimensional (3-D) collagen gels form otospheres that contain differentiating sensory receptor cells**

Ken Kojima<sup>1</sup>, Sunaho Tamura<sup>1</sup>, Akiko T. Nishida<sup>1,2</sup>, Thomas R. Van De Water<sup>3</sup>, Juichi Ito<sup>1</sup>

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### **The kinase inhibitor roscovitine induces differentiation of supernumerary hair cells and Deiters' cells in the developing organ of Corti**

Malgrange B<sup>1</sup>, Knockaert M<sup>2</sup>, Belachew S<sup>1</sup>, Nguyen L<sup>1</sup>, Moonen G<sup>1</sup>, Meijer L<sup>2</sup> and Lefebvre PP<sup>1</sup>

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### **A novel gene, OC29, is expressed in the developing rat inner ear.**

Akiko T. Nishida<sup>1,2</sup>, Ken Kojima<sup>1</sup>, Juichi Ito<sup>1</sup>

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### **Conditional gene targeting of *gjb2* resulted in profound deafness due to degeneration of the organ of Corti**

Katsuhisa Ikeda, Takayuki Kudo, Toshihiko Kikuchi, Yukio Katori, Toshimitsu Kobayashi, Osamu Minowa and Tetsuo Noda

Department of Otorhinolaryngology - Head and Neck Surgery, Tohoku University Graduate School of Medicine, Sendai, Japan.

### **Inner Ear Gene Therapy: The Effect of Volume and Surgical Approach on Hearing Preservation.**

Mark Praetorius<sup>\*</sup>, Kim Baker<sup>#</sup>, Douglas Brough<sup>§</sup>, Peter Plinkert<sup>\*</sup>, Hinrich Staecker<sup>#</sup>

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### **A Mouse Model For the Dominant, Y1870C, Deafness Mutation in the Zona Pellucida Domain of TECTA**

Ian J. Russell<sup>1</sup>, Victoria Lukashkina<sup>1</sup>, Andrei N. Lukashkin<sup>1</sup>, Kevin Legan<sup>1</sup>, Richard J. Goodyear<sup>1</sup>, Kristien Verhoeven<sup>2</sup>, Guy Van Camp<sup>2</sup>, Guy P. Richardson<sup>1</sup>

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### **An atlas of connexins' in situ expression**

Buniello A.<sup>1,2</sup>, Montanaro D.<sup>1</sup>, Volinia S.<sup>1</sup>, Gasparini P.<sup>1</sup>, Marigo V.<sup>1</sup>.

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### **The DFNA15 Deafness Mutation Affects POU4F3 Protein Stability, Localization and Transcriptional Activity**

Sigal Weiss<sup>1</sup>, Irit Gottfried<sup>1</sup>, Itay Mayrose<sup>1</sup>, Mengqing Xiang<sup>2</sup>, Sally J. Dawson<sup>3</sup>, and Karen B. Avraham<sup>1</sup>

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### **A systematic mutational screening of candidate genes for hearing loss: identification of myo1a as a causative gene**

Donaudy F.<sup>1</sup>, Ferrara A<sup>2</sup>, Esposito L<sup>1</sup>, Hertzano R<sup>3</sup>, Ben-David O<sup>3</sup>, Bell RE<sup>3</sup>, Melchionda S<sup>4</sup>, Zelante L<sup>4</sup>, Avraham KB<sup>3</sup>, Gasparini P.<sup>1,2</sup>

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### **Hearing loss in an estrogen receptor beta knock out mouse**

M Hultcrantz<sup>1</sup>, A Stenberg<sup>1</sup>, M Duan<sup>2</sup>, Z Chen<sup>2</sup>, J Qui<sup>2</sup>, R Simonoska<sup>1</sup>, E Enmark<sup>3</sup>, J-Å Gustavsson<sup>3</sup>

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### **Prestin mRNA levels and hair cell loss due to ischemia in the cochlea of newborn rats**

J. Gross, A. Machulik, N. Amarjargal, J. Fuchs and B. Mazurek

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### **Vestibular ablation, gentamicin hypersensitivity and mitochondrial alterations in mexican patients.**

Graciela Meza Ruíz,

Depto. Neurociencias IFIC; UNAM. México.

