ANDREA DE GAETANO

IN A NUTSHELL:

Andrea De Gaetano, a Director of Research with CNR IASI and current Director of CNR IRIB, is a surgeon, mathematician, statistician and lawyer with a long experience of coordinating biomedical research groups, obtaining funded projects and producing publications. His characteristic strength is rapidly understanding diverse medical research problems; facilitating communication and organizing investigation groups including medical doctors, mathematicians/statisticians and software engineers; designing and delivering mathematical, statistical and computational solutions.

ACADEMIC DEGREES

M.D.	Doctor of Medicine (Università Cattolica, Facoltà di Medicina e Chirurgia, Roma, Italy, 1984; summa cum laude)
Surgery	Specialty in Emergency Surgery (Università Statale, Milano, Italy, 1989; 70/70 score)
M.Sc.	Master in Applied Mathematics (UMBC, University of Maryland at Baltimore County, Baltimore, USA, 1991; core curricula in Analysis and Algebra)
Ph.D.	Doctoral degree in Applied Mathematics (Universite' de Pau et des Pays de l'Adour, Pau, France, 1995; Dynamical Systems, Mention Tres Honorable et Félicitations, full score summa cum laude)
J.D.	*Juris Doctor* (Laurea Magistrale in Giurisprudenza, Facoltà di Giurisprudenza, Università di Urbino, 2009, five-year curriculum, score 106/110)
Bar licence	Italian Bar examination, November 2014 (Court of Appeals district of Rome)
DHC	*Doctor Honoris Causa* in BioStatistics, Obuda University, Budapest, Hungary, 2021

LANGUAGES

Italian	mother tongue
English (American)	mother tongue
German	advanced
French	advanced
Spanish	intermediate
Thai	beginner

WORK EXPERIENCE

2022-present	Distinguished Professor (Full Professor with Research Endowment), Dept. of Biomatics, Óbuda University, Budapest - Hungary
2020-present	Director, Istituto per la Ricerca e l'Innovazione Biomedica del Consiglio Nazionale delle Ricerche (CNR- IRIB)
2020-2021	Italian National CNR Delegate, EDA European Defense agency, CAPTECH Simulation.
2018-2020	President, European Society for Mathematical and Theoretical Biology (ESMTB)
2018-2020	Italian National Academic Delegate, NATO, Scientific and Technical Organization, Human Factors and Medicine Panel.
2015-2020	Board Member, International Council for Industrial and Applied Mathematics (ICIAM)
2014-2020	Board Member, European Society for Mathematical and Theoretical Biology (ESMTB)
2012-2017	Coordinator, CNR IASI UOS at Università Cattolica, Policlinico Gemelli
2006-present	Visiting, then Adjunct Professor of Mathematical Statistics, Dept. of Mathematics, Mahidol University, Bangkok, Thailand
2003-2005	Visiting Professor of Mathematical Statistics, Dept. of Biostatistics, University of Copenhagen, Denmark
2001-2004	Professor of Mathematical Statistics, Università di Urbino, Facoltà di Scienze
2001-present	Dirigente di Ricerca (Director of Research, Full Professor), CNR Istituto di Analisi dei Sistemi ed Informatica "A. Ruberti", Rome
1997-2020	Coordinator, BioMathematics Lab, CNR IASI, Rome
1995-2007	Contract Professor of Statistics, School of Internal Medicine, Catholic University, Rome.
1990-2001	Ricercatore (Assistant Professor), CNR Centro di Studio per la Fisiopatologia dello Shock, Rome
1988-1989	Resident in General Surgery, Union Memorial Hospital, Baltimore, MD, USA
1987-1988	Deputy Director, Mathematical Research, Maryland Institute for Emergency Medical Services Systems, Baltimore, MD
1986-1987	Research Fellow, Mathematical Research, Maryland Institute for Emergency Medical Services Systems, Baltimore, MD.

SYNTHESIS OF THE WORK PERFORMED

Since the early years of Medical School, Dr. De Gaetano developed what would become a lifetime commitment to mathematical and statistical methods in biomedical research. He studied and taught a University Course in biostatistics while still in medical school. He then enrolled in the Master program in Applied Mathematics at UMBC in Baltimore, concurrently with his duties as a post-graduate Resident in General Surgery. After his Italian Emergency Surgery board, he obtained M.Sc. and Ph.D. degrees in Applied Mathematics, focusing on the mathematical statistics of parameter estimation for highly nonlinear and for stochastic dynamical models. He has taught post-graduate and doctoral courses in mathematical statistics and its applications to biomedicine for many years at universities in Rome, Urbino, Copenhagen and Bangkok. He has participated in and directed many research projects specializing in the formalization of medical problems and in the quantitative analysis of the results of medical experiments. He enrolled in Law School at the University of Urbino in 2002 (where he was teaching Mathematical Statistics at the time), completing the full Laurea Magistrale curriculum in 2009, with a dissertation in Civil Procedure, on quantitative modeling of the impact of the newly introduced Class Action regulations. He completed his post-graduation Legal Practice with the Studio Legale Pottino in Rome and passed his Italian Bar examination, becoming eligible for counsel and litigation in Italian Tribunals. As a direct link with his activity as a researcher in biomathematics, his legal interests focus on the protection of Intellectual Property Rights, particularly in the framework of European and International Law. He is an expert in mathematical modelling of (patho-)physiological processes, notably in metabolism, ventilation and circulation. He has recently ended his three-year term of office as President of the European biomathematics society ad is currently Director of the Italian National Research Council Institute for Biomedical Research and Innovation (CNR-IRIB).

BIBLIOGRAPHIC INDICATORS

Citations	12638
h-index	48
i10-index	121

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SCIENTIFIC ACTIVITY

Major scientific contributions so far concern diagnostics for flawed estimation in case of high model nonlinearity (as well as numerical schemes to obtain reliable parameter estimates), innovative stochastic differential models in physiology, and the formulation of new models for the glucose/insulin system together with the demonstration of their appropriate physiological behavior and statistical robustness. Through collaboration with Medical Doctors and Physiologists on one side, with Engineers, Mathematicians and Statisticians on the other side, different research topics have been investigated, with publications on energy metabolism, pulmonary circulation, respiratory pathophysiology particularly in intensive care, pharmacoeconomy of the control of psychoses, kinetics of bioactive molecules such as hormones and drugs, inhaled drug pharmacokinetics modeling in chronic obstructive pulmonary disease and asthma, immunology of transplant rejection, effects of sublethal exposure to magnetic fields. The reasons for this width of applications lie in the combination of a solid physiological background with the general applicability of statistical and mathematical analysis for biomedical problems, and with the careful fostering of a team approach to research problems, integrating contributions from people with diverse expertise. Such work has been conducted in close collaboration with several national and foreign research groups, among which Copenhagen, Graz, NCSU Raleigh and Mahidol Bangkok Departments of Mathematics; Paris V and Copenhagen Departments of Biostatistics; Rome La Sapienza and Roskilde Departments of BioEngineering; Athens, Rome Catholic University and Harvard Medical Schools.
Main research interests concern parameter estimation for ordinary, delay, stochastic and fractional differential models; modeling energy metabolism, modeling stress to the cardiocirculatory and respiratory systems, contractual protection of Intellectual Property Rights in the scientific collaboration between public research organizations and private enterprises. In particular, current specific topics of research are: more advanced models for glucose metabolism, insulin secretion and long-term diabetes development; efficient algorithms for (population) parameter estimation; general algorithms for parameter estimation of stochastic differential models; algorithms for estimation of non-local, hence non-Markovian stochastic differential models, such as those based on stochastic delay and fractional differential equations; application of modeling for preparedness against health crises (in particular regarding the physiological assessment of a large number of trauma victims); the development of diagnostic procedures for Cerebral Auto-Regulation dysfunction; modeling ventilation/perfusion maldistribution during mechanical ventilation; modeling possible modifiers to hemorrhagic shock evolution; extension of estimation techniques to Individual Based Models.

Publications

[1] Marcello Pompa, Simona Panunzi, Alessandro Borri, Laura D'Orsi, and Andrea De Gaetano. "mospec": A customized and integrated system for model development, verification and validation. *PloS one*, 20(1):e0316401, 2025.

[2] Giulia Elena Aliffi, Giovanni Nastasi, Vittorio Romano, Dario Pitocco, Alessandro Rizzi, Elvin J Moore, and Andrea De Gaetano. A system of odes for representing trends of cgm signals. *Journal of Mathematics in Industry*, 14(1):23, 2024.

[3] Alessandro Borri, Filippo Cacace, Andrea De Gaetano, Marcello Pompa, and Simona Panunzi. Optimal periodic impulsive strategies in glycemic control. *IEEE Transactions on Control Systems Technology*, 2024.

[4] Alessandro Borri, Massimiliano d'Angelo, Laura D'Orsi, Marcello Pompa, Simona Panunzi, and Andrea De Gaetano. Stochastic modeling of glioblastoma spread: a numerical simulation study. 2024.

[5] Mantana Chudtong, Pitchaporn Paitong, and Andrea De Gaetano. Mathematical modeling of behavior-induced body weight changes. In *13th International Workshop on Innovative Simulation for Health Care, IWISH 2024, Held at the 21st International Multidisciplinary Modeling and Simulation Multiconference, I3M 2024*, page 007. Cal-Tek srl, 2024.

[6] Andrea De Gaetano, Ilona Nagy, Daniel Kiss, Valery G Romanovski, and Thomas A Hardy. A simplified longitudinal model for the development of type 2 diabetes mellitus. *Journal of Theoretical Biology*, 587:111822, 2024.

[7] Lehel Dénes-Fazakas, László Szilágyi, Levente Kovács, Andrea De Gaetano, and György Eigner. Reinforcement learning: A paradigm shift in personalized blood glucose management for diabetes. *Biomedicines*, 12(9):2143, 2024.

[8] Laura D'Orsi, Alessandro Borri, and Andrea DeGaetano. Mathematical modeling of lung mechanics and pressure-controlled ventilation design for barotrauma minimization: A numerical simulation study. *International Journal of Robust and Nonlinear Control*, 2024.

[9] Laura D'Orsi, Gergely Pósfai, and Andrea De Gaetano. A model of the maldistribution of ventilation and perfusion, in the lungs of heart failure patients. *Acta Polytechnica Hungarica*, 21(9):147–158, 2024.

[10] Laura D'Orsi, Elena Lo Presti, Giuseppe Giacopelli, and Andrea De Gaetano. A predictive model of the distribution of t-cell phenotype variations. In *2024 IEEE 28th International Conference on Intelligent Engineering Systems (INES)*, pages 000015–000020. IEEE, 2024.

[11] Laura D'Orsi, Biagio Capasso, Giuseppe Lamacchia, Paolo Pizzichini, Sergio Ferranti, Andrea Liverani, Costantino Fontana, Simona Panunzi, Andrea De Gaetano, and Elena

Lo Presti. Recent advances in artificial intelligence to improve immunotherapy and the use of digital twins to identify prognosis of patients with solid tumors. *International Journal of Molecular Sciences*, 25(21):11588, 2024.

[12] Giuseppe Giacopelli and Andrea De Gaetano. Advances in the characterization of curvature of two-dimentional probability manifolds, 2024.

[13] Simona Panunzi, Marcello Pompa, Alessandro Borri, Laura D'Orsi, and Andrea De Gaetano. *What Is a Good Model? With Examples from Endocrinology*, pages 207–220. Springer Nature Switzerland Cham, 2024.

[14] Simona Panunzi, Marcello Pompa, Alessandro Borri, Pietro Marco D'Angelo, Laura D'Orsi, and Andrea De Gaetano. A bayesian approach for the continuous monitoring of the prediction of the physiological evolution of a crisis victim: A decision support system. *International Journal of Disaster Risk Reduction*, 113:104890, 2024.

