

MANESSO ERICA

Curriculum Vitae

GENERAL INFORMATION

First Name: Erica

Last Name: Manesso

Date and Place of Birth: September 24th, 1981, Camposampiero (PD), Italy

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POSITION

January 1st, 2007 onwards: Ph.D. student at Department of Information Engineering (Bioengineering section), University of Padova, Padova, Italy.

ORGANIZATION

January 1st, 2007 onwards: Ph.D. student member, Italian National Biomedical Engineering Group (GNB).

WORK EXPERIENCES

- May - December 2006: Research assistant, Department of Information Engineering, University of Padova, Padova, Italy.
- January - December 2008: Staff research assistant at Larry L. Hillblom Islet Research Center, David Geffen School of Medicine, Division of Endocrinology, Diabetes, and Hypertension, UCLA, Los Angeles, California, U.S.A.

EDUCATION

- September 2006: Successful examination for working as professional computer science engineer.

- April 2006: Master degree (105/110) in Computer Science Engineering (with specialization in Systems and Informatics Applications), University of Padova, Padova, Italy.
- July 2000: *Diploma di Maturità Scientifica* degree (96/100) at Liceo Scientifico Statale Isaac Newton, Camposampiero (PD), Italy.

TEACHING

- Academic Year 2006-2007: Laboratory of “Modeling and Control of Biological Systems”, Bachelor degree in Biomedical Engineering, University of Padova, Padova, Italy.
- Academic Year 2007-2008: Laboratory of “Modeling and Control of Biological Systems 2”, Master degree in Biomedical Engineering, University of Padova, Padova, Italy.
- Academic Year 2008-2009:
 - Laboratory of “Modeling and Control of Biological Systems 2”, Master degree in Biomedical Engineering, University of Padova, Padova, Italy;
 - Laboratory of “Modeling and Control of Biological Systems”, Bachelor degree in Biomedical Engineering, University of Padova, Padova, Italy.

CO-ADVISOR ACTIVITY IN THESIS

- Student: Compostella Loris, title: “*I Modelli del Sistema Glucosio-Insulina nello Studio della Tolleranza Giornaliera al Glucosio e sull’Effetto del Sonno*”, advisor: Prof. Claudio Cobelli, Master degree in Electronic Engineering, University of Padova, Padova, Italy.
- Student: Schiavon Andrea, title: “*Un Modello Compartimentale per la Stima del Turnover di Proteine*”, advisor: Prof. Gianna Maria Toffolo, Bachelor degree in Biomedical Engineering, University of Padova, Padova, Italy.
- Student: Trifoglio Emanuele, title: “*Modello Precursore-Prodotto per la Stima del Turnover di Proteine*”, advisor: Prof. Gianna Maria Toffolo, Bachelor degree in Biomedical Engineering, University of Padova, Padova, Italy.
- Student: Prendin Alberto, title: “*Modelli d’Organo di Sistemi Metabolici*”, advisor: Prof. Claudio Cobelli, Bachelor degree in Biomedical Engineering, University of Padova, Padova, Italy.
- Student: Privitera Alessandro Giuseppe, title: “*Un Modello Compartimentale per lo Studio del Turnover di Lipoproteine*”, advisor: Prof. Gianna Maria Toffolo, Bachelor degree in Biomedical Engineering, University of Padova, Padova, Italy.
- Student: Gasperi Matteo, title: “*Modelli per la stima del profilo dell’estrazione epatica di insulina nell’arco di una giornata*”, advisor: Prof. Gianna Maria Toffolo, Laurea degree in Electronic Engineering, University of Padova, Padova, Italy.

AWARD

Best Graduate Student Award 2008: Larry L. Hillblom Islet Research Center, David Geffen School of Medicine, Division of Endocrinology, Diabetes, and Hypertension, UCLA, 4th Birthday & Annual Review/Audit. Shutters on the Beach Hotel, Santa Monica, California, U.S.A.

LECTURE IN INTERNATIONAL MEETINGS

September 8th, 2008: “Attempted β -cell Regeneration from Replication Independent Sources in a Rat Model of Type 2 Diabetes.” 44th European Association for the Study of Diabetes Annual Meeting, Roma, Italy, September 7-11, 2008.

SEMINARS

- October 17th, 2007: “Models on Beta-Cell Turnover in Rats and Young Humans”. Larry L. Hillblom Islet Research Center, David Geffen School of Medicine, Division of Endocrinology, Diabetes, and Hypertension, UCLA, Los Angeles, California, U.S.A.
- December 19th, 2008: “A Dynamic Model for Beta-Cell Turnover”. Larry L. Hillblom Islet Research Center, 4th Birthday & Annual Review/Audit. Shutters on the Beach Hotel, Santa Monica, California, U.S.A.

RESEARCH INTERESTS

My research interests are in the field of mathematical and statistical modeling of physiological systems with particular emphasis on beta-cell turnover and lifespan. I have also been studying glucose and insulin metabolism, protein turnover, and surfactant catabolism.