## **Prevalence of the *GJB2* 35delG mutation in non-syndromic hearing loss in Egypt**

**Mohamed Wael M. Mustafa**

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## **Low prevalence of *COCH* mutations in patients with Meniere disease**

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## **Drug delivery to the cochlea after CI implantation – device design and possible applications**

Reetz G.<sup>1)</sup>, Béal F.<sup>1)</sup>, Salt A.<sup>2)</sup>, Miller J.<sup>3)</sup>, and Jolly C.<sup>1)</sup>

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## **A novel drug delivery system into inner ear**

Tsuyoshi Endo<sup>1</sup>, Takayuki Nakagawa<sup>1</sup>, Tomoko Kita<sup>1,2</sup>, Tae-Soo Kim<sup>1</sup>, Fukuichiro Iguchi<sup>1</sup>, Yasushi Naito<sup>1</sup>, Yasushi Tabata<sup>3</sup>, Juichi Ito<sup>1</sup>

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## **Sodium enoxaparin and immune-mediated sensorineural hearing loss.**

R. Mora, M. P. Cordone, B. Crippa, F. Mora, M. Barbieri

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## **The usefulness of computerized dynamic posturography for the study of equilibrium in patients with Meniere's disease. Correlation with clinical and audiologic data**

A. Soto Varela, S. Santos Pérez, A. Lirola Delgado, E. Cabanas Rodríguez, W. Elhendi and Labella Caballero, T.

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## **Rehabilitator treatment of balance disorders: design of a general guidelines with dynamic posturography**

Santos Pérez S., Soto Varela A., Lirola Delgado A., Elhendi W., Labella Caballero T. .

Service of Otorrinolaryngology. University Clinical Hospital. Santiago de Compostela.

## **Extracellular micro-domain voltage divider reveals outer hair cell piezoelectricity**



R.D. Rabbitt, H.E. Ayliffe and W.E. Brownell\*  
University of Utah, Salt Lake City & \*Baylor College of Medicine, Houston

### **The Electrophysiological Identity of Type II Spiral Ganglion Neurons.**

Michael A. Reid and Robin L. Davis

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### **Spontaneous otoacoustic emission and basilar membrane motion in a guinea pig.**

Alfred L. Nuttall<sup>1,4</sup>, Karl Grosh<sup>2</sup>, Jiefu Zheng<sup>1</sup>, Egbert de Boer<sup>3</sup> and Tianying Ren<sup>1</sup>

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### **The Effects of Stimulus Intensity on Adaptation in the Chick Cochlear Nerve.**

Saunders, J.C. and Parsons, T.D. Dept. of Otorhinolaryngology: Head and Neck Surgery, University of Pennsylvania, Philadelphia, PA 19104 USA.

### **The distribution and modulation of tyrosine hydroxylase in the lateral olivocochlear nucleus of the guinea pig**

Xianzhi Niu<sup>1</sup>, Nenad Bogdanovic<sup>2</sup>, and Barbara Canlon<sup>1</sup>

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### **A time-frequency analysis of transient evoked otoacoustic emission responses in a rat animal model treated with cisplatin.**

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### **In search of the cellular target of cisplatin in the guinea pig cochlea: An immunohistochemical pilot-experiment**

M.W.M. van Ruijven, E.G.J. Hendriksen, J.C.M.J. de Groot and G.F. Smoorenburg  
Hearing Research Laboratories, University Medical Center Utrecht, the Netherlands

### **Cisplatin-induced gene-transcription in organ of corti-derived cells**

M. Previati(1,3), I. Lanzoni(3), E. Corbacella(3), S. Giuffre'(1), S. Magosso(3), A. Martini(2,3), S. Capitani (1,3).

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2) Dept. of Audiology, Ferrara University