[15] Simona Panunzi, Valerio Cusimano, Leone Mazzeo, Antonio D'Ambrosio, Vincenzo Piemonte, and Andrea De Gaetano. A physiological-based model of the incretin effect on the insulin production related to intestinal glucose absorption. 2024.

[16] Marcello Pompa, Andrea DeGaetano, Alessandro Borri, Antonella Farsetti, Simona Nanni, Alfredo Pontecorvi, and Simona Panunzi. A physiological mathematical model of the human thyroid. *Journal of Computational Science*, page 102236, 2024.

[17] Marcello Pompa, Andrea De Gaetano, Alessandro Borri, Antonella Farsetti, Simona Nanni, Laura D'Orsi, and Simona Panunzi. A new mathematical approach for hashimoto's thyroiditis in children. *Mathematics*, 12(22):3452, 2024.

[18] Marcello Pompa, Andrea De Gaetano, Alessandro Borri, Laura D'Orsi, and Simona Panunzi. An agent-based model of avascular tumor growth. In *2024 IEEE 24th International Symposium on Computational Intelligence and Informatics (CINTI)*, pages 000017–000024. IEEE, 2024.

[19] Giulia Angelini, Simona Panunzi, Lidia Castagneto-Gissey, Francesca Pellicanò, Andrea DeGaetano, Maurizio Pompili, Laura Riccardi, Matteo Garcovich, Marco Raffaelli, Luigi Ciccoritti, et al. Accurate liquid biopsy for the diagnosis of non-alcoholic steatohepatitis and liver fibrosis. *Gut*, 72(2):392–403, 2023.

[20] Andrea DeGaetano. Mathematical modelling and trauma survival. IEEE, 2023.

[21] Andrea De Gaetano and Giulia Aliffi. Parameter estimation and the space of random variables. In *2023 IEEE 27th International Conference on Intelligent Engineering Systems (INES)*, pages 000263–000268. IEEE, 2023.

[22] Andrea De Gaetano, Mohamed Jleli, Maria Alessandra Ragusa, and Bessem Samet. Nonexistence results for nonlinear fractional differential inequalities involving weighted fractional derivatives. *Discrete & Continuous Dynamical Systems-Series S*, 16(6):1300–1322, 2023.

[23] Andrea De Gaetano. Mathematical modelling and trauma survival. In *2023 IEEE 27th International Conference on Intelligent Engineering Systems (INES)*, pages 000013–000014. IEEE, 2023.

[24] Giovanni Denaro, Luciano Curcio, Alessandro Borri, Laura D'Orsi, and Andrea DeGaetano. A dynamic integrated model for mercury bioaccumulation in marine organisms. *Ecological Informatics*, 75:102056, 2023.

[25] Domenico Luca Grieco, Gabriele Pintaudi, Filippo Bongiovanni, Gian Marco Anzellotti, Luca Salvatore Menga, Melania Cesarano, Antonio M Dell'Anna, Tommaso Rosá, Luca Delle Cese, Giuseppe Bello, et al. Recruitment-to-inflation ratio assessed through sequential end-expiratory lung volume measurement in acute respiratory distress syndrome. *Anesthesiology*, 139(6):801–814, 2023.

[26] Pianpool Kamoljitprapa, Fazil M Baksh, Andrea DeGaetano, Orathai Polsen, and Piyachat Leelasilapasart. Statistical study design for analyzing multiple gene loci correlation in dna sequences. *Mathematics*, 11(23):4710, 2023.

[27] Simona Panunzi, Lucia Francesca Lucca, Antonio De Tanti, Francesca Cava, Annamaria Romoli, Rita Formisano, Federico Scarponi, Anna Estraneo, Diana Frattini, Paolo Tonin, et al. Modeling outcome trajectories in patients with acquired brain injury using a non-linear dynamic evolution approach. *Scientific Reports*, 13(1):6295, 2023.

[28] Simona Panunzi, Alessandro Borri, Laura D'Orsi, and Andrea DeGaetano. Order estimation for a fractional brownian motion model of glucose control. *Communications in Nonlinear Science and Numerical Simulation*, 127:107554, 2023.

[29] Gareth W Peters, Mantana Chudtong, and Andrea DeGaetano. Analysis of option-like fund performance fees in asset management via monte carlo actuarial distortion pricing. *Annals of Actuarial Science*, pages 1–43, 2023.

[30] Marcello Pompa, Antonio Cerasa, Simona Panunzi, and Andrea DeGaetano. Hapc model of crowd behavior during crises. *Mathematics*, 11(12):2711, 2023.

[31] Marcello Pompa, Davide Torre, Gabriella Bretti, and Andrea DeGaetano. Sensitivity analysis of a 2d stochastic agent-based and pde diffusion model for cancer-on-chip experiments. *Axioms*, 12(10):930, 2023.

[32] Marcello Pompa, Simona Panunzi, Alessandro Borri, and Andrea DeGaetano. An agent-based model of glioblastoma infiltration. In *2023 IEEE 23rd International Symposium on*

Computational Intelligence and Informatics (CINTI), pages 383–390. IEEE, 2023.

[33] Marcello Pompa, Gennaro Tartarisco, Simona Panunzi, Laura D'Orsi, Alessandro Borri, and Andrea DeGaetano. A neuronal circuit simulation highlights the role of neuroglia in modulating information transmission. In *2023 IEEE International Conference on Systems, Man, and Cybernetics (SMC)*, pages 4003–4008. IEEE, 2023.

[34] Ornella Verrastro, Simona Panunzi, Lidia Castagneto-Gissey, Andrea DeGaetano, Erminia Lembo, Esmeralda Capristo, Caterina Guidone, Giulia Angelini, Francesco Pennestrì, Luca Sessa, et al. Bariatric–metabolic surgery versus lifestyle intervention plus best medical care in non-alcoholic steatohepatitis (braves): a multicentre, open-label, randomised trial. *The Lancet*, 401(10390):1786–1797, 2023.

[35] Massimo Barnabei, Alessandro Borri, Andrea De Gaetano, Costanzo Manes, Pasquale Palumbo, and Jorge Guerra Pires. A short-term food intake model involving glucose, insulin and ghrelin. *Discrete & Continuous Dynamical Systems-Series B*, 27(4):1913–1926, 2022.

[36] Gabriella Bretti and Andrea DeGaetano. An agent-based interpretation of leukocyte chemotaxis in cancer-on-chip experiments. *Mathematics*, 10(8):1338, 2022.

[37] Andrea DeGaetano. Modeling cerebro-vascular autoregulation after postural change perturbations : Plenary talk. IEEE, 2022.

[38] Domenico Luca Grieco, Salvatore Maurizio Maggiore, Giacomo Bellani, Savino Spadaro, Elena Spinelli, Tommaso Tonetti, Luca S Menga, Marco Pozzi, Denise Battaglini, Rosa Di Mussi, et al. Individualized positive end-expiratory pressure guided by end-expiratory lung volume in early acute respiratory distress syndrome: study protocol for the multicenter, randomized iperpeep trial. *trials*, 23(1):63, 2022.

[39] Deborah Lacitignola, Massimo Frittelli, Valerio Cusimano, and Andrea DeGaetano. Pattern formation on a growing oblate spheroid. an application to adult sea urchin development. *Journal of Computational Dynamics*, 9(2):185–206, 2022.

[40] Elena Lo Presti, Andrea DeGaetano, Giovanni Pioggia, and Sebastiano Gangemi. Comprehensive analysis of the ilcs and unconventional t cells in virus infection: profiling and dynamics associated with covid-19 disease for a future monitoring system and therapeutic opportunities. *Cells*, 11(3):542, 2022.

[41] Elena Lo Presti, Laura D'Orsi, and Andrea DeGaetano. A mathematical model of in vitro cellular uptake of zoledronic acid and isopentenyl pyrophosphate accumulation. *Pharmaceutics*, 14(6):1262, 2022.

[42] Salvatore Maurizio Maggiore, Samir Jaber, Domenico Luca Grieco, Jordi Mancebo, Spyros Zakynthinos, Alexandre Demoule, Jean-Damien Ricard, Paolo Navalesi, Rosanna

Vaschetto, Sami Hraiech, et al. High-flow versus venturimask oxygen therapy to prevent reintubation in hypoxemic patients after extubation: a multicenter randomized clinical trial. *American Journal of Respiratory and Critical Care Medicine*, 206(12):1452–1462, 2022.

[43] Simona Panunzi, Claudio Gaz, Fabio Cibella, and Andrea DeGaetano. Validation of a simplified-geometry model of inhaled formoterol pharmacodynamics in asthmatic patients. *Frontiers in Physiology*, 13:2535, 2022.

[44] Simona Panunzi and Andrea DeGaetano. A modelling approach to hepatic glucose production estimation. *Plos one*, 17(12):e0278837, 2022.

[45] Alessandro Borri and Andrea DeGaetano. A quasi-equilibrium reduced model of pancreatic insulin secretion. *Journal of Mathematical Biology*, 82(4):25, 2021.

[46] A Borri, L Curcio, C Valerio, Andrea DeGaetano, G Denaro, D Laura, M Sabina, P Simona, P Francesca, P Marcello, et al. *Modellistica Matematica E Piattaforme Informatiche a Supporto Della Ricerca Ambientale*, pages 301–349. Edizioni ETS, 2021.

[47] Mantana Chudtong and Andrea DeGaetano. A mathematical model of food intake. *Mathematical Biosciences and Engineering*, 18(2):1238–1279, 2021.

[48] Mantana Chudtong, Gareth Peters, and Andrea De Gaetano. Analysis of option-like fund performance fees in asset management via monte carlo actuarial distortion pricing. *Available at SSRN 3946347*, 2021.

[49] Luciano Curcio, Laura D'Orsi, and Andrea DeGaetano. Seven mathematical models of hemorrhagic shock. *Computational and Mathematical Methods in Medicine*, 2021:1–34, 2021.

[50] Andrea DeGaetano, Sasikarn Sakulrang, Alessandro Borri, Dario Pitocco, Surattana Sungnul, and Elvin J Moore. Modeling continuous glucose monitoring with fractional differential equations subject to shocks. *Journal of Theoretical Biology*, 526:110776, 2021.

[51] Laura D'Orsi, Luciano Curcio, Fabio Cibella, Alessandro Borri, Lilach Gavish, Arik Eisenkraft, and Andrea DeGaetano. A mathematical model of cardiovascular dynamics for the diagnosis and prognosis of hemorrhagic shock. *Mathematical Medicine and Biology: A Journal of the IMA*, 38(4):417–441, 2021.

[52] Laura D'Orsi, Alessandro Borri, and Andrea De Gaetano. Modeling of ventilator-patient interaction. In *BOOK OF ABSTRACTS*, page 52, 2021.

[53] LC Gissey, S Panunzi, S Maltese, MF Russo, G Angelini, A De Gaetano, E Capristo, S Bornstein, G Casella, and G Mingrone. Living systematic meta-analysis of covid-19 vaccines and dose allocation strategies. 2021.

[54] Geltrude Mingrone, Simona Panunzi, Andrea DeGaetano, Caterina Guidone, Amerigo Iaconelli, Esmeralda Capristo, Ghassan Chamseddine, Stefan R Bornstein, and Francesco Rubino. Metabolic surgery versus conventional medical therapy in patients with type 2 diabetes: 10-year follow-up of an open-label, single-centre, randomised controlled trial. *The Lancet*, 397(10271):293–304, 2021.

[55] Simona Panunzi, Sabina Maltese, Ornella Verrastro, Luca Labbate, Andrea De Gaetano, Maurizio Pompili, Esmeralda Capristo, Stefan R Bornstein, and Geltrude Mingrone. Pioglitazone and bariatric surgery are the most effective treatments for non-alcoholic steatohepatitis: A hierarchical network meta-analysis. *Diabetes, Obesity and Metabolism*, 23(4):980–990, 2021.

