## touchREVIEWS in Endocrinology

VOLUME 17 • ISSUE 2 • 2021 EDITOR-IN-CHIEF: JOHN DOUPIS

Medical Therapy for Craniopharyngiomas Krystallenia I Alexandraki and Paraskevi Xekouki

Contemporary Non-hormonal Therapies for the Management of Vasomotor Symptoms Associated with Menopause: A Literature Review

Sabrina Sahni, Angie Lobo-Romero and Taryn Smith

Imeglimin: A New Promising and Effective Weapon in the Treatment of Type 2 Diabetes

John Doupis, Neoklis Baris and Konstantinos Avramidis

**Diagnosis and Clinical Management of Long-chain Fatty-acid Oxidation Disorders: A Review** Joshua J Baker and Barbara K Burton

#### www.touchENDOCRINOLOGY.com

eISSN 2752-5457

## touchREVIEWS in Endocrinology

Volume 17 • Issue 2

#### **Editor-in-Chief**

#### John Doupis

Director of the Diabetes Division of latriko Palaiou Falirou Medical Center and the Internal Medicine and Diabetes Department, the NS Naval Hospital, Athens, Greece

#### **Section Editors**

#### **George P Chrousos**

Professor and Chairman, First Department of Paediatrics, University of Athens Medical School, Athens, Greece

#### **Neil Gittoes**

Head, Centre for Endocrinology, Diabetes and Metabolism, University Hospitals Birmingham and University of Birmingham, Birmingham, UK

#### **Editorial Board**

#### S Faisal Ahmed

Samson Gemmell Chair of Child Health, Consultant in Paediatric Endocrinology, School of Medicine, University of Glasgow, Glasgow, UK

Philippe Bouchard Professor and Chairman, Department of Endocrinology, Hospital Saint Antoine and University Pierre and Marie Curie, Paris, France

Francesco Chiarelli Professor of Paediatrics, D'Annunzio University of Chieti-Pescara, Chieti, Italy

Annamaria Colao Full Professor, University of Naples Federico II, Naples, Italy Thomas Danne

Professor of Paediatrics, Children's Hospital 'Auf der Bult', Hannover, Germany Deep Dutta

Senior Endocrinologist, Department of Endocrinology, CEDAR Super-specialty Clinics, New Delhi, India

**Ulla Feldt-Rasmussen** Professor, Department of Endocrinology, Centre of Cancer and Organ Diseases, University of Copenhagen, Copenhagen, Denmark

Anne-Marie Felton President, Federation of European Nurses in Diabetes (FEND), Newcastle On Tyne, UK

**Angus Forbes** Professor of Diabetes Nursing and Chair, Foundation of European Nurses in Diabetes (FEND), King's College London, London, UK

**Baptist Gallwitz** Professor of Medicine, Eberhard Karls University of Tübingen, Tübingen, Germany

Andrea R Genazzani Professor and Director, Department of Reproductive Medicine and Child Development, University of Pisa, Pisa, Italy

Ezio Ghigo Professor, Division of Endocrinology and Metabolism, University of Turin, Turin, Italy

Ashley Grossman

Professor of Endocrinology, Oxford Centre for Diabetes, Endocrinology and Metabolism, University of Oxford, Oxford, UK

**Chantal Mathieu** Professor of Medicine, Catholic University of Leuven, Leuven, Belgium

Alex Miras Senior Clinical Lecturer in Endocrinology, Imperial College London, London, UK

Enrico Papini

**Burkhard Göke** Medical Director and CEO, University Medical Center Hamburg-Eppendorf, Hamburg, Germanv

Anthony M Heagerty Professor, University of Manchester, Manchester, UK

Jens Juul Holst Professor of Medical Physiology, University of Copenhagen, Copenhagen, Denmark Serbia

Ilpo Huhtaniemi Emeritus Professor of Reproductive Endocrinology, Faculty of Medicine, Department of Surgery & Cancer, Imperial College London, London, UK

Anna-Lena Hulting Professor, Endocrinology, Metabolism and Diabetology, Karolinska University Hospital, Solna, Sweden

Sanjay Kalra Executive Editor, JoSH Diabetes, Bharti Hospital, Karnal, India

Robert Knutzen President and CEO, Pituitary Network Association (PNA), Thousand Oaks, CA, USA