3) Center of Bioacoustic, Ferrara University

### **High dose cisplatin with aminofostine: ototoxicity and pharmacokinetics**

Ekborn A<sup>1</sup>, Hansson J<sup>2</sup>, Ehrsson H<sup>3</sup>, Eksborg S<sup>3</sup>, Wallin I<sup>3</sup>, Wagenius G<sup>4</sup>, Laurell G<sup>1</sup>

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<sup>3</sup>Karolinska Pharmacy, Stockholm and <sup>4</sup>Department of Clinical Oncology, Academic Hospital, Uppsala, Sweden.

### **Temporal disruption of adherens junctions in the mouse vestibular epithelium following aminoglycoside treatment**

Tae-Soo Kim, Takayuki Nakagawa, Shin-ichiro Kitajiri, Fukuichiro Iguchi, Tsuyoshi Endo, Shinji Takebayashi, Tetsuya Tamura, Tomoko Kita, Ken Koijma, Yasushi Naito, Juichi Ito

Department of Otolaryngology-Head and Neck Surgery, Graduate School of Medicine, Kyoto University, Kyoto, Japan

### **Caspase-3 independent apoptosis and necrosis in chronic aminoglycoside ototoxicity**

Hongyan Jiang<sup>1</sup>, Suhua Sha<sup>1</sup>, Andrew Forge<sup>2</sup>, Jochen Schacht<sup>1</sup>

1. Kresge Hearing Research Institute, Department of Otolaryngology, University of Michigan, Ann Arbor, MI 48109-0506, USA

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### **Resistance to noise over-exposure in the MOLF/Ei mouse strain**

Glen K Martin and Brenda L Lonsbury-Martin

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Denver Colorado USA

### **Novel inhibition of noise-induced apoptosis in cochlear hair cell using inhibitors of pp60<sup>c-src</sup> protein tyrosine kinase**

Thomas M. Nicotera<sup>1</sup>, Bohua Hu<sup>2</sup> and Donald Henderson<sup>2</sup>

<sup>1</sup>Dept. of Molecular and Cellular Biophysics, Roswell Park Cancer Institute, Buffalo, NY,

<sup>2</sup>Center for Hearing and Deafness, State University of New York at Buffalo, Buffalo, NY

### **Effects of contralateral white noise on supression of distortion product in normal hearing humans**

del Río Valeiras M\*, Vaamonde Lago, P\*; Porto Golpe I\*, Dios Loureiro C\*\* y Labella Caballero T\*\*

\*Department of Otolaryngology, University of Santiago de Compostela, Spain

\*\*Clinical University Hospital, Santiago de Compostela, Spain

## **Correlation of reactive radical species and apoptosis in the stria vascularis following cisplatin treatment**

Tomoko Kita<sup>1,2</sup>, Takayuki Nakagawa<sup>1</sup>, Ji Eun Lee<sup>3</sup>, Tae-Soo Kim<sup>1</sup>, Tsuyoshi Endo<sup>1</sup>, Fukuichiro Iguchi<sup>1</sup>, Atsushi Shiga<sup>4</sup>, Yasushi Naito<sup>1</sup>, Juichi Ito<sup>1</sup>

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<sup>3</sup>Department of Otolaryngology, School of Medicine, Kyungpook National University Hospital, Daegu, Korea and <sup>4</sup>Department of Otolaryngology, Aichi Medical University, Aichi, Japan

## **Role of cytoskeleton and Bcl-2 family proteins in apoptosis during ageing of inner ear**

Longuet Michel, Giraudet Fabrice, Lavieille Jean-Pierre, Siaud Philippe, Riva-Lavieille Catherine

INSERM-EMI 9902: Laboratoire d'otologie et de neuro-otologie, Université de la méditerranée, Marseille, France.

