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EDUCATION

1996-2002	Ph.D., Life Sciences, Weizmann Institute of Science, Israel (Dissertation title: The primordial emergence of compositional inheritance; Advisor: Prof. Doron Lancet)
1988-1994	Laurea (B.Sc-M.Sc.), Physics, University of Trieste, Italy (Dissertation title: Test of the Standard Model from b quark production at LEP1; Grade: 110/110 with honors; Advisors: Prof. Giuseppe Furlan and Prof. Claudio Verzegnassi)

ACADEMIC APPOINTMENTS

2011-present	Associate Professor, Bioinformatics Graduate Program, Department of Biology, and Department of Biomedical Engineering, Boston University
2013-present	Founding Associate Faculty Member, Boston University Center of Synthetic Biology
2011-present	Faculty Affiliate, Hariri Institute for Computing and Computational Science & Engineering, Boston University
Fall 2012	Visiting Scholar, Department of Organismic and Evolutionary Biology, Harvard University (Sabbatical Leave)
2005-2011	Assistant Professor, Bioinformatics Graduate Program, Department of Biology, and Department of Biomedical Engineering, Boston University
2008-2012	Member of Center for BioDynamics, NSF Research and Training Grant, Boston University
2005-2008	Faculty Scholar, Lawrence Livermore National Laboratory, Microbial Systems Biology
7/2007	Visiting Professor, International Centre for Theoretical Physics, Trieste, Italy, Statistical Mechanics and Interdisciplinary Applications Research Group
1/2001-12/2004	Postdoctoral Research Fellow in computational biology, Dept. of Genetics, Harvard Medical School, Advisor: Prof. George Church
1995-2001	Research Assistant, Dept. of Molecular Genetics, Weizmann Institute of Science, Project: Computational models of evolutionary processes and the origin of life

PROFESSIONAL ACTIVITIES

2010–present	Editorial Board, Journal of Statistical Mechanics: Theory and Experiment

2012	Participant in Colloquium of the American Academy of Microbiology on *How Microbes Can Help Feed the World*, Washington DC
2011	NIH/NCI Study Section for the review of grant applications on Advanced In Vivo Imaging to Understand Cancer Systems.
2010	Review Panel, US Department Of Energy (DOE), Role of Microbial Communities in Carbon Cycling
2010	Guest Editor, special focus issue of journal *Chaos* on Genetic Interactions
2009	Co-organizer, Summer School and Conference *From biological networks to cellular function: evolution, dynamics and spatial organization*, The Abdus Salam International Centre for Theoretical Physics (ICTP), Trieste, Italy
2008	Review committee for The Center for Complexity Science, Yeshaya Horowitz Association, Israel
2005-2008	Associate Editor, PLoS Computational Biology Journal
2007	Advisory Board for NIH-funded Visant software development project
2003, 2005	Advisory Board, EcoCyc (2005) and Pathway Tools Software (2003), Bioinformatics Research Group, SRI International, Menlo Park, CA, USA
2003	Voluntary work on Severe Acute Respiratory Syndrome (SARS) epidemics forecast software at MIT, endorsed by the US Center for Disease Control and Prevention
2001-present	Peer reviewing for more than 20 journals (including Science, Nature, PLoS, Physical Review Letters, Proc. Natl. Acad. Sci. USA), funding agencies (including the US National Science Foundation, US Department of Energy, Israeli National Science Foundation, US-Israel Binational Science Foundation), and conferences

TEACHING

2005-present	Seminar in Bioinformatics (graduate course, BF821), Boston University
2005-present	Computational Genomics (graduate course, BE777), Boston University
2007-2008	Dynamics and Evolution of Biological Networks (newly introduced course for graduate and undergraduate students, BF571), Boston University
2000-2001	Early Evolution (graduate course), Feinberg Graduate School, Weizmann Institute, Israel
1998-1999	Computational and Biochemical Theories of the Origin of Life (newly introduced graduate course), Weizmann Institute, Israel

HONORS AND FELLOWSHIPS

2013	DuPont's *Horizons in Biotechnology* distinguished speaker
2012	Keynote Speaker, Synthetic Ecology Symposium, University of Minnesota
2010	Panelist/Keynote speaker, Public debate on "The strategies of Life", Trieste, Italy (outreach event, III Conference of the Italian Society for Astrobiology
2007	Best Poster Award, European Workshop on Efficiency and Productivity Analysis (EWEPA), Lille, France

2006	Keynote address, Annual Meeting of D-Cure (non-profit organization that promotes and funds research on diabetes in Israel)
2002	Prize of Distinction for Outstanding Ph.D. studies, Weizmann Institute of Science, Israel
2000	Best poster award, Israeli Society for Theoretical and Mathematical Biology 3rd meeting
1996– 2001	The Jack and Simon Djanogly Ph.D. Scholarship, Weizmann Institute
1999	Travel Grant, Theory and Mathematics in Biology and Medicine, Amsterdam
1999, 1996	Travel Grants, International Society for the Study of the Origin of Life
1999	NASA fellowship, Bioastronomy conference, Italy
1997	Complex Systems Summer School, Santa Fe Institute, New Mexico, USA
1997	Travel Grant, Aharon Katzir-Katchalsky Center, Rehovot, Israel
1993	*Fondazione Gregorio Ananian* Prize, for outstanding University merit, Trieste, Italy