Andrea Lenzi Full Professor of Endocrinology, 'La Sapienza' University of Rome, Rome, Italy

#### Rayaz A Malik

Professor of Medicine at Weill Cornell Medical College, Doha, Qatar & New York City, New York, NY, USA

Jean Claude Mbanya Professor of Medicine and Endocrinology, University of Yaoundél, Cameroon, Africa

**Furio Pacini** Professor of Endocrinology, University of Siena, Siena, Italy Italv Ralf Paschke Professor of Internal Medicine and Endocrinology, Leipzig University, Leipzig, Germanv

Professor of Endocrinology, 'La Sapienza' University of Rome Medical School, Rome,

Vera Popovic-Brkic Professor of Medicine, University of Belgrade School of Medicine, Belgrade,

Michael B Ranke Professor, University Children's Hospital, Eberhard Karls University, Tübingen, Germany

João Filipe Raposo Assistant Professor of Public Health, Medical Faculty of New University of Lisbon; Clinical Director. Protective Association of Diabetics of Portugal, Lisbon, Portugal Martin Silink

Martin Simik Professor of Paediatric Endocrinology, University of Sydney; Children's Hospital, Westmead, Sydney, Australia

Johannes WA Smit Professor and Chairman, Department of Endocrinology, Leiden University Medical Centre, Leiden, Netherlands

Solomon Tesfaye Consultant Physician and Honorary Professor of Diabetic Medicine, University of Sheffield, Sheffield, UK

Tommaso Simonicini Professor of Obstetrics and Gynaecology, Department of Clinical and Experimental Medicine, University of Pisa, Pisa, Italy

Peter Trainer Professor of Endocrinology, University of Manchester, Manchester, UK

Graham R Williams Professor of Endocrinology, Imperial College London, London, UK Cover image: Insulin peptide hormone. By molekuul.be © shutterstock.com

**Editorial Directors** Helen Fowler Gina Furnival

Commissioning Editors Sophie Nickelson (Therapy Lead) Katey Gabrysch Victoria Jones

Editorial Workflow Lisa Glass Heather Hall Joanna Macdiarmid

Editorial Assistant Louise Taylor

Design Manager Julie Stevenson

Group Head Medical & Editorial Nicola Cartridge E: nicola.cartridge@touchmedicalmedia.com T. +44 (0)20 7193 3186

**CEO & Managing Director** Barney Kent E: barney.kent@touchmedicalmedia.com T: +44 (0)20 7193 3009

Head of Strategic Partnerships

Caroline Markham E: caroline.markham@touchmedicalmedia.com T: +44 (0)20 7193 3704

touchREVIEWS in Endocrinology wishes to thank the organ-isations below for their assistance. This does not constitute any official endorsement





www.touchmedicalmedia.com

All information obtained by Touch Medical Media and each of the contributors from various sources is as current and accurate as possible. However, due to human or mechanical errors, Touch Medical Media and the contributors cannot guarantee the accuracy, adequacy or completeness of any information, and cannot be held responsible for any errors or omissions, or for the results obtained from the use thereof. Where opinion is expressed, it is that of the authors and does not necessarily coincide with the editorial views of Touch Medical Media. Statistical and financial data in this publication have been compiled on the basis of factual information and do not constitute any investment advertisement or investment advice. For the avoidance of doubt, the information contained in this publication is intended for use by licensed medical professionals. The content should not be considered medical advice, diagnosis or treatment recommendations.

© 2021 Touch Medical Media Group Holdings Ltd, is a private limited company registered in England and Wales at Lancashire Gate, 21 Tiviot Dale, Stockport, Cheshire, SK1 1TD, UK, with registered number 08197142. ISSN: 2752-5457 All rights reserved

## touchREVIEWS in Endocrinology

Established: December 2005 Frequency: Bi-annual Current edition: Volume 17 Issue 2

#### Aims and Scope

- touchREVIEWS in Endocrinology enables time-pressured physicians to stay abreast of major advances and opinion in endocrine practice in Europe.
- touchREVIEWS in Endocrinology comprises balanced and comprehensive articles, addressing the most important and salient developments in the endocrinology field.
- touchREVIEWS in Endocrinology endeavours to support physicians, clinicians and related healthcare professionals in continuously developing their knowledge, effectiveness and productivity. The editorial policy has been designed to encourage discussion among this peer group.
- Comprehensive bibliographies for each article mean that touchREVIEWS in Endocrinology is an informative and valuable reference tool for use throughout the year.
- All articles are subject to peer review, and must adhere to the ICMJE, GPP-3, and COPE guidelines.