## **POSTER**

### **Caffeine and ryanodine affect transmitter release at the cytoneural junction in the frog labyrinth.**

Maria Lisa Rossi<sup>1</sup>, Marta Martini<sup>1</sup>, Giorgio Rispoli<sup>1</sup> and Fabio Mammano<sup>2</sup>

<sup>1</sup>Dipartimento di Biologia, Sezione di Fisiologia e Biofisica, Università di Ferrara, Ferrara, Italy and <sup>2</sup>Istituto Veneto di Medicina Molecolare (VIMM), Padova, Italy.

### **Extracellular K<sup>+</sup> concentration-related lateral wall stiffness and cell shortening in outer hair cells in guinea pig**

Zsolt Farkas, Tamás J Batta, István Sziklai

University of Debrecen MHS Center, ORL Clinic, Debrecen, Hungary

### **Distribution of catestatin-like immunoreactivity in the human auditory system**

Bitsche Mario<sup>1</sup>\*, Mahata Sushil<sup>2</sup>, Marksteiner Josef<sup>3</sup>, Glueckert Rudolf<sup>1</sup>, Schrott-Fischer Anneliese<sup>1</sup>

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<sup>2</sup> Department of Medicine and Molecular Genetics, University of California, San Diego, California, USA

<sup>3</sup> Department of Psychiatry, University of Innsbruck, Austria

### **Homologues of the motor protein prestin in lower vertebrates and insects**

Thomas Weber<sup>1,4</sup>, Martin Göpfert<sup>2,4</sup>, Harald Winter<sup>1</sup>, Ulrike Zimmermann<sup>1</sup>, Daniel Robert<sup>2</sup>, Hanni Kohler<sup>3</sup>, Oliver Hendrich<sup>1</sup>, Karin Rohbock<sup>1</sup>, Hans-Peter Zenner<sup>1</sup>, Marlies Knipper<sup>1</sup>

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<sup>4</sup>These authors contributed equally to this work

### **Evaluation of the onset of hearing and neurotrophin-induced SG neurite outgrowth in p75-deficient mice**

Hansen S., Aletsee C., Brors D., Berend A., Mlynski R. and Dazert S.  
(Wuerzburg/Bochum GER)

### **Different expression of P2X receptor subtypes in the OHCs of the guinea pig**

Attila Szűcs<sup>1</sup>, Henrietta Szappanos<sup>2</sup>, László Csernoch<sup>2</sup>, Andrea Tóth<sup>1</sup>, Zsolt Farkas<sup>1</sup>, István Sziklai<sup>1</sup>

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Department of Otolaryngology and Head and Neck Surgery, Debrecen, Hungary<sup>1</sup>

University of Debrecen Medical and Health Science Centre, Medical School,

Department of Physiology, Debrecen, Hungary<sup>2</sup>

## **Effect of Calmodulin inhibitors on gap junctional coupling in isolated Hensen-cells of the guinea pig cochlea**

A. Bloedow, A. Ngezahayo, H.-A. Kolb, A. Ernst

Institution/s ?

## **Hair cell differentiation in the inner ear is associated with oxidative stress during mouse embryogenesis and postnatal development.**

D. Labbé<sup>1</sup>, J. Hüwel<sup>2</sup>, A. Hess<sup>2</sup>, W. Bloch<sup>1</sup>, M. Michel<sup>2</sup>, S. Arnhold<sup>1</sup>

<sup>1</sup>Department of Anatomy I University of Cologne and Department of Otolaryngology University of Leipzig

## **Role of oxidative stress in CDDP-ototoxicity in mice**

M. Teranishi<sup>1</sup>, D. Labbé<sup>2</sup>, W. Bloch<sup>3</sup>, A. Mickenhagen<sup>4</sup>, M. Dürr<sup>2</sup>, T. Nakashima<sup>1</sup>, K. Watanabe<sup>5</sup>, O. Michel<sup>2</sup>

