

GLUCOSE TOLERANCE

Edited by Sureka Chackrewarthy

INTECHOPEN.COM

-



Glucose Tolerance http://dx.doi.org/10.5772/2916 Edited by Sureka Chackrewarthy

Contributors

Paul Ernsberger, Richard J. Koletsky, Merita Emini Sadiku, Ayfer Colak, Gulden Diniz, Haifei Shi, Shiva Priya Dharshan Senthil Kumar, Ketut Suastika, Pande Dwipayana, Made Siswadi Semadi, R.A. Tuty Kuswardhani, Sylwia Dzięgielewska-Gęsiak, Ewa Wysocka, Soo-Jeong Kim, Dai-Jin Kim, Annadie Krygsman, Kia Halschou Hansen, Klaus Bukhave, Jens Rikardt Andersen, Nitsa Mirsky, Jackson Roberto Guedes da Silva Almeida, Grasielly Rocha Souza, Edigênia Cavalcante da Cruz Araújo, Fabrício Souza Silva, Julianeli Tolentino de Lima, Luciano Augusto de Araújo Ribeiro, Xirley Pereira Nunes, José Maria Barbosa Filho, Lucindo José Quintans Junior, Mdrcio Roberto Viana dos Santos, Sureka Chackrewarthy, M.I. Thabrew, Yukihito Ishii, Takeshi Ohta, Tomohiko Sasase

Published by InTech

Janeza Trdine 9, 51000 Rijeka, Croatia

Copyright © 2012 InTech

All chapters are Open Access distributed under the Creative Commons Attribution 3.0 license, which allows users to download, copy and build upon published articles even for commercial purposes, as long as the author and publisher are properly credited, which ensures maximum dissemination and a wider impact of our publications. After this work has been published by InTech, authors have the right to republish it, in whole or part, in any publication of which they are the author, and to make other personal use of the work. Any republication, referencing or personal use of the work must explicitly identify the original source.

Notice

Statements and opinions expressed in the chapters are these of the individual contributors and not necessarily those of the editors or publisher. No responsibility is accepted for the accuracy of information contained in the published chapters. The publisher assumes no responsibility for any damage or injury to persons or property arising out of the use of any materials, instructions, methods or ideas contained in the book.

Publishing Process Manager Romina Skomersic Typesetting InTech Prepress, Novi Sad Cover InTech Design Team

First published December, 2012 Printed in Croatia

A free online edition of this book is available at www.intechopen.com Additional hard copies can be obtained from orders@intechopen.com

Glucose Tolerance, Edited by Sureka Chackrewarthy p. cm. ISBN 978-953-51-0891-7

Contents

Preface IX

Section	Impaired Glucose Tolerance: Diagnosis, Prognosis and Treatment 1
Chapter 1	The Glucose Tolerance Test as a Laboratory Tool with Clinical Implications 3 Paul Emsberger and Richard J. Koletsky
Chapter 2	Can We Prevent c Delay Type 2 Diabetes? 15 Merita Emini Sadiku
Section 2	Insights into Potential Mechanisms of Insulin Resistance 25
Chapter 3	Impaired Glucose Tolerance, Obesity and Inflammatory Mediators 27 Ayfer Colak and Gulden Diniz
Chapter 4	Sex Differences in Obesity-Related Glucose Intolerance and Insulin Resistance 37 Haifei Shi and Shiva Priya Dharshan Senthil Kumar
Chapter 5	Age is an Important Risk Factor for Type 2 Diabetes Mellitus and Cardiovascular Diseases 67 Ketut Suastika, Pande Dwipayana, Made Siswadi Semadi and R.A. Tuty Kuswardhani
Chapter 6	Glucose Tolerance and Elders – Lessons We Have Learned and Challenges for the Future 81 Sylwia Dzięgielewska-Gęsiak and Ewa Wysocka
Chapter 7	The RelationshipBetween Chronic Alcohol Use and Type 2 Diabetes Mellitus New Insights into Mechanisms of Appetite-Regulating Peptides 101 Soo-Jeong Kim and Dai-Jin Kim

VI Contents

Section 3	Dietary Constituents and Insulin Resistance 123
Chapter 8	Importance of Dietary Fatty Acid Profile and Experimental Conditions in the Obese Insulin-Resistant Rodent Model of Metabolic Syndrome 125 Annadie Krygsman
Chapter 9	Intestinal Disaccharidase Activity and Uptake of Glucose from Sucrose 149 Kia Halschou Hansen, Klaus Bukhave and Jens Rikardt Andersen
Section 4	Novel Therapeutic Targets and Pharmacologic Compounds with Antidiabetic Potential 163
Chapter 10	Glucose Tolerance Factor – Insulin Mimetic and Potentiating Agent – A Source for a Novel Anti Diabetic Medication 165 Nitsa Mirsky
Chapter 11	Medicinal Plants and Natural Compounds from the Genus <i>Morus</i> (Moraceae) with Hypoglycemic Activity: A Review 189 Jackson Roberto Guedes da Silva Almeida, Grasielly Rocha Souza, Edigênia Cavalcante da Cruz Araújo, Fabrício Souza Silva, Julianeli Tolentino de Lima, Luciano Augusto de Araújo Ribeiro, Xirley Pereira Nunes, Jose Maria Barbosa Filho, Lucindo José Quintans Jdnior and Márcio Roberto Viana dos Santos
Chapter 12	Hypoglycaemic and Hypolipidaemic Effects of an Ethylacetate Fraction of <i>Artocarpus heterophyllus</i> Leaves 207 Sureka Chackrewarthy and M.I. Thabrew
Chapter 13	Non-Obese Type 2 Diabetes Animals Models 223

Yukihito Ishii, Takeshi Ohta and Tomohiko Sasase