

# 9th International Congress of the GRS & IGF Societies

The Westin Seattle | September 14-17, 2018

## POSTER SESSIONS

Posters Presented by Underlined Colleague

**SATURDAY, SEPTEMBER 15, 2018**

**11:30 p.m. - 1:30 p.m. Lunch / Exhibits / Poster Viewing**

- Poster #1/Abstract #25**  
GH Basic  
**Distinct pathways of GH and TNF alpha for suppression of insulin-dependent glucose uptake. GH Basic**  
Lisa Nakata, Meri Yonezawa-Sone, Tomomi Ogata, Kouhei Kasahara, Naoyuki Kataoka, Fumihiko Hakuno, Shin-Ichiro Takahashi  
*Dept. of Anim. Res. Sci., Grad. Sch. of Agri. Life Sci., Univ. of Tokyo*
- Poster #2/Abstract #37**  
GH Basic  
**Somapacitan temporal distribution in mice, characterisation of a novel long acting human growth hormone derivative using in vivo imaging**  
Maj Petersen, Johannes Josef Fels, Nils Langeland Johansen, Peter Holding Kvist, Peter Thygesen  
*Novo Nordisk A/S, Copenhagen, Denmark*
- Poster #3/Abstract #40**  
GH Basic  
**Global gene expression profiling provides new insights into the role of the GH/IGF1 axis in tumor characteristics and outcomes**  
Colin Kruse<sup>1,2,3</sup>, Reeto Basu<sup>1</sup>, Alison Brittain<sup>1,2,4</sup>, Will Kruse, John Kopchick<sup>1,2,4</sup>  
<sup>1</sup>Edison Biotechnology Institute, Ohio University, Athens, OH, <sup>2</sup>Interdisciplinary Program in Molecular and Cellular Biology, Ohio University, Athens, OH, <sup>3</sup>Environmental and Plant Biology, Ohio University, Athens, OH, <sup>4</sup>University Heritage College of Osteopathic Medicine, Athens, OH
- Poster #4/Abstract #41**  
GH Basic  
**Long-acting human growth hormone analogue somapacitan by non-covalent albumin binding**  
Henrik Sune Ramirez-Andersen<sup>1</sup>, Peter Thygesen<sup>1</sup>, Carsten Behrens<sup>1</sup>, Jens Buchardt<sup>1</sup>, Jianhui Deng<sup>2</sup>, Johannes Josef Fels<sup>1</sup>, Charlotta Grånäs Folkesson<sup>1</sup>, Chen Jianhe<sup>2</sup>, Leif Nørskov Lauritsen<sup>1</sup>, Per Franklin Nielsen<sup>1</sup>, Christian Rischel<sup>1</sup>, Mats Reslow<sup>1</sup>, Jing Su<sup>1</sup>, Charlotte Wiberg<sup>1</sup>, Xia Wenjuan<sup>2</sup>, Xin Zhao<sup>2</sup>, Nils Langeland Johansen<sup>1</sup>  
<sup>1</sup>Novo Nordisk A/S; <sup>2</sup>Novo Nordisk Research Centre China
- Poster #5/Abstract #45**  
GH Basic  
**Identification of a high-affinity somapacitan binding site on human albumin**  
Anders Dybdal Nielsen, Eva Johansson, Peter Thygesen  