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- 3) Department of Anatomy, University of Cologne, Germany
- 4) Uhrmacherfoundation, University of Cologne, Germany
- 5) Department of Otorhinolaryngology, Nippon Medical School, Tokyo, Japan

## **NOS inhibitor reduces the cochlear damage of guinea pigs after the acoustic stimulation**

Ken-ichi Watanabe<sup>1</sup>, Shunta Inai<sup>1</sup>, Alexander Hess<sup>2</sup>, Daniel Labbe<sup>2</sup>, Olaf Michel<sup>3</sup> and Toshiaki Yagi<sup>1</sup>

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## **Role of Ca<sub>v</sub>1.3 (class D) L-type Ca<sup>2+</sup> Channels for Morphology of Vestibular Sensory epithelium**

Arne Scholtz M.D.<sup>1\*</sup>, Rudolf Glueckert<sup>1</sup>, Georg Wietzorrek<sup>2</sup>, Mario Bitsche<sup>1</sup>, Anneliese Schrott-Fischer<sup>1</sup>

<sup>1</sup> Department of Otolaryngology, University Hospital of Innsbruck, Austria

<sup>2</sup> Institute of Pharmacy, Dept. of Pharmacology and Toxicology, University of Innsbruck, Austria

## **Geranylgeranylacetone induced heat shock proteins protect cochlea hair cells from acoustic trauma**

Tsuyoshi Takemoto, Kazuma Sugahara, Takeshi Okuda, Hiroaki Shimogori, and Hiroshi Yamashita

Department of Otolaryngology, Yamaguchi University School of Medicine  
Minamikogushi 1-1-1, Ube, Yamaguchi 755-8505, Japan

## **Differential expression of calcium binding proteins in newt hair cells**

Ruth R. Taylor and Andrew Forge  
UCL Centre for Auditory Research, London

### **The DFNA5 mouse: further phenotypic analysis**

Lut Van Laer<sup>1</sup>, Markus Pfister<sup>2</sup>, Sofie Thys<sup>1</sup>, Marcus Mueller<sup>2</sup>, Karen Vrijens<sup>1</sup>, Lieve Umans<sup>3</sup>, Lutgarde Serneels<sup>3</sup>, Frank Kooy<sup>1</sup>, Jean-Pierre Timmermans<sup>4</sup>, Fred Van Leuven<sup>3</sup>, Guy Van Camp<sup>1</sup>

### **Another candidate of DFNB6 mutation mouse**

Sung Hwa Hong, Myung Soon Kim, \*Ji Hwan Woo, Sook Kyung Park, Young Ju Sung, Won Ho Chung, \*\*Zae Young Ryoo, \*\*Kyoung In Cho  
Department of ORL-HNS, Sungkyunkwan University School of Medicine, Seoul Korea  
\*Department of Biomedical Engineering, College of Medicine, Hanyang University, Seoul Korea  
\*\*Catholic Research Institutes of Medical Science, Seoul Korea

### **Noise-induced hearing loss and expression of prestin mRNA in the organ of Corti of guinea pigs**

H. Haupt<sup>1</sup>, I. Iarin<sup>2</sup>, A. Machulik<sup>1</sup>, B. Mazurek<sup>1</sup>, J. Gross<sup>1</sup>  
<sup>1</sup>Dept. of ORL, Charité Hospital, Humboldt University, Berlin, Germany  
<sup>2</sup>Dept. of ORL, University of Technology, Dresden, Germany

### **Analysis of the vestibular system in igf-i deficient mice**

Morales-García, J. A.<sup>1</sup>; Vigil, P.<sup>1</sup>; Contreras, J.<sup>2</sup>; Varela-Nieto, I.<sup>1</sup>  
<sup>1</sup>Instituto de Investigaciones Biomédicas – A. Sols (CSIC-UAM). <sup>2</sup>Department of Anatomy, Facultad de Veterinaria. Universidad Complutense de Madrid. Spain.