[56] Simona Panunzi, Sabina Maltese, Andrea DeGaetano, Esmeralda Capristo, Stefan R Bornstein, and Geltrude Mingrone. Comparative efficacy of different weight loss treatments on knee osteoarthritis: A network meta-analysis. *Obesity Reviews*, 22(8):e13230, 2021.

[57] Francesca Pellicanò, Laura D'Orsi, Andrea DeGaetano, and Simona Panunzi. A population approach for the estimation of methylmercury toxicokinetics in red mullets. *Toxicology and Applied Pharmacology*, 428:115679, 2021.

[58] Marcello Pompa, Simona Panunzi, Alessandro Borri, and Andrea DeGaetano. A comparison among three maximal mathematical models of the glucose-insulin system. *PloS one*, 16(9):e0257789, 2021.

[59] Marcello Pompa, Simona Panunzi, Antonella Farsetti, Simona Nanni, and Andrea DeGaetano. A new mathematical model of the human thyroid. In *BOOK OF ABSTRACTS*, page 71, 2021.

[60] Pairote Satiracoo and Andrea De Gaetano. Parameter estimation of a simple, realistic stochastic model of gastric emptying of pellets under fasting conditions. *Journal of Biological Systems*, 29(03):561–576, 2021.

[61] E Capristo, S Panunzi, A De Gaetano, M Raffaelli, C Guidone, A Iaconelli, L L'Abbate, AL Birkenfeld, R Bellantone, S Bornstein, et al. Corrigendum to" intensive lifestyle modifications with or without liraglutide 3mg vs. sleeve gastrectomy: A three-arm non-randomised, controlled, pilot study"[diabetes metab. 44 (2018) 235-242]. *Diabetes & metabolism*, 46(2):179, 2020.

[62] Fabio Cibella, Simona Panunzi, Valerio Cusimano, and Andrea DeGaetano. Decision support for medical disasters: Evaluation of the impress system in the live palermo demo. *International Journal of Disaster Risk Reduction*, 50:101695, 2020.

[63] Luciano Curcio, Valerio Cusimano, Laura D'Orsi, Jiraphat Yokrattanasak, and AD Gaetano. Comparison between two different cardiovascular models during a hemorrhagic shock

scenario. *Mathematical Biosciences and Engineering*, 17(5):5027–5058, 2020.

[64] Luciano Curcio, Laura D'Orsi, Fabio Cibella, Linn Wagnert-Avraham, Dean Nachman, Andrea DeGaetano, et al. A simple cardiovascular model for the study of hemorrhagic shock. *Computational and Mathematical Methods in Medicine*, 2020, 2020.

[65] Giovanni Denaro, Daniela Salvagio Manta, Alessandro Borri, Maria Bonsignore, Davide Valenti, Enza Quinci, Andrea Cucco, Bernardo Spagnolo, Mario Sprovieri, and Andrea DeGaetano. Hr3dhg version 1: modeling the spatiotemporal dynamics of mercury in the augusta bay (southern italy). *Geoscientific Model Development*, 13(4):2073–2093, 2020.

[66] Geltrude Mingrone, Simona Panunzi, Andrea DeGaetano, Sofie Ahlin, Valerio Spuntarelli, Isabel Bondia-Pons, Chiara Barbieri, Esmeralda Capristo, Amalia Gastaldelli, and John J Nolan. Insulin sensitivity depends on the route of glucose administration. *Diabetologia*, 63:1382–1395, 2020.

[67] Geltrude Mingrone, SIMONA PANUNZI, ANDREA DEGAETANO, Caterina Guidone, Amerigo Iaconelli, Esmeralda Capristo, Ghassan Chamseddine, Stefan Bornstein, and Francesco Rubino. Ten-year outcomes of an open-label, single-centre randomized controlled trial comparing metabolic surgery versus conventional medical therapy for type 2 diabetes. *The Lancet*, 2020.

[68] Simona Panunzi, Marcello Pompa, Alessandro Borri, Vincenzo Piemonte, and Andrea DeGaetano. A revised sorensen model: Simulating glycemic and insulinemic response to oral and intra-venous glucose load. *Plos one*, 15(8):e0237215, 2020.

[69] Alessandro Borri, Valerio Cusimano, Simona Panunzi, and Andrea De Gaetano. Multi-agent system modeling of advection-diffusion-reaction equations. In *2019 18th European Control Conference (ECC)*, pages 2430–2435. IEEE, 2019.

[70] Alessandro Borri, Simona Panunzi, and Andrea De Gaetano. Rapid and ultra-rapid insulin in glycemic control. In *2019 IEEE International Conference on Systems, Man and Cybernetics (SMC)*, pages 336–341. IEEE, 2019.

[71] E. Capristo, S. Panunzi, A. DeGaetano, V. Spuntarelli, R. Bellantone, P. Giustacchini, A. L. Birkenfeld, S. Amiel, S. R. Bornstein, M. Raffaelli, and G. Mingrone. Incidence of hypoglycemia after gastric bypass vs sleeve gastrectomy: A randomized trial. *Journal of clinical endocrinology & metabolisms*, 14:2073–2093, 4 2019.

[72] Andrea DeGaetano, Claudio Gaz, and Simona Panunzi. Consistency of compact and extended models of glucose-insulin homeostasis: The role of variable pancreatic reserve. *Plos one*, 14(2):e0211331, 2019.

[73] Andrea DeGaetano and Thomas Andrew Hardy. A novel fast-slow model of diabetes progression: insights into mechanisms of response to the interventions in the diabetes prevention program. *PLoS One*, 14(10):e0222833, 2019.

[74] Laura D'Orsi, Marco Mameli, Alessandro Borri, and Andrea DeGaetano. Assisted ventilation control based on phase and frequency estimation of respiratory drift. In *2019 IEEE International Conference on Systems, Man and Cybernetics (SMC)*, pages 879–885. IEEE, 2019.

[75] Esmeralda Capristo, S Panunzi, A DeGaetano, Marco Raffaelli, C Guidone, Amerigo Iaconelli, L L'Abbate, AL Birkenfeld, R Bellantone, SR Bornstein, et al. Intensive lifestyle modifications with or without liraglutide 3 mg vs. sleeve gastrectomy: A three-arm non-randomised, controlled, pilot study. *Diabetes & metabolism*, 44(3):235–242, 2018.

[76] Esmeralda Capristo, Simona Panunzi, Andrea DeGaetano, Valerio Spuntarelli, Rocco Bellantone, Piero Giustacchini, Andreas L Birkenfeld, Stephanie Amiel, Stefan R Bornstein, Marco Raffaelli, et al. Incidence of hypoglycemia after gastric bypass vs sleeve gastrectomy: a randomized trial. *The Journal of Clinical Endocrinology & Metabolism*, 103(6):2136–2146, 2018.

[77] Mario Di Ferdinando, Pierdomenico Pepe, Pasquale Palumbo, Simona Panunzi, and Andrea DeGaetano. Semiglobal sampled-data dynamic output feedback controller for the glucose–insulin system. *IEEE Transactions on Control Systems Technology*, 28(1):16–32, 2018.

[78] Alessandro Borri, Pasquale Palumbo, Costanzo Manes, Simona Panunzi, Andrea DeGaetano, et al. Sampled-data observer-based glucose control for the artificial pancreas. *Acta Polytechnica Hungarica*, 14(1):79–94, 2017.

[79] Alessandro Borri, Filippo Cacace, Andrea DeGaetano, Alfredo Germani, Costanzo Manes, Pasquale Palumbo, Simona Panunzi, and Pierdomenico Pepe. Luenberger-like observers for nonlinear time-delay systems with application to the artificial pancreas: The attainment of good performance. volume 37, pages 33–49. IEEE, 2017.

[80] Alessandro Borri, Filippo Cacace, Andrea De Gaetano, Alfredo Germani, Costanzo Manes, Pasquale Palumbo, Simona Panunzi, and Pierdomenico Pepe. The attainment of good performance. *IEEE CONTROL SYSTEMS MAGAZINE*, 2017.

[81] Mario Di Ferdinando, Pierdomenico Pepe, Pasquale Palumbo, Simona Panunzi, and Andrea DeGaetano. Robust global nonlinear sampled-data regulator for the glucose-insulin system. In *2017 IEEE 56th Annual Conference on Decision and Control (CDC)*, pages 4686–4691. IEEE, 2017.

[82] Laura D'Orsi, Alessandro Borri, and Andrea De Gaetano. Modelling the ventilator-patient interaction: A pressure-cycled

control strategy. In *2017 IEEE 56th Annual Conference on Decision and Control (CDC)*, pages 5032–5037. IEEE, 2017.

[83] Claudio Gaz, Andrea DeGaetano, Costanzo Manes, Pasquale Palumbo, Alessandro Borri, and Simona Panunzi. Effective control of glycemia using a simple discrete-delay model. volume 50, pages 13526–13531. Elsevier, 2017.

[84] Geltrude Mingrone, Esmeralda Capristo, Simona Panunzi, Andrea DeGaetano, Valerio Spuntarelli, Rocco Bellantone, Piero Giustacchini, Andreas Birkenfeld, Stephanie Amiel, Stefan Bornstein, et al. Incidence of hypoglycemia after gastric bypass vs. sleeve gastrectomy-a randomized trial. In *DIABETES*, volume 66, pages LB87–LB87. AMER DIABETES ASSOC 1701 N BEAUREGARD ST, ALEXANDRIA, VA 22311-1717 USA, 2017.

[85] Pierdomenico Pepe, Pasquale Palumbo, Simona Panunzi, and Andrea De Gaetano. Local sampled-data control of the glucose-insulin system. In *2017 American Control Conference (ACC)*, pages 110–115. IEEE, 2017.

[86] JG Pires, A Borri, A DeGaetano, C Manes, and P Palumbo. A short-term dynamical model for ghrelin. volume 50, pages 11011–11016. Elsevier, 2017.

[87] Sasikarn Sakulrang, Elvin J Moore, Surattana Sungnul, and Andrea DeGaetano. A fractional differential equation model for continuous glucose monitoring data. *Advances in Difference Equations*, 2017:1–11, 2017.

[88] Alessandro Borri, Simona Panunzi, and Andrea De Gaetano. A glycemia-structured population model. *Journal of Mathematical Biology*, 73:39–62, 2016.

[89] Alessandro Borri, Simona Panunzi, Rachele Brancaleoni, Daniele Gui, Sabina Magalini, Claudio R Gaz, and Andrea De Gaetano. Simulation of trauma incidents: modelling the evolution of patients and resources. *Journal of medical systems*, 40:1–12, 2016.

[90] Alessandro Borri, Simona Panunzi, Andrea DeGaetano, Costanzo Manes, and Pasquale Palumbo. Glucose control with incomplete information. In *2016 IEEE International Conference on Systems, Man, and Cybernetics (SMC)*, pages 001780–001784. IEEE, 2016.

[91] Alessandro Borri, Christos Dimopoulos, Simona Panunzi, Rachele Brancaleoni, Claudio Roberto Gaz, Daniele Gui, Sabina Magalini, and Andrea DeGaetano. Modelling trauma physiology for large crisis management. In *15th International Conference on Modeling and Applied Simulation, MAS 2016*, pages 78–84, 2016.

[92] N. Dobrinkova, A. Kostaridis, A. Olunczek, M. Heckel, D. Vergeti, S. Tsekeridou, G. Seynaeve, A. DeGaetano, T. Finnie, E. Nectarios, and C. Psaroudakis. Disaster reduction potential of impress platform tools. *International Conference on Information Technology in Disaster Risk Reduction*, pages 225–239, 11 2016.