RESEARCH GRANTS

Current

2012-2017	US Department of Defense, Multidisciplinary University Research Initiative (MURI): *Associating growth conditions with cellular composition in Gram-negative bacteria* (Role Co-PI)
2011-2016	US National Institute of Health, R01: *Visant-Predictome: A System for Integration, Mining, Visualization and Analysis* (Role: PI)
2011-2014	US Department of Energy: *Modeling, patterning and evolving syntrophic communities that link fermentation to metal reduction* (Role: Co-PI).
2010-2014	US National Institute of Health, R01: *Computation and functional significance of multi-phenotype genetic interaction maps* (Role: PI).
2010-2013	US Department of Energy: *An open source platform for multi-scale spatially distributed simulations of microbial ecosystems* (Role: PI).

Past

2007-2012	US National Institute of Health, R01: *Systems-level physiological basis of selection and epistasis in adaptation* (Role: Co-PI).
2007-2012	NASA Astrobiology Institute, *Requirements for the development and maintenance of multicellular life* (Role: Co-PI).
2009-2011	US National Institute of Health, "Grand Opportunities" (GO), RC2: *SciBay: A New Methodology for Scientific Collaboration and Gene Function Determination* (Role Co-Pi).
2007-2011	US Department of Energy, *Integrated Genome-Based Studies of Shewanella Ecophysiology* (Role: PI).
2007-2010	US Department of Energy, *A Systems Biology Platform for Characterizing Regulatory and Metabolic Pathways that Influence and Control Microbial Hydrogen Control* (Role: Co-PI).

2007-2009   National Science Foundation, *Acquisition of a Linux Cluster for Bioinformatics Research and Education* (Role: Co-PI).

INVITED LECTURES (2002 – present)

10/2013   *Cross Disciplinary Genomics* meeting, Université Pierre et Marie Curie, Paris
09/2013   DuPont's *Horizons in Biotechnology* seminar, Wilmington, Delaware
05/2013   Beyond Center Workshops on the Physics of Living Matter - NASA Astrobiology Institute, *Engines of Life: thermodynamic pathways to metabolism*, Tempe, AZ
04/2013   Center for Cancer Computational Biology Seminar Series, Dana Farber Cancer Institute, Harvard Medical School
03/2013   Systems Biology Special Symposium *One2many: From Single Cells to Populations*, Weizmann Institute of Science, Israel.
12/2012   Winter School on Quantitative Systems Biology, International Center for Theoretical Physics, Trieste, Italy
10/2012   Molecular Biosciences Program student-organized seminar series, Montana State University, Bozeman, MT
10/2012   Life Science Division seminar series, Lawrence Berkeley National Laboratory
08/2012   Gordon Research Conference on Molecular Basis of Microbial One-Carbon Metabolism, Bates College, Maine
07/2012   Seminar at Summer Course on Quantitative Methods in Diabetes Research, Joslin Diabetes Center, Harvard Medical School
05/2012   Conference on *Statistical Mechanics in Systems Biology: Regulation, Inference, Optimization*, Anacapri, Italy
04/2012   Keynote Lecture, Synthetic Ecology Symposium, University of Minnesota
04/2012   NASA Astrobiology Conference, AbSciCon, Georgia Tech, Atlanta, GA
01/2012   Marine Biology Laboratory, Bay Center Seminar Series, Woods Hole, MA
06/2011   1st Conference on Constraint-based Reconstruction and Analysis, Reykjavik, Iceland
05/2011   Opening seminar for Microbiome Research in the Boston Area (MiRiBA) initiative, Broad Institute, Cambridge MA
04/2011   Graduate Center of the City University of NewYork, Initiative for the Theoretical Sciences Workshop on *Metabolic control and related problems*, NY
01/2011   Workshop: *Cells, Circuits, and Computation 2011*, Harvard University, Cambridge MA
12/2010   Microsoft Research: Computational Aspects of Biological Information 2010, Cambridge, MA
12/2010   Workshop: *Applications of Optimization in Science and Engineering*, IPAM, UCLA
09/2010   Conference: *Quantitative Biology: From Complex Networks to Simple Models*, Montauk, NY
07/2010   Yeast Genetics and Molecular Biology Meeting, Univ. of British Columbia, Vancouver, Canada
06/2010   BioMaPS School, *New Directions in Evolutionary and Population Genetics*, Rutgers University
05/2010   3rd Workshop of the Italian Astrobiology Society, *When Darwin meets Copernicus*, Duino, Italy.
03/2010   Tri-institutional Seminar, Memorial Sloan Kettering Cancer Center, New York
02/2010   Seminar, University of Toronto, Donnelly Centre for Cellular and Biomolecular Research
12/2009   Computational Biology and Bioinformatics seminar, Broad Institute, Cambridge, MA
06/2009   Physics Department Seminar, University La Sapienza, Rome, Italy
04/2009   Systems Biology Seminar, University of Massachusetts Medical School, Worchester, MA
10/2008   Systems Biology Seminar, University of Michigan, Ann Arbor, MI
09/2008   Center for Complexity Science Open Day Seminar, Hebrew University, Jerusalem, Israel
09/2008   Fifth European Conference on Complex Systems, Jerusalem, Israel
06/2008   *Compartmentation, Phase Separation and the Origin of Life*, Santa Fe Institute, NM