### **Analysis of the otosclerosis phenotype in a Greek kindred: a genetic and clinical study**

K. Van Den Bogaert(1), V. Iliadou(2), N. Eleftheriades(2), G. Aperis(3), K. Vanderstraeten(1), E. Fransen(1), M. Grigoriadou(3), A. Pampanos(3), J. Economides(4), T. Iliades(2), M.B. Petersen(3), G. Van Camp(1)  
(1) Department of Medical Genetics, University of Antwerp, Antwerp, Belgium  
(2) Department of Otorhinolaryngology, Aristotle University of Thessaloniki, Thessaloniki, Greece  
(3) Department of Genetics, Institute of Child Health, Athens, Greece  
(4) Department of Audiology-Neurootology, “Aghia Sophia” Children’s Hospital, Athens, Greece

### **Effect of acoustic overstimulation on gene expression in the cochlea of guinea pig.**

†Caravelli A., †Di Leva F, †Saulino C, †Sequino L, §Sanges R, #Cocoza S, §Pianese L, †Marciano E† and †\*Franzé A†\*  
†Institute of Audiology, Department of Neuroscience and Behavioural Sciences, University “ Federico II “, Naples, , § BioGeM, SCARL, Ariano Irpino (Av), #Department of Biology and Cellular and Molecular Pathology, University “Federico II“, Naples, \*Institute of Genetics and Biophysics “A. Buzzati Traverso”, Naples, Italy.

## **Using Microarrays to Identify Target Genes of the Pou4f3 Transcription Factor in the Embryonic Mouse Inner Ear**

Ronna Hertzano<sup>1,2,4</sup>, Sharon Rashi-Elkeles<sup>1</sup>, Mireille Montcouquiol<sup>2</sup>, Jennifer Jones<sup>2</sup>, Rani Elkon<sup>1</sup>, Gideon Rechavi<sup>3</sup>, Thomas B. Friedman<sup>4</sup>, Matthew W. Kelley<sup>2</sup>, and Karen B. Avraham<sup>1</sup>

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## **A *pcdh15* mutation in children diagnosed with non-syndromic hearing loss: a sign for future development of Retinitis Pigmentosa**

Z. Brownstein<sup>1</sup>, O. Dagan<sup>1</sup>, T. Ben-Yosef<sup>2</sup>, M. Frydman<sup>1, 3</sup>, D. Abeliovich<sup>4</sup>, M. Sagi<sup>4</sup>, F. A. Abraham<sup>5</sup>, M. Shohat<sup>6</sup>, T. Friedman<sup>2</sup> and K. B. Avraham<sup>1</sup>

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## **Correlation of histological and functional analyses of aging effects on auditory and vestibular peripherals of C57BL/6 mice**

Atsushi Shiga<sup>1</sup>, Takayuki Nakagawa<sup>2</sup>, Meiho Nakayama<sup>1</sup>, Tsuyoshi Endo<sup>2</sup>, Fukuichiro Iguchi<sup>2</sup>, Tae-Soo Kim<sup>2</sup>, Ken Kojima<sup>2</sup>, Tomoko Kita<sup>2</sup>, Yasushi Naito<sup>2</sup>, Juichi Ito<sup>2</sup>

<sup>1</sup>Department of Otolaryngology, Aichi Medical University, Aichi, Japan and <sup>2</sup>Department of Otolaryngology Head and Neck Surgery, Kyoto University Graduate School of Medicine, Kyoto, Japan

## **Identification of essential Gata3 target genes in adult cochlea**

J. Hikke van Doorninck, Jacqueline van der Wees, Marjolein A.J. van Looij, Frank Grosveld and Chris I. De Zeeuw .

Department of Neuroscience and Department of Cell Biology, Erasmus MC, P.O. Box 1738, 3000 DR Rotterdam, The Netherlands.