#### Structure and Format

- touchREVIEWS in Endocrinology is a peer-reviewed, free-toaccess, bi-annual journal comprising expert interviews, review articles, case reports, editorials, special reports and original research.
- The structure of each edition of the publication comprises section categories determined by the Managing Editor. The degree of coverage assigned to each category is the decision of the Managing Editor, and in part reflects the views of the Editorial Board.
- All articles disclose any author disclosures along with any funding, financial support, and medical writing assistance.
- Each edition of touchREVIEWS in Endocrinology is published in full online at www.touchENDOCRINOLOGY.com

#### **Editorial Expertise**

*touchREVIEWS in Endocrinology* is supported by various levels of expertise:

- Guidance from an Editorial Board consisting of leading authorities from a variety of endocrine disciplines.
- Invited contributors who are recognised authorities from their respective fields.
- Peer review conducted by experts appointed for their experience and knowledge of a specific topic.
- An experienced team of editors and technical editors.

#### Peer Review

- On submission, all articles are assessed by the Managing Editor to determine their suitability for inclusion and appropriateness for peer review.
- The Managing Editor identifies at least two appropriate reviewers, who are selected on the basis of their specialist knowledge in the relevant area, following consultation with a member of the Editorial Board where necessary.
- We aim to have the final peer review decision within 4 weeks.
- Following review, papers are either accepted without modification, returned to the author(s) to incorporate required changes or not accepted for publication.
- The Managing Editor reserves the right to accept or reject any proposed amendments on the advice of the Editorial Board and reviewers.

#### Submissions and Instructions for Authors

- The Managing Editor commissions articles with guidance from the Editorial Board and unsolicited articles are welcomed.
- The Managing Editor is always keen to hear from authors wishing to discuss potential submissions, and will give due consideration to any proposals. Please contact the Managing Editor for further details.
- The 'Instructions for Authors' information is available for download at www.touchENDOCRINOLOGY.com

#### **Distribution and Readership**

*touchREVIEWS in Endocrinology* is distributed bi-annually through controlled circulation to healthcare and pharmaceutical professionals in the field in Europe.

#### Abstracting and Indexing

*touchREVIEWS in Endocrinology* is abstracted, indexed and listed in PubMed Central, Embase, Genamics JournalSeek, Google Scholar, IndexCopernicus and Summon by Serial Solutions.

#### Free-to-access

All articles are free-to-access, which allows everyone in the endocrinology field to download published articles for free.

#### Online

www.touchmedicalmedia.com provides clinicians and other industry professionals with a free resource of articles from over nine titles, spanning seven therapy areas including cardiology, endocrinology, immunology, neurology, oncology, ophthalmology and respiratory. Also available online at www.touchENDOCRINOLOGY.com is *touchREVIEWS in Endocrinology*'s sister publication, *US Endocrinology.* 

#### **Society Partners**

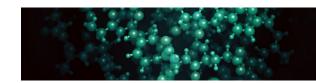
touchENDOCRINOLOGY.com has developed very valuable society partnerships with the most respected not-for-profit medical societies both in Europe and the USA. These partnerships are key as touchENDOCRINOLOGY.com helps to promote awareness of these medical societies while also providing free-to-access, peer-reviewed articles and multimedia content to the society members, which ensures that the community is kept up-to-date with the latest cutting-edge content and opinion from world-renowned doctors.

#### About Touch Medical Media

Touch Medical Media publishes a rich and diverse portfolio of free-to-access, peer-reviewed journals across the clinical and pharmaceutical arenas. Touch Medical Media aims to assist in the education and practice of healthcare and pharmaceutical professionals.