*Novo Nordisk A/S*
- Poster #6/Abstract #60**  
GH Basic  
**Reduced protein expression of the phosphodiesterase PDE4A4 in AIP mutation-positive somatotroph adenomas**  
Mariana Bizzi<sup>1</sup>, Sergio Pinheiro<sup>1</sup>, Graeme Bolger<sup>2</sup>, Junia Schweizer<sup>1</sup>, Alexandre Giannetti<sup>1</sup>, Mary Dang<sup>3</sup>, Márta Korbonits<sup>3</sup>, Antonio Ribeiro-Oliveira<sup>1</sup>  
<sup>1</sup>Federal University of Minas Gerais, Brazil, <sup>2</sup>University of Alabama at Birmingham, Birmingham, AL, <sup>3</sup>Barts and the London Medical School, UK
- Poster #7/Abstract #99**  
GH Basic  
**Increase in fibrosis of bovine growth hormone transgenic mice versus controls is tissue-dependent**  
Stephen Bell<sup>1,2</sup>, Delaney Geitgey<sup>1,3,4</sup>, Cody Wilson<sup>1,3</sup>, Mathew Buchman<sup>3</sup>, Ed O. List<sup>3</sup>, John Kopchick<sup>1,2,3</sup>, Darlene Berryman<sup>1,2,3</sup>  
<sup>1</sup>Diabetes Institute, Ohio University, Athens, OH, <sup>2</sup>Department of Biomedical Sciences, Heritage College of Osteopathic Medicine, Ohio University, Athens, OH, <sup>3</sup>Edison Biotechnology Institute, Ohio University, Athens, OH, <sup>4</sup>Ohio University Honors Tutorial College
- Poster #8/Abstract #105**  
GH Basic  
**Discovery and development of small molecule antagonists inhibiting the growth hormone receptor**  
Man Lu<sup>1</sup>, Jack Flanagan<sup>2</sup>, Ries Langley<sup>3</sup>, Fiona Clow<sup>3</sup>, Michael Waters<sup>4</sup>, Michael Hay<sup>2</sup>, Jo Perry<sup>1</sup>  
<sup>1</sup>Liggins Institute, <sup>2</sup>Auckland Cancer Society Research Centre, <sup>3</sup>Molecular Medicine and Pathology, University of Auckland; <sup>4</sup>Institute for Molecular Bioscience, The University of Queensland
- Poster #9/Abstract #22**  
GH Clinical  
**Metabolic and immunological assessment of small-for-gestational-age children during one-year treatment with growth hormone: the clinical impact of apolipoproteins**  
Kenji Ihara<sup>1,2</sup>, Kanako Kojima-Ishii<sup>2</sup>, Naoko Toda<sup>2</sup>, Kazuhiko Okubo<sup>2</sup>, Vlad Tocan<sup>2</sup>, Noriko Ohyama<sup>2</sup>, Mika Makimura<sup>2</sup>, Terumichi Matsuo<sup>2</sup>, Masayuki Ochiai<sup>2</sup>, Shouichi Ohga<sup>2</sup>  
<sup>1</sup>Department of Pediatrics, Faculty of Medicine, Oita University, <sup>2</sup>Department of Pediatrics, Graduate School of Medical Science, Kyushu University