## **Ultrastructural study of induced regeneration in auditory nerve following deafness**

Schrott-Fischer Anneliese<sup>1\*</sup>, Miller Joseph<sup>2</sup>, Glueckert Rudolf<sup>1</sup>, Bitsche Mario<sup>1</sup>, Gmeiner Guenter<sup>1</sup>, Scholtz Arne<sup>1</sup>, Altschuler Rick<sup>2</sup>

<sup>1</sup>Department of Otolaryngology Innsbruck University Hospital, Austria

<sup>2</sup>Kresge Hearing Research Institute, University of Michigan, Ann Arbor, USA

### **The igf system in the mouse postnatal inner ear**

Díaz-Casares, A.(1); Vigil, P, (1); Morales, J.A. (1); Castilla-Cortázar, I. (1); Rico, Y. (1); Resnik, M. (1); Cediél, R. (2); Varela-Nieto, I. (1).

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(2) Facultad de Veterinaria de la Universidad Complutense de Madrid.

### **Mesenchyme-free otic vesicle culture to elucidate the mechanism of morphogenesis**

Takashi Miura<sup>a,b</sup>, Kohei Shiota<sup>b</sup> and Gillian Morriss-Kay<sup>a</sup>

<sup>a</sup>Department of Human anatomy and Genetics University of Oxford UK

<sup>b</sup>Department of Anatomy and Developmental Biology Kyoto University Graduate School of Medicine Kyoto, Japan

### **Evaluation of the number of human spiral ganglion cells in relation to hearing loss**

Gmeiner Guenter<sup>1\*</sup>, Miller Joseph<sup>2</sup>, Glueckert Rudolf<sup>1</sup>, Bitsche Mario<sup>1</sup>, Scholtz Arne<sup>1</sup>, Schrott-Fischer Anneliese<sup>1</sup>

<sup>1</sup>Department of Otolaryngology Innsbruck University Hospital, Austria

<sup>2</sup>Kresge Hearing Research Institute, University of Michigan, Ann Arbor, USA

### **Cochlear manifestations in Fabry disease: an investigation of twenty-two hemizygotus male patients**

Pierre Bonfils<sup>1</sup>, Dominique Germain<sup>2</sup>, Paul Avan<sup>3</sup>

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2. Genetics Laboratory, European Hospital Georges Pompidou, Paris, France

3. Biophysics Laboratory, University of Auvergne, Clermont-Ferrand, France

### **The effect of micordialysis on substance concentrations in small fluid compartments**

H. Hahn, A. N. Salt\*, H.-P. Zenner, S. Plontke

Dept. of Otorhinolaryngology Head and Neck Surgery, Tübingen Hearing Research Center (THRC), University of Tübingen, Germany. \*Dept. of Otolaryngology,

Washington University in St. Louis, USA.

### **Adenovirus receptors are necessary but not sufficient to gene transfer in cochlea.**

Frédéric Venail<sup>1</sup>, Jing Wang<sup>1</sup>, Jérôme Ruel<sup>1</sup>, Guy Rebillard<sup>1</sup>, Jean-Luc Puel<sup>1</sup>

<sup>1</sup>INSERM UMR 583 and Université Montpellier 1, Physiopathologie et Thérapie des Déficiets Sensoriels et Moteurs , Montpellier, France

### **Transient Evoked Otoacoustic Emissions in Adults: A comparison Between the two test Protocols**

Joseph Kei, \*Ravi Sockalingam, Clive Holloway, Alan Agyik, Craig Brinin, Doreen Baine



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Brisbane, Australia

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### **Hearing loss in GATA-3 haploinsufficient mice**

Marjolein.A.J. van Looij<sup>1</sup>, J.H. van Doorninck<sup>2</sup>, J. van de Wees<sup>3</sup>, H. van der Burg<sup>2</sup>,  
M.M. de Ruiter<sup>2</sup>, G.A. van Zanten<sup>1</sup>, F. Grosveld<sup>3</sup>, C.I. De Zeeuw<sup>2</sup>,