[93] Pasquale Palumbo, Pierdomenico Pepe, Simona Panunzi, and Andrea DeGaetano. Recent results on glucose–insulin predictions by means of a state observer for time delay systems. *Prediction Methods for Blood Glucose Concentration: Design, Use and Evaluation*, pages 227–241, 2016.

[94] Simona Panunzi, Lena Carlsson, Andrea DeGaetano, Markku Peltonen, Toni Rice, Lars Sjöström, Geltrude Mingrone, and John B Dixon. Determinants of diabetes remission and glycemic control after bariatric surgery. *Diabetes care*, 39(1):166–174, 2016.

[95] Jiraphat Yokrattanasak, Andrea DeGaetano, Simona Panunzi, Pairote Satiracoo, Wayne M Lawton, and Yongwimon Lenbury. A simple, realistic stochastic model of gastric emptying. *PloS one*, 11(4):e0153297, 2016.

[96] Fabio Cibella, Giuseppina Cuttitta, Roberto Della Maggiore, Silvia Ruggieri, Simona Panunzi, Andrea DeGaetano, Salvatore Bucchieri, Gaspare Drago, Mario R Melis, Stefania La Grutta, et al. Effect of indoor nitrogen dioxide on lung function in urban environment. *Environmental Research*, 138:8–16, 2015.

[97] Andrea De Gaetano, Claudio Gaz, Pasquale Palumbo, and Simona Panunzi. A unifying organ model of pancreatic insulin secretion. *PloS one*, 10(11):e0142344, 2015.

[98] P Latafat, Pasquale Palumbo, Pierdomenico Pepe, L Kovác, Simona Panunzi, and Andrea DeGaetano. An lmi-based controller for the glucose-insulin system. In *2015 European Control Conference (ECC)*, pages 7–12. IEEE, 2015.

[99] Geltrude Mingrone, Simona Panunzi, Andrea DeGaetano, Caterina Guidone, Amerigo Iaconelli, Giuseppe Nanni, Marco Castagneto, Stefan Bornstein, and Francesco Rubino. Bariatric–metabolic surgery versus conventional medical treatment in obese patients with type 2 diabetes: 5 year follow-up of an open-label, single-centre, randomised controlled trial. *The Lancet*, 386(9997):964–973, 2015.

[100] Eleonora Pacciani, Alessandro Borri, Paolo Maurizio Soave, Daniele Gui, Sabina Magalini, Simona Panunzi, Claudio Roberto Gaz, Pasquale Gaudio, Andrea Malizia, and Andrea DeGaetano. Modelling and simulation for major incidents. In *2015 9th International Conference on Pervasive Computing Technologies for Healthcare (PervasiveHealth)*, pages 297–303. IEEE, 2015.

[101] Simona Panunzi, Andrea DeGaetano, Annamaria Carnicelli, and Geltrude Mingrone. Predictors of remission of diabetes mellitus in severely obese individuals undergoing bariatric surgery: do bmi or procedure choice matter? a meta-analysis. *Annals of surgery*, 261(3):459–467, 2015.

[102] Simona Panunzi, Laura D'Orsi, Daniela Iacoviello, and Andrea De Gaetano. A stochastic delay differential model of cerebral autoregulation. *Plos one*, 10(4):e0118456, 2015.

[103] S Panuzi, G Mingrone, A Gaetano, et al. Five-year outcomes after surgery and medical therapy for type 2 diabetes: a randomized clinical trial. *2nd Diabetes Surgery Summit—(DSS-II). UK: London*, 2015.

[104] S Räty, J Pulkkinen, I Nordback, J Sand, M Victorzon, J Grönroos, G Mingrone, Holcomb JB Robinson BR Minei JP Stewart R et al. Panunzi S Schreiber M, McCully B, A DeGaetano, C Guidone, et al. Transfusion of cryopreserved packed red blood cells is safe and effective after trauma: a prospective randomized trial. ann surg 2015; 262: 426–433. *Hospital*, 237:242, 2015.

[105] Andrea DeGaetano, Simona Panunzi, Pasquale Palumbo, Claudio Gaz, and Thomas Hardy. *Data-driven Modeling for Diabetes: Data-driven Modeling of Diabetes Progression*, pages 165–186. Springer Berlin Heidelberg, 2014.

[106] Andrea DeGaetano, Simona Panunzi, Dimitris Eliopoulos, Thomas Hardy, and Geltrude Mingrone. Mathematical modeling of renal tubular glucose absorption after glucose load. *PloS one*, 9(1):e86963, 2014.

[107] Andrea De Gaetano, Claudio Roberto Gaz, Pasquale Palumbo, and Simona Panunzi. Population-of-controllers model explains heterogeneous insulin secretion experiments. 2014.

[108] Claudio Roberto Gaz, Andrea De Gaetano, Simona Panunzi, George Cremona, and Beverley Patterson. A simplified, geometrical approach to the pkpd of inhaled bronchodilators. 2014.

[109] Salvatore Maurizio Maggiore, Francesco Antonio Idone, Rosanna Vaschetto, Rossano Festa, Andrea Cataldo, Federica Antonicelli, Luca Montini, Andrea DeGaetano, Paolo Navalesi, and Massimo Antonelli. Nasal high-flow versus venturi mask oxygen therapy after extubation. effects on oxygenation, comfort, and clinical outcome. *American journal of respiratory and critical care medicine*, 190(3):282–288, 2014.

[110] P Palumbo, G Pizzichelli, S Panunzi, Pierdomenico Pepe, and A DeGaetano. Model-based control of plasma glycemia: Tests on populations of virtual patients. *Mathematical biosciences*, 257:2–10, 2014.

[111] P Palumbo, G Pizzichelli, P Pepe, S Panunzi, and A DeGaetano. Closed-loop control scheme for the euglycemic hyperinsulinemic clamp: validation on virtual patients. *IFAC Proceedings Volumes*, 47(3):2088–2093, 2014.

[112] Pasquale Palumbo, Pierdomenico Pepe, Simona Panunzi, and Andrea DeGaetano. Dde model-based control of glycemia via sub-cutaneous insulin administration. *Delay Systems: From Theory to Numerics and Applications*, pages 229–240, 2014.

[113] Simona Panunzi, Alessandro Borri, Pasquale Palumbo, Levente Kovács, and Andrea DeGaetano. Simulation of insulin regimen and glucose profiles in type 1 diabetic patient. In *2014 IEEE*

International Conference on Systems, Man, and Cybernetics (SMC), pages 2464–2469. IEEE, 2014.

[114] Andrea DeGaetano, Simona Panunzi, Alice Matone, Adeline Samson, Jana Vrbikova, Bela Bendlova, and Giovanni Pacini. Routine ogtt: a robust model including incretin effect for precise identification of insulin sensitivity and secretion in a single individual. *PLoS One*, 8(8):e70875, 2013.

[115] A. DeGaetano, C. R. Gaz, C. Gori Giorgi, and P. Palumbo. An islet population model of pancreatic insulin production. pages 3355–3360, 12 2013.

[116] Samuele Iesari, Carel W le Roux, Andrea DeGaetano, Melania Manco, Giuseppe Nanni, and Geltrude Mingrone. Twenty-four hour energy expenditure and skeletal muscle gene expression changes after bariatric surgery. *The Journal of Clinical Endocrinology & Metabolism*, 98(2):E321–E327, 2013.

[117] K. Juagwon, Y. Lenbury, A. DeGaetano, and P. Palumbo. Application of modified watanabe's approach for reconstruction of insulin secretion rate during ogtt under non-constant fraction of hepatic insulin extraction in international journal of mathematics and computers in simulation. *International journal of mathematics and computers in simulation*, 7:304–313, 2013.

[118] K Juagwon, Y Lenbury, A DeGaetano, P Palumbo, et al. Reconstruction of insulin secretion under the effects of hepatic extraction during ogtt: a modelling and convolution approach. pages 85–90, 2013.

[119] Laura Leccesi, Simona Panunzi, Andrea DeGaetano, Pietro Familiari, Amerigo Iaconelli, Caterina Guidone, Ada Mazzarella, Guido Costamagna, and Geltrude Mingrone. Effects of transoral gastroplasty on glucose homeostasis in obese subjects. *The Journal of Clinical Endocrinology & Metabolism*, 98(5):1901–1910, 2013.

[120] Sabina Magalini, Gilda Pepe, Simona Panunzi, Andrea DeGaetano, C Abatini, Andrea Di Giorgio, Maurizio Foco, and Daniele Gui. Observational study on preoperative surgical field disinfection: Povidone-iodine and chlorhexidine-alcohol. *European Review for Medical & Pharmacological Sciences*, 17(24), 2013.

[121] Geltrude Mingrone, Simona Panunzi, Andrea DeGaetano, Caterina Guidone, Amerigo Iaconelli, Laura Leccesi, Giuseppe Nanni, Alfons Pomp, Marco Castagneto, Giovanni Ghirlanda, et al. Bariatric surgery versus conventional medical therapy for type 2 diabetes. *Survey of Anesthesiology*, 57(1):24–25, 2013.

[122] V Novak, DM Simpson, M Czosnyka, J Pachter, J Ottesen, M Guenther, K Hu, A DeGaetano, I Piper, M Shaw, et al. Tcarnet: a pathway to translating cerebral autoregulation research into patient benefit. In *CEREBROVASCULAR DISEASES*, volume 35, pages 34–34. KARGER

ALLSCHWILERSTRASSE 10, CH-4009 BASEL, SWITZERLAND, 2013.

[123] Pasquale Palumbo, Susanne Ditlevsen, Alessandro Bertuzzi, and Andrea DeGaetano. Mathematical modeling of the glucose–insulin system: A review. *Mathematical biosciences*, 244(2):69–81, 2013.

[124] Pasquale Palumbo, Pierdomenico Pepe, Simona Panunzi, and Andrea DeGaetano. Observer-based closed-loop control for the glucose-insulin system: local input-to-state stability with respect to unknown meal disturbances. In *2013 American Control Conference*, pages 1751–1756. IEEE, 2013.

[125] Pasquale Palumbo, Pierdomenico Pepe, Jude D Kong, Sreedhar S Kumar, Simona Panunzi, and Andrea DeGaetano. Regulation of the human plasma glycemia by means of glucose measurements and subcutaneous insulin administration. *IFAC Proceedings Volumes*, 46(20):524–529, 2013.

[126] Pasquale Palumbo, Pierdomenico Pepe, Simona Panunzi, and Andrea DeGaetano. Closed-loop glucose control: application to the euglycemic hyperinsulinemic clamp. In *52nd IEEE Conference on Decision and Control*, pages 4461–4466. IEEE, 2013.

[127] Simona Panunzi, Laura D'Orsi, Daniela Iacoviello, Andrea DeGaetano, et al. Empirical modeling of cerebral autoregulation. In *2nd International Workshop on Innovative Simulation for Health Care (IWISH 2013). Athens, Greece 25-27 September 2013*, pages 7–16, 2013.

[128] Joanne Sloan-Lancaster, Eyas Abu-Raddad, John Polzer, Jeffrey W Miller, Joel C Scherer, Andrea DeGaetano, Jolene K Berg, and William H Landschulz. Double-blind, randomized study evaluating the glycemic and anti-inflammatory effects of subcutaneous ly2189102, a neutralizing il-1β antibody, in patients with type 2 diabetes. *Diabetes care*, 36(8):2239–2246, 2013.

[129] M Antonelli, G De Pascale, Vito Marco Ranieri, P Pelaia, Rosalba Tufano, O Piazza, Alberto Zangrillo, A Ferrario, A DeGaetano, E Guaglianone, et al. Comparison of triple-lumen central venous catheters impregnated with silver nanoparticles (agtive®) vs conventional catheters in intensive care unit patients. *Journal of Hospital Infection*, 82(2):101–107, 2012.