- Poster #10/Abstract #74**  
GH Clinical  
**Regulation of growth hormone (GH) isoforms during oral glucose tolerance test (OGTT) in patients with acromegaly and healthy subjects**  
Katharina Schilbach<sup>1</sup>, Esther Ulmer<sup>1</sup>, Michael Haenelt<sup>1</sup>, Shiva Sophia Nicolay<sup>1</sup>, Laura Schwerdt<sup>1</sup>, Jùnia ROL Schweizer<sup>2</sup>, Christopher Bartel<sup>3</sup>, Jochen Schopohl<sup>1</sup>, Sylvère Störmann<sup>1</sup>, Christian J. Strasburger<sup>3</sup>, Zida Wu<sup>3</sup>, Martin Bidlingmaier<sup>1</sup>  
<sup>1</sup>Endocrine Research Unit, Medizinische Klinik und Poliklinik IV, Klinikum der Universität München, Munich, Germany, <sup>2</sup>Federal University of Minas Gerais, Belo Horizonte, Brazil, <sup>3</sup>Department of Clinical Endocrinology, Campus Charité Mitte, Universitätsmedizin Berlin, Berlin, Germany
- Poster #11/Abstract #91**  
GH Clinical  
**Growth hormone treatment outcomes in Indian children with celiac disease and growth hormone deficiency**  
Smita Ramachandran, Aashish Sethi, Inderpal Kochar  
Indraprastha Apollo Hospital, Delhi, India
- Poster #12/Abstract #47**  
IGF Basic  
**Insulin sensitivity improves after disease control in acromegaly irrespective of treatment modality and despite an increase in intrahepatic lipid content: an investigator-initiated prospective trial**  
Mai Christiansen Arlien-Søborg<sup>1</sup>, Jakob Dal<sup>2</sup>, Michael Madsen<sup>1</sup>, Morten Høgdal<sup>1</sup>, Niels Jessen<sup>1</sup>, Jens Otto Lunde Jørgensen<sup>1</sup>  
<sup>1</sup>Aarhus University Hospital, <sup>2</sup>Aalborg University Hospital, Aarhus, Denmark
- Poster #13/Abstract #49**  
IGF Basic  
**Mouse pericardial fat and its regulation by PAPP-A**  
Cheryl A. Conover, Sally A. West, Laurie K. Bale  
Mayo Clinic, Rochester, MN
- Poster #14/Abstract #63**  
IGF Basic  
**Nuclear IHGBP-3 is a potential biomarker for response to EGFR-sphingosine kinase targeted therapy in basal-like triple-negative breast cancer (TNBC).**  
Robert Baxter, Sohel Julovi, Janet Martin,  
Kolling Institute, University of Sydney, Sydney, Australia
- Poster #15/Abstract #93**  
IGF Basic  
**Antiinflammatory AAT-IHGBP-3/IGFBP-3R axis in obesity-induced insulin resistance**  
Minsun Kim<sup>1,2</sup>, Qing Cai<sup>2</sup>, Youngman Oh<sup>2</sup>  
<sup>1</sup>Chonbuk National University Medical School and Hospital, Dept. of Pediatrics, Jeonju, Korea; <sup>2</sup>Dept. of Pathology, Virginia Commonwealth University, Richmond, VA
- Poster #15A/Abstract #35**  
IGF Basic  
**novel IGFBP-3 interactions in the breast cancer response to DNA-damaging chemotherapy**  
Hasanathi C. de Silva, Mike Lin, Leo Phillips, Janet Martin, Robert Baxter  
Kolling Institute, University of Sydney, Royal North Shore Hospital, St Leonards, Australia
- Poster #15B/ Abstract #156**  
~~Late-Breaking~~  
~~IGF Clinical~~  
**~~WITHDRAWN~~**  
**~~A missing link of IGF-1 autocrine regulation and its clinical application as a biomarker and an intervention~~**  
~~Jian Guan~~  
~~University of Auckland, Auckland, New Zealand~~
- Poster #15C/Abstract #170**  
~~Late-Breaking~~  
~~Other~~  
**Probing tripodal peptide scaffolds as insulin and IGF-1 receptor ligands**  
Irena Selicharová  
Institute of Organic Chemistry and Biochemistry, The Czech Academy of Sciences, Prague, Czech Republic
- Poster #15D/ Abstract #190**  
~~Late-Breaking~~  
IGF Basic  
**IGF-I insensitivity in patients with fetal and post-natal growth restriction: functional analysis in patients with IGF-IR disruption or Silver-Russell Syndrome**  
Eloise Giabicani  
Sorbonne Université, INSERM Centre de Recherche Saint Antoine, APHP, Hôpital Armand Trousseau, Explorations Fonctionnelles Endocriniennes, Paris, France.
- Poster #15E/Abstract #157**  
~~Late-Breaking~~  
GH Basic  
**Long acting r-hGH delivery and significance of its structural stability at polymer interface**  
Vaishnavi Parikh  
University of the Sciences in Philadelphia, Philadelphia, PA
- Poster #15F/Abstract #186**  
~~Late-Breaking~~  
~~GH Clinical~~  
**~~WITHDRAWN~~**  
**~~Thyroid nodules in acromegaly~~**  
~~Roxana Dumitriu~~  
~~National Institute of Endocrinology C. I. Parhon, Bucharest, Romania~~
- Poster #15G/ Abstract #231**  
~~Late-Breaking~~  
GH Clinical  
**Meeting unmet needs: the sustained release of protein and peptide drugs**  
David B. Karpf, Eva Mortensen  
Ascendis Pharma A/S, Copenhagen, Denmark