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Dept. of Neuroscience, Erasmus MC, Rotterdam, The Netherlands, <sup>3</sup> Dept. of Cell  
Biology and Genetics, Erasmus MC, Rotterdam, The Netherlands

### **Medial olivocochlear efferent activity in awake animals**

Matthieu J. Guillon<sup>1</sup>, Jean-Luc Puel<sup>1</sup>, Pierre Bonfils<sup>2</sup>

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déficits sensoriels et Moteurs, Montpellier, France

<sup>2</sup>Auditory Research Laboratory, Formation Associée Claude Bernard and CNRS  
UPRESA 7060, Paris, France

### **Local application of a mitochondrial toxin, 3-Nitropropionic Acid causes dose dependent ABR threshold shift on rat cochlea: a model for sudden deafness**

Noriyuki Hoya, Yasuhide Okamoto, Susumu Nakagawa, Takafumi Suzuki, Hidenobu  
Taiji, Tatsuo Matsunaga

National Tokyo Medical Center, Tokyo, Japan

### **Otoacoustic emissions disclose morphological and functional changes in the cochleae of transgenic mice with detached tectorial membranes**

AN Lukashkin, VA Lukashkina, PK Legan, GP Richardson and IJ Russell

School of Biological Sciences, University of Sussex, Falmer, Brighton, BN1 9QG, UK

### **Methyl parathion reduces the cochlear's resistance to acoustic trauma.**

Bairi<sup>1</sup> M., Hadjab<sup>2</sup> S., Lucciano<sup>2</sup> M., Maurel<sup>2</sup> D., Guellati<sup>1</sup> M., Siaud<sup>2</sup> P.

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Annaba, Algérie. <sup>2</sup> Laboratoire d'Otologie Neuro-Otologie, EMI 9902, Faculté de  
Médecine Nord, Université de la Méditerranée, Boulevard Pierre Dramard, 13916  
Marseille Cedex 20, France.

### **Hexachlorobenzene induces hearing losses : interaction with the thyroid hormones.**

Hadjab S., Maurel D., Riva-Lavieille C., Siaud P.

Laboratoire d'Otologie Neuro-Otologie, EMI 9902, Faculté de Médecine Nord,  
Université de la Méditerranée, Boulevard Pierre Dramard, 13916 Marseille Cedex 20,  
France.

### **PKC activation prevents auditory neurons apoptosis through**

### **MAPK/ERKs and PI3K pathways**

Lallemend F<sup>1</sup>, Lefebvre PP<sup>1,2</sup>, Hans G<sup>1,3</sup>, Breuskin I<sup>1</sup>, Rigo JM<sup>1</sup>, Moonen G<sup>1,3</sup> and Malgrange B<sup>1</sup>

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Departments of <sup>2</sup>Otorhinolaryngology and <sup>3</sup>Neurology, University of Liège, C.H.U. (B35) Sart-Tilman, B-4000 Liège, Belgium.

### **Effects of thapsigargin and eosin on the survival of rat cochlea hair cells during ischemia**

N. Amarjargal, H. Haupt, B. Mazurek, N. Andreeva, J. Gross

Molecular Biological Research Laboratory, Department of Otorhinolaryngology, University Hospital Charité, Berlin, Germany

### **Argon protects hypoxia-exposed hair cells in the rat's organ of Corti**

I. M. Iarin, H. Haupt, B. Mazurek, J. Gross

Dept. of ORL, Charité Hospital, Humboldt University, Berlin, Germany

### **The influence of the potassium concentration on the ischemia-induced vulnerability of inner and outer hair cells**

B. Mazurek, N. Amarjargal, H. Haupt, J. Gross

Dept. of ORL, Charité Hospital, Humboldt University, Berlin, Germany

### **Gentamicin-induced hair cell death is not dependent on the apoptosis receptor fas**

Daniel Bodmer, Andrea Albinger, Dominik Brors, Kwang Pak, Morana Bodmer, Allen F. Ryan

**Institution/s ?**