#### Contents



#### Foreword

#### 83 Foreword

#### John Doupis

Department of Internal Medicine and Diabetes, Salamis Naval and Veterans Hospital, Salamis Naval Base, Attiki, Greece

#### **Reviews**

#### **Diabetes**

#### 84 Finerenone: A Potential Treatment for Patients with Chronic Kidney Disease and Type 2 Diabetes Mellitus

Luis D'Marco,<sup>1,2</sup> María Jesús Puchades,<sup>1,3</sup> Lorena Gandía,<sup>1</sup> Claudia Forquet,<sup>1</sup> Elena Giménez-Civera,<sup>1</sup> Nayara Panizo,<sup>1</sup> Javier Reque,<sup>4</sup> Isabel Juan-García,<sup>1</sup> Valmore Bermúdez<sup>5</sup> and José Luis Gorriz<sup>1,3</sup>

Nephrology Department, Hospital Clínico Universitario, Instituto de Investigación Sanitaria (INCLIVA), Valencia, Spain;
Centro de Estudios Universitarios Cardenal Herrera University, Valencia, Spain; 3. Valencia University, Valencia, Spain;
Nephrology Department, Hospital de Castellon, Castellon, Spain; 5. Facultad de Ciencias de la Salud, Universidad Simón Bolívar, Barranquilla, Colombia

#### 88 Imeglimin: A New Promising and Effective Weapon in the Treatment of Type 2 Diabetes

#### John Doupis, Neoklis Baris and Konstantinos Avramidis

Department of Internal Medicine and Diabetes, Salamis Naval and Veterans Hospital, Salamis Naval Base, Attiki, Greece

#### 92 Changing the Concept: From the Traditional Glucose-centric to the New Cardiorenal-metabolic Approach for the Treatment of Type 2 Diabetes

Dimitrios G Chatzis,<sup>1</sup> Konstantinos Kolokathis,<sup>2</sup> Kalliopi Magounaki,<sup>1</sup> Stefanos Chatzidakis,<sup>1</sup> Konstantinos Avramidis,<sup>2</sup> Marianna Leopoulou,<sup>3</sup> Theodoros P Angelopoulos<sup>4</sup> and John Doupis<sup>2,4</sup>

1. European University of Cyprus Medical School, Nicosia, Cyprus; 2. Salamis Naval and Veterans Hospital, Department of Internal Medicine and Diabetes, Salamis Naval Base, Salamis, Attiki, Greece; 3. "Elpis" General Hospital, Department of Cardiology, Athens, Greece; 4. latriko Paleou Falirou Medical Center, Athens, Greece

#### 102 Controversies in Gestational Diabetes

#### Chloe A Zera<sup>1,2</sup> and Ellen W Seely<sup>2,3</sup>

1. Division of Maternal Fetal Medicine, Department of Obstetrics and Gynecology, Beth Israel Deaconess Medical Center, Boston, MA, USA; 2. Harvard Medical School, Boston, MA, USA; 3. Division of Endocrinology, Diabetes and Hypertension, Department of Medicine, Brigham and Women's Hospital, Boston, MA, USA

#### **General Endocrinology**

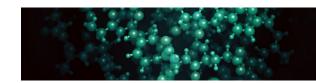
#### 108 Diagnosis and Clinical Management of Long-chain Fatty-acid Oxidation Disorders: A Review

#### Joshua J Baker<sup>1,2</sup> and Barbara K Burton<sup>1,2</sup>

1. Ann & Robert H. Lurie Children's Hospital of Chicago, Chicago, IL, USA; 2. Northwestern University Feinberg School of Medicine, Chicago, IL, USA



#### Contents



#### **Reviews**

#### **Liver Disorders**

112 Non-alcoholic Steatohepatitis: From Pathophysiology to Clinical Practice Sherwyn Schwartz,<sup>1</sup> Jean Lucas<sup>2</sup> and Mark H DeLegge<sup>3</sup>

1. Evolution Research Group, San Antonio, TX, USA; 2. Lucas Research, Moorehead City, NC, USA; 3. IQVIA, Raleigh, NC, USA

#### **Pituitary Disorders**

#### 121 Medical Therapy for Craniopharyngiomas

**Krystallenia I Alexandraki<sup>1</sup> and Paraskevi Xekouki<sup>2</sup>** 1. Second Department of Surgery, Aretaieion Hospital, Medical School, National and Kapodistrian University of Athens, Athens, Greece; 2. Endocrinology and Diabetes Clinic, University General Hospital of Heraklion, University of Crete School of Medicine, Heraklion, Greece