[130] A De Gaetano, S Panunzi, and TA Hardy. Response to tailored therapy in a heterogeneous type 2 diabetes mellitus population: simulation results from a qualified mathematical model. In *DIABETOLOGIA*, volume 55, pages S150–S151. SPRINGER 233 SPRING ST, NEW YORK, NY 10013 USA, 2012.

[131] Andrea DeGaetano, Alice Matone, Annamaria Agnes, Pasquale Palumbo, Francesco Ria, and Sabina Magalini. Modeling rejection immunity. *Theoretical biology & medical modelling*, 9:18, May 2012.

[132] Claudio Gaz, George Cremona, Simona Panunzi, Beverley Patterson, and Andrea DeGaetano. A geometrical approach to the pkpd modelling of inhaled bronchodilators. *Journal of pharmacokinetics and pharmacodynamics*, 39:415–428, 2012.

[133] Thomas Hardy, Eyas Abu-Raddad, Niels Porksen, and Andrea DeGaetano. Evaluation of a mathematical model of diabetes progression against observations in the diabetes prevention program. *American Journal of Physiology-Endocrinology and Metabolism*, 303(2):E200–E212, 2012.

[134] Jiaxu Li, Minghu Wang, Andrea DeGaetano, Pasquale Palumbo, and Simona Panunzi. The range of time delay and the global stability of the equilibrium for an ivgtt model. *Mathematical biosciences*, 235(2):128–137, 2012.

[135] S. Magalini, G. Pepe, S. Panunzi, P.L. Spada, A. DeGaetano, and D. Gui. An economic evaluation of clostridium difficile infection management in an italian hospital environment. *Eur. Rev. Med. Pharmacol. Sci.*, 16:2136–2141, 2012.

[136] Geltrude Mingrone, Simona Panunzi, Andrea DeGaetano, Caterina Guidone, Amerigo Iaconelli, Laura Leccesi, Giuseppe Nanni, Alfons Pomp, Marco Castagneto, Giovanni Ghirlanda, et al. Bariatric surgery versus conventional medical therapy for type 2 diabetes. *New England Journal of Medicine*, 366(17):1577–1585, 2012.

[137] Geltrude Mingrone, Simona Panunzi, Andrea DeGaetano, Caterina Guidone, Marco Raffaelli, Cosimo Callari, Pio Celestino Lombardi, and Rocco Bellantone. Protocol for a randomised clinical study comparing the effect of roux-en-y gastric bypass and sleeve gastrectomy on reactive hypoglycaemia in morbidly obese subjects. *BMJ open*, 2(6):e002184, 2012.

[138] Geltrude Mingrone, Simona Panunzi, Andrea DeGaetano, Caterina Guidone, Amerigo Laconelli, Laura Leccesi, Giuseppe Nanni, Alfons Pomp, Marco Castagneto, Giovanni Ghirlanda, et al. Bariatrische chirurgie versus conventionele behandeling bij type 2 diabetes. *Nederlands Tijdschrift voor Diabetologie*, 10(4):193–194, 2012.

[139] Pasquale Palumbo, Pierdomenico Pepe, Simona Panunzi, and Andrea DeGaetano. Time-delay model-based control of the glucose–insulin system, by means of a state observer. *European Journal of Control*, 18(6):591–606, 2012.

[140] P Palumbo, P Pepe, S Panunzi, and A DeGaetano. Observer-based glucose control via subcutaneous insulin administration. *IFAC Proceedings Volumes*, 45(18):107–112, 2012.

[141] Puntip Toghaw, Alice Matone, Yongwimon Lenbury, and Andrea DeGaetano. Bariatric surgery and t2dm improvement mechanisms: a mathematical model. *Theoretical Biology and Medical Modelling*, 9(1):1–15, 2012.

[142] Cinzia Digesú, Savino Cilla, Andrea DeGaetano, Mariangela Massaccesi, Gabriella Macchia, Edy Ippolito, Francesco Deodato, Simona Panunzi, Chiara Iapalucci, Gian Carlo Mattiucci, et al. Postoperative intensity modulated radiation therapy in high risk prostate cancer: a dosimetric comparison. *Medical Dosimetry*, 36(3):231–239, 2011.

[143] M Di Mugno, S Magalini, A DeGaetano, G La Posta, D Sermoneta, and D Gui. Health status casualty model for simulation of crisis management activities (eu sicma project). volume 26, page s44. Jems Publishing Company, Inc., 2011.

[144] A. Fagiolini, A. Matone, C. Gaz, S. Panunzi, and A. DeGaetano. Confronto farmacoeconomico di ziprasidone con altri antipsicotici atipici per il trattamento della schizofrenia. *Farmeconomia*, 12:29–40, 2011.

[145] Amerigo Iaconelli, Simona Panunzi, Andrea DeGaetano, Melania Manco, Caterina Guidone, Laura Leccesi, Donatella Gniuli, Giuseppe Nanni, Marco Castagneto, Giovanni Ghirlanda, et al. Effects of bilio-pancreatic diversion on diabetic complications: a 10-year follow-up. *Diabetes care*, 34(3):561–567, 2011.

[146] S Magalini, M Di Mugno, A DeGaetano, G La Posta, D Sermoneta, and D Gui. European project sicma (simulation of crisis management activities) for medical management of maxi emergency trauma patients. volume 26, pages s41–s41. Cambridge University Press, 2011.

[147] S Magalini, M Di Mugno, A DeGaetano, G La Posta, D Sermoneta, and D Gui. Management activities) for medical management of maxi emergency trauma patients. volume 26, pages s40–s41, 2011.

[148] Alessio G Morganti, Savino Cilla, Andrea DeGaetano, Simona Panunzi, Cinzia Digesù, Gabriella Macchia, Mariangela Massaccesi, Francesco Deodato, Gabriella Ferrandina, Numa Cellini, et al. Forward planned intensity modulated radiotherapy (imrt) for whole breast postoperative radiotherapy. is it useful? when? *Journal of Applied Clinical Medical Physics*, 12(2):213–222, 2011.

[149] Pasquale Palumbo, Pierdomenico Pepe, Simona Panunzi, and Andrea DeGaetano. Glucose control by subcutaneous insulin administration: a dde modelling approach. *IFAC Proceedings Volumes*, 44(1):1471–1476, 2011.

[150] Pasquale Palumbo, G Pizzichelli, Simona Panunzi, Pierdomenico Pepe, and Andrea DeGaetano. Tests on a virtual patient for an observer-based, closed-loop control of plasma glycemia. In *2011 50th IEEE Conference on Decision and Control and European Control Conference*, pages 6936–6941. IEEE, 2011.

[151] Yih-Choung Yu, A DeGaetano, and P Palumbo. *Mathematical Modeling of the Cardiovascular System and Its Control Mechanism*. Eolss Publishers, 2011.

[152] Pasquale Palumbo, Pierdomenico Pepe, Simona Panunzi, and Andrea DeGaetano. Digital closed-loop control of plasma glycemia. In *49th IEEE Conference on Decision and Control (CDC)*, pages 833–838. IEEE, 2010.

[153] Pasquale Palumbo and Andrea DeGaetano. An islet population model of the endocrine pancreas. *Journal of mathematical biology*, 61:171–205, August 2010.

[154] Simona Panunzi, Andrea DeGaetano, and Geltrude Mingrone. Advantages of the single delay model for the assessment of insulin sensitivity from the intravenous glucose tolerance test. *Theoretical Biology and Medical Modelling*, 7(1):1–20, 2010.

[155] Umberto Picchini, ANDREA DE GAETANO, and Susanne Ditlevsen. Stochastic differential mixed-effects models. *Scandinavian Journal of statistics*, 37(1):67–90, 2010.

[156] Andrea DeGaetano, Simona Panunzi, Francesco Rinaldi, Arnaldo Risi, and Marco Sciandrone. A patient adaptable ecg beat classifier based on neural networks. *Applied Mathematics and Computation*, 213(1):243–249, 2009.

[157] A. DeGaetano, T Hardy, E Abu-Raddad, P Palumbo, J Bue-Valleskey, and N Porksen. Predicting the effects of lifestyle or pharmacological intervention on progression of type 2 diabetes: evaluation of a novel mathematical model against results of the dpp. *Diabetologia*, 52:S328–S328, 9 2009.

[158] Alessio G Morganti, Savino Cilla, Vincenzo Valentini, Gabriella Macchia, Francesco Deodato, Gabriella Ferrandina, M Grazia Cece, Massimo Cirocco, Giorgia Garganese, Liberato Di Lullo, et al. Phase i–ii studies on accelerated imrt in breast carcinoma: technical comparison and acute toxicity in 332 patients. *Radiotherapy and Oncology*, 90(1):86–92, 2009.

[159] Alessio G Morganti, Cinzia Digesù, Simona Panunzi, Andrea DeGaetano, Gabriella Macchia, Francesco Deodato, M Grazia Cece, Massimo Cirocco, Augusto Di Castelnuovo, Licia Iacoviello, et al. Radioprotective effect of moderate wine consumption in patients with breast carcinoma. *International Journal of Radiation Oncology* Biology* Physics*, 74(5):1501–1505, 2009.

[160] Pasquale Palumbo, Pierdomenico Pepe, Simona Panunzi, and Andrea DeGaetano. Observer-based closed-loop control of plasma glycemia. In *Proceedings of the 48h IEEE Conference on Decision and Control (CDC) held jointly with 2009 28th Chinese Control Conference*, pages 3507–3512. IEEE, 2009.

[161] P. Palumbo, P. Pepe, S. Panunzi, and A. DeGaetano. Robust closed-loop control of plasma glycemia: a discrete-delay model approach. *Discr. Cont. Dyn. Syst. B.*, 12:455–468, 2009.

[162] Andrea DeGaetano, Thomas Hardy, Benoit Beck, Eyas Abu-Raddad, Pasquale Palumbo, Juliana Bue-Valleskey, and Niels Pørksen. Mathematical models of diabetes progression.

American journal of physiology. Endocrinology and metabolism, 295:E1462–E1479, December 2008.

[163] Dang Vu Giang, Yongwimon Lenbury, Andrea DeGaetano, and Pasquale Palumbo. Delay model of glucose–insulin systems: global stability and oscillated solutions conditional on delays. *Journal of mathematical analysis and applications*, 343(2):996–1006, 2008.

[164] Alessio G Morganti, Francesco Deodato, Simone Zizzari, Savino Cilla, Gabriella Macchia, Simona Panunzi, Andrea DeGaetano, Angelo Piermattei, Numa Cellini, Vincenzo Valentini, et al. Complexity index (comix) and not type of treatment predicts undetected errors in radiotherapy planning and delivery. *Radiotherapy and Oncology*, 89(3):320–329, 2008.

[165] P. Palumbo, U. Picchini, B. Beck, G.J. Van, N. Delbar, and A. DeGaetano. A general approach to the apparent permeability index. *J. Pharmacokinet Pharmacodyn.*, 35:235–248, 2008.

[166] P. Palumbo, P. Pepe, S. Panunzi, and A. DeGaetano. Robust closed-loop control of plasma glycemia: a discrete-delay model approach. volume 35, pages 3330–3335, 12 2008.

[167] Umberto Picchini, Susanne Ditlevsen, and Andrea DeGaetano. Maximum likelihood estimation of a time-inhomogeneous stochastic differential model of glucose dynamics. *Mathematical Medicine and Biology: A Journal of the IMA*, 25(2):141–155, 2008.

[168] Umberto Picchini, Susanne Ditlevsen, Andrea DeGaetano, and Petr Lansky. Parameters of the diffusion leaky integrate-and-fire neuronal model for a slowly fluctuating signal. *Neural computation*, 20(11):2696–2714, 2008.