**11:30 p.m. - 1:30 p.m. Lunch / Exhibits / Poster Viewing**

- Poster #16/Abstract #30**  
GH Clinical  
**The 20-kD growth hormone isoform in acromegaly**  
Júnia Schweizer<sup>1</sup>, Michael Haenelt<sup>2</sup>, Katharina Schilbach<sup>2</sup>, Esther Ulmer<sup>2</sup>, Mariana Bizzi<sup>1</sup>, Beatriz Rocha<sup>1</sup>, Alexandre Giannetti<sup>3</sup>, Antônio Ribeiro-Oliveira<sup>1</sup>, Martin Bidlingmaier<sup>2</sup>  
<sup>1</sup>Endocrinology Laboratory - Federal University of Minas Gerais, Belo Horizonte, Brazil; <sup>2</sup>Endokrino-logisches Labor, Klinikum der Universität München, Munich, Germany; <sup>3</sup>Surgery Department - Federal University of Minas Gerais, Belo Horizonte, Brazil
- Poster #17/Abstract #42**  
GH Clinical  
**Barriers, facilitators, and patient voice influencing successful transition of care in young adults with growth hormone deficiency**  
Carla DeMuro<sup>1</sup>, Chioma Uzoigwe-Smith<sup>2</sup>, Julianna Setyawan<sup>2</sup>, Sandy Lewis<sup>1</sup>, Emily Evans<sup>1</sup>, Susan Martin<sup>1</sup>, Vlady Ostrow<sup>2</sup>, Murray Gordon<sup>3</sup>  
<sup>1</sup>RTI Health Solutions; <sup>2</sup>Novo Nordisk Inc.; <sup>3</sup>Allegheny Neuroendocrinology Center
- Poster #18/Abstract #64**  
GH Clinical  
**Baseline demographics of the TransCon Growth Hormone Phase 3 heiGHt Trial**  
Aimee Shu<sup>1</sup>, Michael Beckert<sup>2</sup>, David B. Karpf<sup>1</sup>, Zhengning Lin<sup>1</sup>, Jonathan A. Leff<sup>1</sup>  
<sup>1</sup>Ascendis Pharma Inc., <sup>2</sup>Ascendis Pharma A/S, Copenhagen, Denmark
- Poster #19/Abstract #72**  
GH Clinical  
**Latest safety results from an analysis of patients with Prader-Willi syndrome in Patro children: a multi-centre, non-interventional study of the long-term safety of Omnitrope®**  
Hichem Zouater<sup>1,2</sup> Constanze Lämmer<sup>1</sup>, Philippe Backeljauw<sup>2</sup>, Roland Pfäffle<sup>3</sup>, Shankar Kanumakala<sup>4</sup>, Charlotte Höybye<sup>5</sup>, Berit Kriström<sup>6</sup>, Tadej Battelino<sup>7</sup>, Michel Colle<sup>8</sup>, Sandro Loche<sup>9</sup>, Karl Otfried Schwab<sup>10</sup>, Alfonso Lechuga<sup>11</sup>, Markus Zabransky<sup>12</sup>,  