#### **Reproductive Endocrinology**

#### 133 Contemporary Non-hormonal Therapies for the Management of Vasomotor Symptoms Associated with Menopause: A Literature Review

#### Sabrina Sahni,<sup>1</sup> Angie Lobo-Romero<sup>2</sup> and Taryn Smith<sup>3</sup>

1. Division of General Internal Medicine, Jacoby Center for Breast Health, Mayo Clinic, Jacksonville, FL, USA; 2. Division of General Internal Medicine, Women's Health, Mayo Clinic Rochester, MN, USA; 3. Division of General Internal Medicine, Women's Health, Mayo Clinic, Jacksonville, FL, USA

#### **Case Report**

**Reproductive Endocrinology** 

#### 138 Congenital Adrenal Hyperplasia Due to 17-α-hydroxylase Deficiency: A Case Report

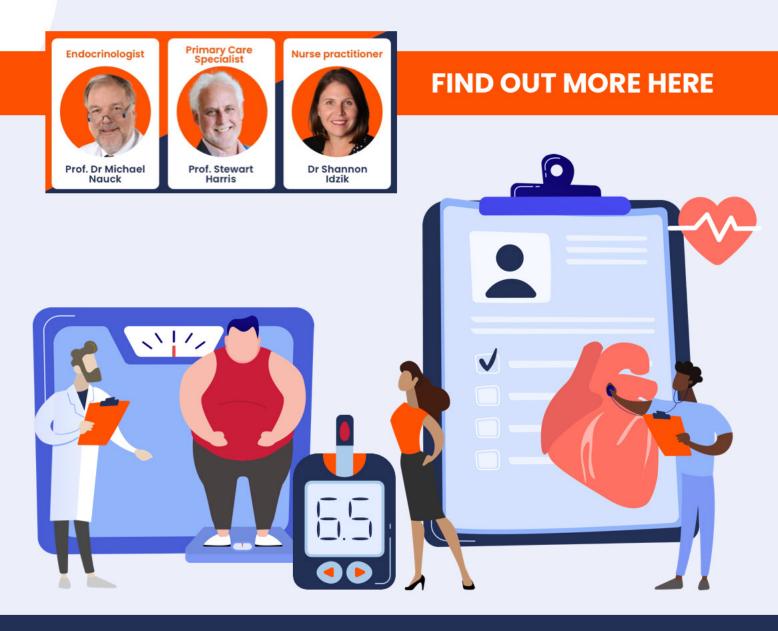
Lucas Ribeiro dos Santos,<br/>¹ Erico Paulo Heilbrun,¹ Charles Simões Félix¹ and Márcio Luis Duarte<br/>²  $% T_{\rm e}$ 

1. Medical Sciences Faculty of Santos, Santos, São Paulo, Brazil; 2. Webimagem, São Paulo, Brazil





# Antihyperglycemic therapy in the patient with T2D and obesity: A multidisciplinary outlook



This activity is funded by an independent medical education grant from Eli Lilly. This activity is provided by touchIME.



# How can individualized glycemic targets be set and implemented in clinical practice?

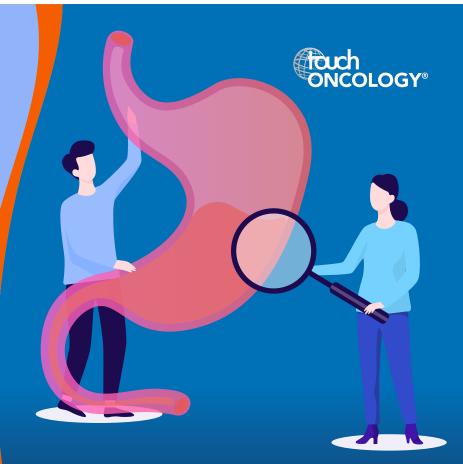
### **FIND OUT**

This activity is funded by an independent medical education grant from Eli Lilly. This activity is provided by touchIME

HOW ARE ADVANCES IN OUR UNDERSTANDING OF THE MOLECULAR PATHOLOGY OF GEP-NETS SHAPING

## FUTURE TREATMENT PROSPECTS?

**FIND OUT MORE HERE** 



This activity is funded by an independent medical education grant from Advanced Accelerator Applications. This medical education is provided by USF Health and touchIME.