[169] Pasquale Palumbo, Simona Panunzi, and Andrea DeGaetano. Qualitative behavior of a family of delay-differential models of the glucose-insulin system. *Discrete and Continuous Dynamical Systems Series B*, 7(2):399, 2007.

[170] Pasquale Palumbo and Andrea DeGaetano. *State Feedback Control of the Glucose-Insulin System*, pages 241–252. Springer Berlin Heidelberg, 2007.

[171] Simona Panunzi, Pasquale Palumbo, and Andrea DeGaetano. A discrete single delay model for the intra-venous glucose tolerance test. *Theoretical Biology and Medical Modelling*, 4(1):1–16, 2007.

[172] Luigi Rusciani, Ilaria Proietti, Andrea Paradisi, Antonio Rusciani, Giuseppe Guerriero, Alessia Mammone, Andrea DeGaetano, and Silvio Lippa. Recombinant interferon α-2b and coenzyme q10 as a postsurgical adjuvant therapy for melanoma: A 3-year trial with recombinant interferon-α and 5-year follow-up. *Melanoma Research*, 17(3):177–183, 2007.

[173] WHO Clausen, A DeGaetano, and A Vølund. Within-patient variation of the pharmacokinetics of subcutaneously injected biphasic insulin aspart as assessed by compartmental modelling. *Diabetologia*, 49:2030–2038, 2006.

[174] Andrea DeGaetano, Simona Panunzi, Benoit Beck, and Bruno Boulanger. *Statistical Modeling in Pharmaceutical Research and Development*, pages 67–102. John Wiley & Sons, Inc. Hoboken, NJ, USA, 2006.

[175] Andrea Morelli, Jean-Louis Teboul, Salvatore Maurizio Maggiore, Antoine Vieillard-Baron, Monica Rocco, Giorgio Conti, Andrea DeGaetano, Umberto Picchini, Alessandra Orecchioni, Iacopo Carbone, et al. Effects of levosimendan on right ventricular afterload in patients with acute respiratory distress syndrome: a pilot study. *Critical care medicine*, 34(9):2287–2293, 2006.

[176] P. Palumbo, W.H. Ong Clausen, S. Panunzi, and A. DeGaetano. Linear periodic models of subcutaneous insulin absorption: Mathematical analysis. *HERMIS Journal*, 7:60–79, 2006.

[177] Pasquale Palumbo and Andrea DeGaetano. A closed-loop optimal control of the plasma glycemia. In *Proceedings of the 45th IEEE Conference on Decision and Control*, pages 679–684. IEEE, 2006.

[178] P Palumbo, S Panunzi, and A DeGaetano. Stability analysis of a discrete-delay model of the glucose-insulin system. *IFAC Proceedings Volumes*, 39(10):229–234, 2006.

[179] Emiliano Pavoni, Andrea Pucci, Paola Vaccaro, Giorgia Monteriù, Adolfo De Pasquale Ceratti, Antonio Lugini, Rosa A Virdis, Enrico Cortesi, Andrea DeGaetano, Simona Panunzi, et al. A study of the humoral immune response of breast cancer patients to a panel of human tumor antigens identified by phage display. *Cancer Detection and Prevention*, 30(3):248–256, 2006.

[180] Umberto Picchini, Susanne Ditlevsen, and Andrea DeGaetano. Modeling the euglycemic hyperinsulinemic clamp by stochastic differential equations. *Journal of mathematical biology*, 53(5):771–796, 2006.

[181] Umberto Picchini, Andrea DeGaetano, and Susanne Ditlevsen. Parameter estimation in stochastic differential mixed-effects models. Technical report, 2006.

[182] Luigi Rusciani, Ilaria Proietti, Antonio Rusciani, Andrea Paradisi, Gregoriana Sbordoni, Carmine Alfano, Simona Panunzi, Andrea DeGaetano, and Silvio Lippa. Low plasma coenzyme q10 levels as an independent prognostic factor for melanoma progression. *Journal of the American Academy of Dermatology*, 54(2):234–241, 2006.

[183] Mario Ciampelli, Fulvio Leoni, Francesco Cucinelli, Salvatore Mancuso, Simona Panunzi, Andrea DeGaetano, and Antonio Lanzone. Assessment of insulin sensitivity from measurements in the fasting state and during an oral glucose tolerance test in polycystic ovary syndrome and menopausal patients. *The Journal of Clinical Endocrinology & Metabolism*, 90(3):1398–1406, 2005.

[184] W. H. O. Clausen, A. DeGaetano, and S. Panunzi. Mathematical modelling of exogenous glucose regulation in type 1 diabetic subjects after multiple meals. Technical report, 2005.

[185] A DeGaetano, D Di Martino, A Germani, C Manes, and P Palumbo. Distributed-delay models of the glucose-insulin homeostasis and asymptotic state observation. *IFAC Proceedings Volumes*, 38(1):1041–1046, 2005.

[186] Susanne Ditlevsen and Andrea De Gaetano. Stochastic vs. deterministic uptake of dodecanedioic acid by isolated rat livers. *Bulletin of Mathematical Biology*, 67(3):547–561, 2005.

[187] Susanne Ditlevsen and Andrea De Gaetano. Mixed effects in stochastic differential equation models. *REVSTAT-Statistical Journal*, 3(2):137–153, 2005.

[188] Andrea Morelli, Zaccaria Ricci, Rinaldo Bellomo, Claudio Ronco, Monica Rocco, Giorgio Conti, Andrea DeGaetano, Umberto Picchini, Alessandra Orecchioni, Monica Portieri, et al. Prophylactic fenoldopam for renal protection in sepsis: a randomized, double-blind, placebo-controlled pilot trial. *Critical care medicine*, 33(11):2451–2456, 2005.

[189] Andrea Morelli, Luigi Tritapepe, Monica Rocco, Giorgio Conti, Alessandra Orecchioni, Andrea DeGaetano, Umberto Picchini, Paolo Pelaia, Carlo Reale, and Paolo Pietropaoli. Terlipressin versus norepinephrine to counteract anesthesia-induced hypotension in patients treated with renin-angiotensin system inhibitors: effects on systemic and regional hemodynamics. *The Journal of the American Society of Anesthesiologists*, 102(1):12–19, 2005.

[190] P Palumbo, WH Ong-Clausen, S Panunzi, A DeGaetano, et al. Analysis of impulsive models of subcutaneously delivered insulin kinetics. In *Proc. 7th Hellenic European Conference on Computer Mathematics and its Applications (HERCMA2005)*, 2005.

[191] Simona Panunzi, Andrea De Gaetano, and Geltrude Mingrone. Approximate linear confidence and curvature of a kinetic model of dodecanedioic acid in humans. *American Journal of Physiology-Endocrinology and Metabolism*, 289(5):E915–E922, 2005.

[192] Umberto Picchini, Andrea DeGaetano, Simona Panunzi, Susanne Ditlevsen, and Geltrude Mingrone. A mathematical model of the euglycemic hyperinsulinemic clamp. *Theoretical Biology and Medical Modelling*, 2(1):1–11, 2005.

[193] A. DeGaetano and G. Cremona. Direct estimation of general pulmonary vascular models from occlusion experiments. *Cardiovascular Engineering.*, 4:103–114, 2004.

[194] A. DeGaetano, G. Cortese, M.G. Pedersen, S. Panunzi, U. Picchini, and A. Morelli. Modeling serum creatinine in septic icu patients. *Cardiovascular Engineering.*, 4:173–180, 2004.

[195] Andrea Morelli, Monica Rocco, Giorgio Conti, Alessandra Orecchioni, Andrea DeGaetano, Giuliana Cortese, Flaminia

Coluzzi, Enrico Vernaglione, Paolo Pelaia, and Paolo Pietropaoli. Effects of terlipressin on systemic and regional haemodynamics in catecholamine-treated hyperkinetic septic shock. *Intensive care medicine*, 30:597–604, 2004.

[196] Andrea Morelli, Monica Rocco, Giorgio Conti, Alessandra Orecchioni, Andrea DeGaetano, Flaminia Coluzzi, Enrico Vernaglione, Paolo Pelaia, and Paolo Pietropaoli. Effects of short-term fenoldopam infusion on gastric mucosal blood flow in septic shock. *The Journal of the American Society of Anesthesiologists*, 101(3):576–582, 2004.

[197] Amitava Mukhopadhyay, Andrea DeGaetano, and Ovide Arino. Modeling the intra-venous glucose tolerance test: a global study for a single-distributed-delay model. *Discrete and Continuous Dynamical Systems Series B*, 4(2):407–418, 2004.

[198] S Panunzi, P Palumbo, and A DeGaetano. Modeling ivgtt data with delay differential equations. *IASI-CNR Research Report*, 625, 2004.

[199] F. Bartolozzi, A. DeGaetano, E. Di Lena, S. Marino, L. Nieddu, and G. Patrizi. Operational research techniques in medical treatment and diagnosis. a review. *European Journal of Operations Research, EJOR*, 121/37:435–466, 2003.

[200] Andrea DeGaetano, Domenico Di Martino, Alfredo Germani, and Costanzo Manes. Mathematical models and state observation of the glucose-insulin homeostasis. In *System Modeling and Optimization: Proceedings of the 21 st IFIP TC7 Conference held in July 21 st–25 th, 2003, Sophia Antipolis, France 21*, pages 281–294. Springer US, 2003.

[201] Susanne Ditlevsen and Andrea De Gaetano. A model of the uptake of alternative fatty acids by isolated rat liver based on stochastic differential equations. *Dynamical Stochastic Modeling in Biology*, page 26, 2003.

[202] G Gasbarrini, G Mingrone, A Giancaterini, A DeGaetano, A Scarfone, E Capristo, M Calvani, V Caso, and AV Greco. Effects of propionyl-l-carnitine topical irrigation in distal ulcerative colitis: a preliminary report. *Hepato-gastroenterology*, 50(53):1385–1389, 2003.

[203] P Muretto, F Graziano, MP Staccioli, I Barbanti, A Bartolucci, G Paolini, D Giordano, E Testa, and A DeGaetano. An endogastric capsule for measuring tumor markers ingastric juice: An evaluation of the safety and efficacy of a new diagnostic tool. *Annals of oncology*, 14(1):105–109, 2003.

[204] Annamaria Ruzzo, Francesco Graziano, Antonello Costagliola, Federica Arduini, Enrica Testa, Italo Bearzi, Giulian a Cortese, Andrea DeGaetano, Francesca Andreoni, Vittorio Lai, et al. The g/a nucleotide change at cdna position 2494 in the e-cadherin gene (cdh1): Analysis in italian patients. *Tumor biology*, 24(3):147–150, 2003.

[205] A Ruzzo, F Graziano, A Costagliola, E Testa, F Andreoni, F Arduini, A Antolini, I Bearzi, A DeGaetano, and M Magnari. Analysis of g/a snp change at position 2494 in the e-cadherin gene in italian patients with sporadic, diffuse gastric cancer. *EJC Supplements*, 5(1):S63, 2003.

[206] M. Severini, A.M. Dattilo, and A. DeGaetano. Sublethal effect of a weak intermittent magnetic field on the development of xenopus laevis (daudin) tadpoles. *Int. J. Biometeorol.*, 48:91–97, 2003.

[207] F Graziano, R Bisonni, V Catalano, R Silva, S Rovidati, E Mencarini, B Ferraro, Franco Canestrari, AM Baldelli, A DeGaetano, et al. Potential role of levocarnitine supplementation for the treatment of chemotherapy-induced fatigue in non-anaemic cancer patients. *British Journal of Cancer*, 86(12):1854–1857, 2002.