<sup>1</sup>Paediatric Centre, St. Bernard Hospital, Hildesheim, Germany; <sup>2</sup>Cincinnati Centre for Paediatric and Adult Turner Syndrome Care, Cincinnati Children's Hospital Medical Center, Cincinnati, OH; <sup>3</sup>Department of Paediatric Endocrinology, University of Leipzig Medical School, Leipzig, Germany; <sup>4</sup>Department of Paediatrics, Royal Alexandra Children's Hospital, Brighton, UK; <sup>5</sup>Patient Area Endocrinology and Nephrology, Inflammation and Infection Theme, Karolinska University Hospital, Sweden; <sup>6</sup>Department of Clinical Science/Paediatrics, Umeå University, Umeå, Sweden; <sup>7</sup>Department of Endocrinology, Diabetes and Metabolic Diseases, University Children's Hospital, Ljubljana, Slovenia; <sup>8</sup>Bordeaux, Franc; <sup>9</sup>Paediatric Endocrinology and Neonatal Screening Centre, AO Brotzu Microcitemico "A. Cao" Hospital, Cagliari, Italy; <sup>10</sup>Pediatrics and Adolescence Medicine, Pediatric Diabetology and Endocrinology, University Medical Center, Freiburg, Germany; <sup>11</sup>Department of Mother and Child Health and Radiology, Universidad de Cádiz, Cadiz, Spain; <sup>12</sup>Sandoz GmbH, Holzkirchen, Germany
- Poster #20/Abstract #83**  
GH Clinical  
**ANSWER study pediatric growth hormone treatment outcomes – growth hormone deficiency, born small for gestational age, Turner syndrome, Noonan syndrome, Prader-Willi syndrome, and idiopathic short stature**  
Judith Ross<sup>1,2</sup>, Paul Saenger<sup>3</sup>, Natalia Holot<sup>4</sup>, Vlady Ostrow<sup>4</sup>  
<sup>1</sup>Department of Pediatrics, Thomas Jefferson University, Philadelphia, PA; <sup>2</sup>DuPont Hospital for Children, Wilmington, DE; <sup>3</sup>Winthrop University Hospital, Mineola, NY; <sup>4</sup>Novo Nordisk Inc., Plainsboro, NJ
- Poster #21/Abstract #86**  
GH Clinical  
**Comparative study of final outcomes in ISS vs GHD children treated with recombinant growth hormone**  
Aashish Sethi, Smita Ramachandran, Inderpal Kochar  
Indraprastha Apollo Hospital, Delhi, India
- Poster #22/Abstract #87**  
GH Clinical  
**Growth hormone outcomes in RSS and SGA children: Indian Tertiary care study.**  
Aashish Sethi, Smita Ramachandran, Inderpal Kochar  
Indraprastha Apollo Hospital, Delhi, India
- Poster #23/Abstract #88**  
GH Clinical  
**The benefits of growth hormone in Indian Turner children.**  
Aashish Sethi<sup>1</sup>, Smita Ramachandran<sup>2</sup>, Inderpal Kochar<sup>1</sup>  
<sup>1</sup>Indraprastha Apollo Hospital, <sup>2</sup>Indraprastha Apollo Hospital, Delhi, India
- Poster #24/Abstract #89**  
GH Clinical  
**Age appropriate initiation of growth hormone affecting final height outcomes in GHD children: Indian Tertiary care study.**  
Smita Ramachandran, Aashish Sethi, Inderpal Kochar  
Indraprastha Apollo Hospital, Delhi, India