COLLABORATIONS

- Larry L. Hillblom Islet Research Center, David Geffen School of Medicine, UCLA, Los Angeles, California, U.S.A.: Dr. Butler.
- Department of Internal Medicine, Division of Endocrinology, Diabetes, Metabolism & Nutrition, Mayo Clinic, Rochester, Minnesota, U.S.A.: Dr. Rizza.
- Children Nutrition’s Research Center, Baylor College of Medicine, Houston, Texas, U.S.A.: Dr. Sunehag.
- Department of Pediatrics, University of Padova, Padova, Italy: Dr. Cogo.

PUBLICATIONS

Papers

- Saisho Y., Manesso E., Gurlo T., Huang C., Toffolo G.M., Cobelli C., and Butler P.C. “Development of Factors to Convert Frequency to Rate for Beta Cell Replication and

Apoptosis Quantified by Time Lapse Video Microscopy and Immunohistochemistry." *Am. J. Physiol. Endocrinol. Metab.* 2009 Jan;296(1):E89-96.

- Manesso E., Toffolo G.M., Saisho Y., Butler A.E., Matveyenko A.V., Cobelli C., and Butler P.C. "Dynamics of β -Cell Turnover; Evidence for β -Cell Turnover and Regeneration from Sources of β -Cells other than β -Cell Replication in the HIP Rat." *Am. J. Physiol. Endocrinol. Metab.* 2009 Aug;297(2):E323-30.
- Saisho Y., Butler A.E., Manesso E., Galasso R., Zhang L., Gurlo T., Toffolo G.M., Cobelli C., Kavanagh K., Wagner J.D., and Butler P.C. Relationship between Fractional Pancreatic Beta Cell Area and Fasting Plasma Glucose Concentration in Monkeys. *Diabetologia.* 2009 Aug 27. [Epub ahead of print]
- van der Heijden G.J., Toffolo G.M., Manesso E., Sauer P.J., and Sunehag A.L. "Aerobic Exercise Increases Peripheral and Hepatic Insulin Sensitivity in Sedentary Adolescents." *J. Clin. Endocrinol. Metab.* 2009 Oct 6. [Epub ahead of print]

Abstracts

- Manesso E., Toffolo G. M., Rizza R., Basu R., and Cobelli C. "An Organ Model to Measure Insulin Secretion during a Meal from Arteriovenous Hepatic Catheter Measurements." Sixth Annual Diabetes Technology Meeting, Atlanta, Georgia, U.S.A., November 2-4, 2006, pg. 384.
- Manesso E., Toffolo G. M., Basu R., Rizza R., and Cobelli C. "Validation of Whole Body C-Peptide Minimal Model During a Meal from Arteriovenous Hepatic Catheter Measurements." *Diabetes*(2007) 56: (Suppl1) A387.
- Manesso E., Toffolo G.M., Saisho Y., Butler A. E., Galasso R., Butler P. C., and Cobelli C. "Attempted β -cell Regeneration from Replication Independent Sources in a Rat Model of Type 2 Diabetes." *Diabetologia*(2008) 51: (Suppl1) S18.
- Saisho Y., Butler A.E., Manesso E., Galasso R., Toffolo G.M., Cobelli C., Rizza R.A., and Butler P.C. " β -Cells are Formed throughout Adult Life in Humans Primarily from Sources Independent from Duplication of Existing β -Cells." *Diabetes*(2009).

International Conference Proceedings

- Saisho Y., Butler A.E., Manesso E., Toffolo G.M., Galasso R., Meier J.J., Cobelli C., Rizza R., and Butler P.C. "Modeling of Beta Cell Turnover in Rodents and Humans." 2007 Department of Medicine Research Day, December, 1st 2007, UCLA, Los Angeles, CA, USA.
- Manesso E., Butler A.E., Toffolo G.M., Saisho Y., Galasso R., Cobelli C., and Butler P.C. "Beta Cell Turnover in a Rat Model of Type 2 Diabetes provides evidence for attempted Regeneration from Putative Pancreatic Stem Cells." 2008 Department of Medicine Research Day, October, 4th 2008, UCLA, Los Angeles, CA, USA.

CONGRESSES AND WORKSHOPS

- September 25-28, 2006: "Neurorobotics". XXV Annual National School of Bioengineering, Bressanone (BZ), Italy.

- June 22-26, 2007: American Diabetes Association, 67th Scientific Sessions, Chicago, Illinois, U.S.A.
- July 2-3, 2007: RFPK Introductory Population Kinetics Workshop using SPK, Padova, Italy.
- September 25-28, 2007: "Computational Genomics and Proteomics". XXVI Annual National School of Bioengineering, Bressanone (BZ), Italy.
- June 6-10, 2008: American Diabetes Association, 68th Scientific Sessions, San Francisco, California, U.S.A.
- September 7-11, 2008: 44th European Association for the Study of Diabetes Annual Meeting, Roma, Italy.
- February 17-18, 2009: Systems biology of Regulated Exocytosis in pancreatic beta-cells (REx), Carlsberg Academy, Copenhagen, Denmark.

PERSONAL SKILLS AND COMPETENCES

- Mother tongue: Italian.
- English (U.S.A.): fluent.
- Computer skills and competences:
 - MATLAB, SAAM II, SPK, Microsoft Office tools, LaTeX (excellent);
 - Java, PHP, Postgre SQL, HTML (basic).

Use of personal data is allowed according to Italian law 196/2003 art. 7.

Padova, October 12^{sd}, 2009

Erica Manesso