[208] D Gui, M Runfola, S Rossi, S Panunzi, and A DeGaetano. Academic recruitment in spain and italy. *Science*, 297(5582):770–771, 2002.

[209] Simeone Marino, Andrea DeGaetano, Annalisa Giancaterini, D Giordano, Melania Manco, Aldo V Greco, and Geltrude Mingrone. Computing dit from energy expenditure measures in a respiratory chamber: a direct modeling method. *Computers in biology and medicine*, 32(4):297–309, 2002.

[210] M Calvani, S D'Iddio, A DeGaetano, P Mariotti, L Mosconi, MG Pomponi, E Tabolacci, MG Torriolil, S Vernacotola, and G Neri. El tratamiento con l-aceltilcarnitina del comportamiento hiperactivo de pacientes con el síndrome x frágil. *Revista de Neurología*, 33(1):65–70, 2001.

[211] A Giancaterini, Geltrude Mingrone, A DeGaetano, E Capristo, M Calvani, V Caso, AV Greco, and G Gasbarrini. Effects of propyonil-l-carnitine topical irrigation in distal ulcerative colitis: a preliminary report. *Official journal of the American College of Gastroenterology— ACG*, 96(7):2275–2276, 2001.

[212] A. Giancaterini, A. DeGaetano, AV. Greco, S. Marino, M. Manco, S. Camastra, A. Gastaldelli, E. Ferrannini, M. Castagneto, and G. Mingrone. Role of physical activity, resting energy expenditure and diet-induced thermogenesis in weight loss achievement. *Diabetologia*, 44:A189–A189, 8 2001.

[213] Geltrude Mingrone, Simeone Marino, Andrea DeGaetano, Esmeralda Capristo, Steven B. Heymsfield, Giovanni Gasbarrini, and Aldo V. Greco. Different limit to the body's ability of increasing fat-free mass. *Metabolism*, 50(9):1004–1007, 2001.

[214] A. Purro, L. Appendini, A. DeGaetano, M. Gudjonsdottir, C.F. Donner, and A. Rossi. Physiologic determinants of ventilator dependence in long-term mechanically ventilated patients. *Am. J. Respir. Crit. Care. Med.*, 161:1115–1123, 2000.

[215] Esmeralda Capristo, Giovanni Addolorato, Geltrude Mingrone, Andrea DeGaetano, Aldo V Greco, Pietro A Tataranni, and

Giovanni Gasbarrini. Changes in body composition, substrate oxidation, and resting metabolic rate in adult celiac disease patients after a 1-y gluten-free diet treatment. *The American journal of clinical nutrition*, 72(1):76–81, 2000.

[216] E Capristo, G Addolorato, G Mingrone, A De Gaetano, AV Greco, PA Tataranni, and G Gasbarrini. Original research communications-nutritional status, dietary intake, and body composition-changes in body composition, substrate oxidation, and resting metabolic rate in adult celiac disease. *American Journal of Clinical Nutrition*, 72(1):76–81, 2000.

[217] Andrea DeGaetano and Ovide Arino. Mathematical modelling of the intravenous glucose tolerance test. *Journal of mathematical biology*, 40:136–168, 2000.

[218] A DeGaetano and O Arino. A statistical approach to the determination of stability for dynamical systems modelling physiological processes. *Mathematical and computer modelling*, 31(4-5):41–51, 2000.

[219] A Giancaterini, A DeGaetano, G Mingrone, D Gniuli, E Liverani, E Capristo, and AV Greco. Acetyl-l-carnitine infusion increases glucose disposal in type 2 diabetic patients. *Metabolism*, 49(6):704–708, 2000.

[220] D. Gui, A. DeGaetano, P.L. Spada, A. Viggiano, E. Cassetta, and A. Albanese. Botulinum toxin injected in the gastric wall reduces body weight and food intake in rats. *Aliment. Pharmacol. Ther.*, 14:829–834, 2000.

[221] Melania Manco, AV Greco, E Capristo, Donatella Gniuli, Andrea DeGaetano, and G Gasbarrini. Insulin resistance directly correlates with increased saturated fatty acids in skeletal muscle triglycerides. *Metabolism*, 49(2):220–224, 2000.

[222] M Manco, G Mingrone, A Miccheli, A DeGaetano, R Rosa, N Pescosolido, and AV Greco. Are drusen markers of impaired glucose tolerance? *Diabetes Research and Clinical Practice*, (50):251–252, 2000.

[223] Nicola Pescosolido, M Manco, G Mingrone, A DEGAETANO, E Capistro, R Rosa, Alfredo Miccheli, AV Greco, et al. Impaired insulin sensitivity in subsitivity in subjects with macular degeneration of different degree. *JOURNAL OF THE AMERICAN COLLEGE OF NUTRITION*, 19(5):686–Abs, 2000.

[224] Felicita Andreotti, Alessandro Sciahbasi, Andrea DeGaetano, Giuseppe Benedetti, Geltrude Mingrone, Aldo Virgilio Greco, and Attilio Maseri. Comparison of insulin response to intravenous glucose in healed myocardial infarction, in "cooled-off" unstable and stable angina pectoris, and in healthy subjects. *The American journal of cardiology*, 84(8):870–875, 1999.

[225] Esmeralda Capristo, Andrea DeGaetano, Geltrude Mingrone, Giovanni Addolorato, Aldo V Greco, Marco Castagneto, and Giovanni Gasbarrini. Multivariate identification of metabolic

features in inflammatory bowel disease. *Metabolism*, 48(8):952–956, 1999.

[226] Esmeralda Capristo, Geltrude Mingrone, Andrea DeGaetano, Giovanni Addolorato, Aldo V Greco, and Giovanni Gasbarrini. A new hplc method for the direct analysis of triglycerides of dicarboxylic acids in biological samples. *Clinica chimica acta*, 289(1-2):11–21, 1999.

[227] A De Gaetano and O Arino. Probabilistic determination of stability for a delay-differential model of the glucose-insulin dynamical system. *Journal of Biological Systems*, 7(02):131–144, 1999.

[228] Andrea DeGaetano, Geltrude Mingrone, Marco Castagneto, G Benedetti, AV Greco, and G Gasbarrini. Kinetics of dodecanedioic acid triglyceride in rats. *American Journal of Physiology-Endocrinology and Metabolism*, 276(3):E497–E502, 1999.

[229] Andrea De Gaetano, Geltrude Mingrone, Marco Castagneto, and Menotti Calvani. Carnitine increases glucose disposal in humans. *Journal of the American College of Nutrition*, 18(4):289–295, 1999.

[230] A. Giancaterini, A. DeGaetano, G. Mingrone, D. Gniuli, E. Capristo, E. Liverani, and AV. GRECO. Does acety-l-carnutine infusion stimulate the gene expression of glucose metabolism enzymes in type 2 diabetic patients? *Diabetes*, 48:SA356–SA356, 1999.

[231] Geltrude Mingrone, Esmeralda Capristo, Aldo V Greco, Guiseppe Benedetti, Andrea DeGaetano, Pietro A Tataranni, and Giovanni Gasbarrini. Elevated diet-induced thermogenesis and lipid oxidation rate in crohn disease. *The American journal of clinical nutrition*, 69(2):325–330, 1999.

[232] Geltrude Mingrone, Andrea DeGaetano, Aldo V Greco, Esmeralda Capristo, Giuseppe Benedetti, Marco Castagneto, and Giovanni Gasbarrini. Comparison between dodecanedioic acid and long-chain triglycerides as an energy source in liquid formula diets. *Journal of Parenteral and Enteral Nutrition*, 23(2):80–84, 1999.

[233] Geltrude Mingrone, Aldo V Greco, Esmeralda Capristo, Giuseppe Benedetti, Annalisa Giancaterini, Andrea De Gaetano, and Giovanni Gasbarrini. L-carnitine improves glucose disposal in type 2 diabetic patients. *Journal of the American College of Nutrition*, 18(1):77–82, 1999.

[234] G. Mingrone, A. DeGaetano, M. Pugeat, E. Capristo, A.V. Greco, and G. Gasbarrini. The steroid resistance of crohn's disease. *J. Investig. Med.*, 47:319–325, 1999.

[235] MG Torrioli, S Vernacotola, P Mariotti, E Bianchi, M Calvani, A DeGaetano, P Chiurazzi, and G Neri. Double-blind, placebo-controlled study of l-acetylcarnitine for the treatment of hyperactive behavior in fragile x syndrome. *American Journal of Medical Genetics*, 87(4):366–368, 1999.

[236] E. Capristo, G. Mingrone, M. Pugeat, A. DeGaetano, A. Giancaterini, AV: Greco, and G. Gasbarrini. Evaluation of the steroid resistance in crohn's disease patientss. *Gastroenterology*, 114:A946, 1998.

[237] Marco Castagneto, Andrea DeGaetano, Geltrude Mingrone, Esmeralda Capristo, Giuseppe Benedetti, Roberto Maria Tacchino, Aldo Virgilio Greco, and Giovanni Gasbarrini. A surgical option for familial chylomicronemia associated with insulin-resistant diabetes mellitus. *Obesity Surgery*, 8(2):191–198, 1998.

[238] Aldo V Greco, MD Geltrude Mingrone, Esmeralda Capristo, Giuseppe Benedetti, MD Andrea DeGaetano, and Giovanni Gasbarrini. The metabolic effect of dodecanedioic acid infusion in non–insulin-dependent diabetic patients. *Nutrition*, 14(4):351–357, 1998.

[239] Geltrude Mingrone, Giuseppe Benedetti, Esmeralda Capristo, Andrea DeGaetano, Aldo Virgilio Greco, PA Tataranni, and G Gasbarrini. Twenty-four-hour energy balance in crohn disease patients: metabolic implications of steroid treatment. *The American journal of clinical nutrition*, 67(1):118–123, 1998.

[240] G. Mingrone, A. DeGaetano, and A.V. Greco. Treatment of type 2 diabetes. *International Diabetes Monitor*, 10, 1998.

[241] Alessandro Bertuzzi, Geltrude Mingrone, Andrea DeGaetano, Alberto Gandolfi, Aldo V Greco, and Serenella Salinari. Kinetics of dodecanedioic acid and effect of its administration on glucose kinetics in rats. *British journal of nutrition*, 78(1):143–153, 1997.

[242] E Capristo, G Mingrone, G Benedetti, A Giancaterini, A Favuzzi, A DeGaetano, AV Greco, and G Gasbarrini. Effects of steroid therapy on glucose metabolismin crohn's disease. Number 16, page 46, 1997.

[243] A.V. Greco, G. Mingrone, A. DeGaetano, L. Amigo, L. Puglielli, M. Castagneto, and F. Nervi. Uptake of dodecanedioic acid by isolated rat liver. *Br. J. Nutr.*, 258:209–218, 1997.

[244] Geltrude Mingrone, Andrea DeGaetano, AV Greco, Esmeralda Capristo, G Benedetti, Marco Castagneto, and G Gasbarrini. Dodecanedioic acid infusion induces a sparing effect on whole-body glucose uptake, mainly in non-insulin-dependent diabetes mellitus. *British journal of nutrition*, 78(5):723–735, 1997.

[245] G Mingrone, G Benedetti, E Capristo, A DeGaetano, AV Greco, PA Tataranni, and G Gasbarrini. Twenty-four-hour energy balance in crohn'spatients under steroid treatment. Number 16, page 46, 1997.

[246] G. Mingrone, A. DeGaetano, A.V. Greco, E. Capristo, G. Benedetti, M. Castagneto, and G. Gasbarrini. Reversibility of insulin resistance in obese diabetic patients: role of plasma lipids. *Diabetologia*, 40:599–605, 1997.