- Poster #25/Abstract #90  
GH Clinical  
**Demographic profile and compliance with growth hormone therapy in children with short stature: Indian tertiary center experience**  
Smita Ramachandran, Aashish Sethi, Inderpal Kochar  
*Indraprastha Apollo Hospital, Delhi, India*
- Poster #26/Abstract #98  
GH Clinical  
**Growth hormone stimulation test for the diagnosis of growth hormone deficiency in short children**  
Seung Yeon Jeong, Jeesuk Yu  
*Dankook University Hospital, Cheonan, South Korea*
- Poster #27/Abstract #107  
IGF Basic  
**The different roles of insulin-like growth factors (IGFs) and low oxygen tension in the differentiation of placental mesenchymal stem cell into endothelial cells**  
Amer Youssef, Victor Han  
*CHRI-Western University, London, Ontario, Canada*
- Poster #28/Abstract #43  
~~IGF Clinical~~  
**~~WITHDRAWN IGF type 1 receptor (IGF1R) gene expression: a useful marker of IGF bioactivity?~~**  
~~Soraya Sader, Rodrigo Custodio, Rafaela Ricco, Mariana de Paula, Patricia Atique, Palmira Cupo, Maria Cervi, Rubens Ricco, Raphael Liberatore Jr, Carlos Martinelli Jr  
*Ribeirão Preto Medical School, University of São Paulo, Ribeirão Preto-SP, Brazil*~~
- Poster #29/Abstract #97  
IGF Clinical  
**High prevalence of low IGF-1 in adult females with Ehlers-Danlos syndrome**  
Anna Maria Formenti<sup>1</sup>, Stefano Frara<sup>2</sup>, Mauro Doga<sup>2</sup>, Marina Colombi<sup>3</sup>, Letizia Chiara Pezzaioli<sup>3</sup>, Giuseppe Banfi<sup>2</sup>, Andrea Giustina<sup>2</sup>  
<sup>1</sup>Spedali Civili Brescia, <sup>2</sup>San Raffaele Vita-Salute University Milano, <sup>3</sup>University of Brescia
- Poster #30/Abstract #14  
~~Other~~  
**~~WITHDRAWN Bacillus subtilis, a probiotic bacterium, delays the aging process by the insulin-like signaling pathway in C. elegans~~**  
~~Veronica Donato  
*CONICET, National University of Rosario, Argentina*~~
- Poster #31/Abstract #101  
Other  
**The breast development mode and influence factors in sex induction therapy of Chinese Turner Syndrome girls**  
Song Guo, Yanhong Li, Jun Zhang, Qiuli Chen, Hongshan Chen, Huamei Ma, Minlian Du  
*The First Affiliated Hospital of Sun Yat-sen University, Guangdong Sheng, China*
- Poster #32/Abstract #164  
Late-Breaking  
IGF Basic  
**Serum IGF-1 levels in the morning fasting are decreased under dietary conditions of consuming or not consuming fat-free milk at the beginning of exercise**  
Tetsuo Yamada  
*Department of Nutrition and Dietetics, College of Nutrition, Kanto Gakuin University*
- Poster #33/Abstract #174  
Late-Breaking  
Other  
**Functional comparison of insulinoma-derived permanent pancreatic beta cell lines with native rat pancreatic beta cells: the role of zinc ions**  
Lenka Zakova  
*IOCB AS, Prague, CR*
- Poster #34/Abstract #172  
Late-Breaking  
IGF Clinical  
**172 Hypoplastic pulmonary arteries identified in a Laron syndrome patient carrying a homozygous GHR c.784>C mutation**  
Aysehan Akinci, Irena Selicharová  
*Institute of Organic Chemistry and Biochemistry of the Czech Academy of Sciences, Prague, Czech Republic*
- Poster #35/Abstract #222  
Late-Breaking  
GH Clinical  
**Molecular subgroups in Turner syndrome defined by baseline blood transcriptome are associated with response to recombinant human growth hormone (r-hGH)**  
~~Adam Stevens~~ **NOW PRESENTED BY PETER CLAYTON**  
*University of Manchester, Manchester, UK*
- Poster #36/Abstract #242  
Late-Breaking  
GH Clinical  
**Symptom burden in patients with acromegaly treated with injectable somatostatin receptor ligands**  
Biermasz, Nienke R.1; Dreval, Alexander2; Fleseriu, Maria3; Molitch, Mark4; Gordon, Murray B.5; Crosby, Ross D.6,7; Ludlam, William H.8; Haviv, Asi8; Mathias, Susan D.6  
*Allegheny Neuroendocrinology Center, Allegheny General Hospital, Pittsburgh, PA*
- Poster #37/Abstract #78  
IGF Clinical  
**Lot-to-lot comparison and long-term stability of the IDS-ISYS GH and IGF-I immunoassays in the context of clinical trials**  
Tim Kühnle  
*Endocrine Laboratory, Medizinische Klinik und Poliklinik IV, Klinikum der Universität München, Munich, Germany*