[247] A Bertuzzi, A DeGaetano, A Gandolfi, AV Greco, G Mingrone, and S Salinari. Glucose kinetics in rat after administration of dodecanedioic acid. In *Proceedings of 18th Annual International Conference of the IEEE Engineering in Medicine and Biology Society*, volume 5, pages 1830–1831. IEEE, 1996.

[248] Andrea De Gaetano, Geltrude Mingrone, and M Castageneto. NONMEM improves group parameter estimation for the minimal model of glucose kinetics. *American Journal of Physiology-Endocrinology and Metabolism*, 271(5):E932–E937, 1996.

[249] D. Gui, P.L. Spada, A. DeGaetano, and F. Pacelli. Hypocholesterolemia and risk of death in the critically ill surgical patient. *Intensive Care Med.*, 22:790–794, 1996.

[250] Geltrude Mingrone, Andrea DeGaetano, Aldo V Greco, Giuseeppe Benedetti, Esmeralda Capristo, Marco Castagneto, and Giovanni Gasbarrini. Plasma clearance and oxidation of dodecanedioic acid in humans. *Journal of Parenteral and Enteral Nutrition*, 20(1):38–42, 1996.

[251] Pietro A Tataranni, Geltrude Mingrone, Comasia A Raguso, Andrea De Gaetano, Roberto M Tacchino, Marco Castagneto, and Aldo V Greco. Twenty-four-hour energy and nutrient balance in weight stable postobese patients after biliopancreatic diversion. *Nutrition*, 12(4):239–244, 1996.

[252] Andrea DeGaetano and O Arino. *Modélisation mathématique du système Glucose-Insuline*. PhD thesis, 1995.

[253] AV Greco, Geltrude Mingrone, Esmeralda Capristo, Andrea De Gaetano, Giovanni Ghirlanda, and Marco Castagneto. Effects of dexfenfluramine on free fatty acid turnover and oxidation in obese patients with type 2 diabetes mellitus. *Metabolism*, 44:57–61, 1995.

[254] Aldo V Greco, Pietro A Tataranni, Geltrude Mingrone, Andrea De Gaetano, Andrea Manto, P Cotroneo, and Giovanni Ghirlanda. Daily energy metabolism in patients with type 1 diabetes mellitus. *Journal of the American College of Nutrition*, 14(3):286–291, 1995.

[255] Geltrude Mingrone, Andrea DeGaetano, Aldo V Greco, Esmeralda Capristo, Marco Castagneto, and Giovanni Gasbarrini. Medium-chain triglycerides for parenteral nutrition: kinetic profile in humans. *Nutrition (Burbank, Los Angeles County, Calif.)*, 11(5):418–422, 1995.

[256] Marco Castagneto, Andrea De Gaetano, Geltrude Mingrone, Roberto Tacchino, Giuseppe Nanni, Esmeralda Capristo, Giuseppe Benedetti, Pietro Antonio Tataranni, and Aldo Virgilio Greco. Normalization of insulin sensitivity in the obese patient after stable weight reduction with bilio-pancreatic diversion. *Obesity Surgery*, 4(2):161–168, 1994.

[257] William P Coleman, Geltrude Mingrone, Andrea DeGaetano, Aldo V Greco, Marco Castagneto, and John H Siegel. A

theoretical design for investigating leucine metabolism. *IFAC Proceedings Volumes*, 27(1):383–384, 1994.

[258] William P Coleman, Andrea DeGaetano, Paolo Brugnoli, Daniele Gui, Ivo Glovannini, Marco Castagneto, and John H Siegel. Mathematical techniques for investigating respiratory control. *IFAC Proceedings Volumes*, 27(1):571–572, 1994.

[259] Andrea DeGaetano, Marco Castagneto, Geltrude Mingrone, Giuliano Gangeri, Gabriele Sganga, Pietro A Tataranni, Comasia Raguso, and Aldo V Greco. Kinetics of medium-chain triglycerides and free fatty acids in healthy volunteers and surgically stressed patients. *Journal of Parenteral and Enteral Nutrition*, 18(2):134–140, 1994.

[260] Andrea DeGaetano, Marco Castagneto, Geltrude Mingrone, William P Coleman, Gabriele Sganga, Pietro Antonio Tataranni, Giuliano Gangeri, and Aldo Virgilio Greco. Pc-based differential model fitting as a support for clinical research. *International journal of clinical monitoring and computing*, 11:35–41, 1994.

[261] Andrea DeGaetano, Geltrude Mingrone, William P Coleman, Marco Castagneto, Comasia A Raguso, Pietro A Tataranni, and Aldo V Greco. Minimal modelling of glucose kinetics by nonmem estimation. volume 27, pages 279–280. Elsevier, 1994.

[262] Geltrude Mingrone, AV Greco, Andrea DeGaetano, A Tataranni, C Raguso, and Marco Castagneto. Pharmacokinetic profile of dodecanedioic acid, a proposed alternative fuel substrate. *Journal of Parenteral and Enteral Nutrition*, 18(3):225–230, 1994.

[263] CA Raguso, Geltrude Mingrone, AV Greco, PA Tataranni, Andrea DeGaetano, and Marco Castagneto. Dicarboxylic acids and glucose utilization in humans: effect of sebacate. *Journal of Parenteral and Enteral Nutrition*, 18(1):9–13, 1994.

[264] G Scambia, P Benedetti Panici, E Foti, M Amoroso, G Salerno, G Ferrandina, F Battaglia, S Greggi, A DeGaetano, and G Puglia. Squamous cell carcinoma antigen: prognostic significance and role in the monitoring of neoadjuvant chemotherapy response in cervical cancer. *Journal of clinical oncology*, 12(11):2309–2316, 1994.

[265] Pietro A Tataranni, Geltrude Mingrone, Aldo V Greco, Paolo Caradonna, Esmeralda Capristo, Comasia A Raguso, Andrea De Gaetano, Roberto M Tacchino, and Marco Castagneto. Glucose-induced thermogenesis in postobese women who have undergone biliopancreatic diversion. *The American Journal of Clinical Nutrition*, 60(3):320–326, 1994.

[266] A Bertuzzi, A DeGaetano, A Gandolfi, AV Greco, G Mingrone, and S Salinari. Pharmacokinetics of dodecanedioic acid in rat. In *Proceedings of the 15th Annual International Conference of the IEEE Engineering in Medicine and Biology Societ*, pages 572–573. IEEE, 1993.

[267] William P Coleman, John H Siegel, Ivo Giovannini, David P Sanford, and Andrea DeGaetano. Computational logic: a method for formal analysis of the icu knowledge base. *International journal of clinical monitoring and computing*, 10:67–79, 1993.

[268] Andrea DeGaetano, William P. Coleman, Rita Pizzi, Edoardo Tomasella, Marco Castagneto, and Aldo V. Greco. Hydra: a c-language environment for real-time dos multitasking at the bedside. *International Journal of Clinical Monitoring and Computing*, 10(3):147–154, 1993.

[269] AV Greco, Geltrude Mingrone, PA Tataranni, C Raguso, Andrea DeGaetano, RM Tacchino, R Lavielle, and Giovanni Ghirlanda. Turnover and oxidation rates of plasma-free fatty acids in obese patients treated with dexfenfluramine. *Annals of nutrition and metabolism*, 37(5):237–244, 1993.

[270] Geltrude Mingrone, AV Greco, Marco Castagneto, Andrea DeGaetano, PA Tataranni, and C Raguso. Kinetics and thermogenesis of medium-chain monocarboxylic and dicarboxylic acids in man: sebacate and medium-chain triglycerides. *Journal of Parenteral and Enteral Nutrition*, 17(3):257–264, 1993.

[271] Geltrude Mingrone, Andrea DeGaetano, AV Greco, Esmeralda Capristo, C Raguso, PA Tataranni, and Marco Castagneto. A rapid glc method for the direct analysis of plasma medium chain fatty acids. *Clinica chimica acta*, 214(1):21–30, 1993.

[272] PA. Tataranni, G. Ghirlanda, G. Mingrone, P. Cotroneo, A. Manto, C. Raguso, A. De Gaetano, and Greco A.V. Energy balance in insulin-dependent diabetes mellitus patients by respiration chamber1. *Current Topics in Diabetes Research*, 12:243–245, 1993.

[273] PA Tataranni, G Ghirlanda, G Mingrone, P Cotroneo, A Manto, C Raguso[a], A DeGaetano, and AV Greco[a]. Belfiore f, bergman rn, molinatti gm (eds): Current topics in diabetes research. front diabetes. basel, karger, 1993, vol 12, pp 243-245. *Current Topics in Diabetes Research*, 12:243, 1993.

[274] W.P. Coleman, D.P. Sanford, and A. DeGaetano. Sintassi e semantica del linguaggio descrittivo dell'informazione medica (syntax and semantics of the language describing medical information.). *Medicina e Informatica*, 3:169–171, 1992.

[275] G. Gangeri, G. Sganga, P. Carducci, S. Lippa, A. DeGaetano, E. Landolfi, M. Castagneto, and F. Crucitti. Plasma levels of coenzyme q10 in sepsis. *Intensive Care Medicine. Supplement.*, page 18, 1992.

[276] G Gangeri, Gabriele Sganga, A DeGaetano, S Lippa, P Carducci, A Arcangeli, Marco Castagneto, et al. Oxygen free radical damage in sepsis and multiple organ failure: plasma levels of conjugated dienes and endogeneous antioxidants. *CLINICAL INTENSIVE CARE*, (2):16–16, 1992.

[277] Aldo Virgilio Greco, Geltrude Mingrone, Comasia Raguso, Antonio Tataranni, Enrico Finotti, Roberto M Tacchino, Esmeralda Capristo, Andrea DeGaetano, and Marco Castagneto. Metabolic effects and disposition of sebacate, an alternate dicarboxylic fuel substrate. *Annals of nutrition and metabolism*, 36(1):1–11, 1992.

[278] Antonio Tataranni, Geltrude Mingrone, Andrea DeGaetano, Comasia Raguso, and Virgilio Greco. Tracer study of metabolism and tissue distribution of sebacic acid in rats. *Annals of nutrition and metabolism*, 36(5-6):296–303, 1992.

[279] AI Rivkind, JH Siegel, M Littleton, A DeGaetano, T Mamantov, F Laghi, and JC Stoklosa. Neutrophil oxidative burst activation and the pattern of respiratory physiologic abnormalities in the fulminant post-traumatic adult respiratory distress syndrome. *Circulatory shock*, 33(1):48–62, 1991.

[280] William P Coleman, John H Siegel, Ivo Giovannini, Andrea DeGaetano, Shirin Goodarzi, Roberto M Tacchino, and Gabriele Sganga. Probability and the patient state space. *International journal of clinical monitoring and computing*, 7:201–215, 1990.

[281] William P Coleman, David P Sanford, Andrea DeGaetano, and Fred Geisler. Functional models of neurobiological processes. *Mathematical and Computer Modelling*, 14:317–321, 1990.

[282] William P Coleman, David P Sanford, Andrea DeGaetano, and Fred Geisler. Logical structure of neurobiological information processing. In *Great Lakes CS Conference on New Research Results in Computer Science*, pages 406–411. Springer New York New York, NY, 1989.

[283] F. Laghi, J.H. Siegel, A.I. Rivkind, C. Chiarla, A. DeGaetano, S. Blevins, J.C. Stoklosa, U.R. Borg, and H. Belzberg. Respiratory index/pulmonary shunt relationship: quantification of severity and prognosis in the post-traumatic adult respiratory distress syndrome. *Crit. Care. Med.*, 17:1121–1128, 1989.

[284] R. Pizzi, A. DeGaetano, P. Guadalupi, and O. Chiara. On- and off-line surveillance of the critically ill patient. *J. Clin. Comput.*, 17:67–72, 1988.

March 6, 2025