02/2008	Annual Contractor-Grantee Workshop, US Department of Energy, Bethesda, Maryland
12/2007	Synthetic Biology Engineering Research Center seminar, MIT
09/2007	Annual meeting of the American Biomedical Engineering Society, Los Angeles, CA
06/2007	Condensed Matter Physics Seminar, International Center for Theoretical Physics, Trieste
06/2007	Workshop on *Physical and Chemical Foundations of Bioinformatics Methods,* Max Planck Institute for the Physics of Complex Systems, Dresden, Germany
12/2006	Keynote, Diabetes (D-Cure) Working Groups Annual Symposium, Weizmann Institute, Israel
12/2006	Bauer Forum, Harvard Center for Systems Biology, Harvard University, Cambridge, MA
09/2006	Opening lecture for Origins Forum, Harvard Origins of Life Initiative, Cambridge, MA
08/2006	Gordon Research Conference, *Macromolecular Organization and Cell Function: Cellular Systems Biology*, USA
06/2006	*Optimization in Complex Networks*, Center for Nonlinear Studies, Los Alamos Natl. Lab.
05/2006	Workshop *From vent chemistry to biochemistry,* Santa Fe Institute, NM
05/2006	American Society for Microbiology, 106th General Meeting, Orlando, FL
04/2006	Interdisciplinary Seminar series in Nonlinear Science, Northwestern University
10/2005	MIT, Chemical Oceanography seminar
06/2005	Intelligent Systems for Molecular Biology (ISMB), BioPathways session, Detroit, MI
05/2005	Workshop on Structure and Function of Complex Networks, ICTP, Trieste, Italy
05/2005	Workshop on Biological Networks, Bertinoro (BO), Italy
02/2005	Symposium on Network Dynamics and Biological Function, Boston University
12/2004	Networking Systems Biology symposium, Weizmann Institute of Science, Israel
12/2004	Erice International School on Complexity, *Towards the minimal cell*, Erice, Italy
11/2004	*Genomes, Chromosomes, Cells and Developm. Biology*, University C. Bernard, Lyon, France
09/2004	BioThermoKinetics workshop, Oxford University, UK
05/2004	Brandeis Adult Learning Institute, Brandeis University, Boston, MA
11/2003	Lawrence Livermore National Laboratory, ISCR and CASC seminar
06/2003	Harvard Bauer Center for Genomics Research, Genomics Talk
05/2003	Radcliffe Inst. for Advanced Study, Computational Biology conference
04/2003	University of Pennsylvania, Condensed Matter Physics seminar
11/2002	MIT Mathematics Department, Bioinformatics seminar
04/2002	DARPA BioComp PI meeting, San Diego, CA
06/2002	University of Alaska, International Conference on Emergence in Chemical Systems
11/2002	Harvard University, Fourth international Conference on the Evolution of Language

PUBLICATIONS

JOURNAL ARTICLES

Antonio L. C. Gomes, James E. Galagan and Daniel Segrè: Resource competition may lead to effective treatment of antibiotic resistant infections, *PLOS ONE*, **In press**.

Varun Mazumdar, Salomon Amar and Daniel Segrè: Metabolic proximity reflects the order of colonization in a microbial biofilm, *PLOS ONE,* **2013, 8(10): e77617**.

Ed Reznik, Pankaj Mehta and Daniel Segrè: Flux imbalance analysis and the sensitivity of cellular growth to changes in metabolite pools, *PLOS Computational Biology*, **2013, 9(8): e1003195**.

Ed Reznik, Osman Chaudhary and Daniel Segrè: The average enzyme principle, *FEBS Letters*, **2013, 587, 2891–289.**

Brian J. Anton, Yi-Chien Chang, …[66 authors]…, Daniel Segrè, Charles DeLisi, Richard J. Roberts, Martin Steffen, Simon Kasif: COMBREX: Design, Methodology, and Initial Results, *PLOS Biology*, **2013, 11(8): e1001638**.

Ed Reznik, Stefan Yohe and Daniel Segrè: A variational principle in enzyme kinetics, *Biology Direct*, **2013**, **8:7**.

Ed Reznik, Tasso Kaper and Daniel Segrè: The dynamics of hybrid metabolic-genetic oscillators, *Chaos*, **2013**, 23, 013132**.**

Sara B. Collins*, Ed Reznik* and Daniel Segrè: Temporal expression-based analysis of metabolism, *PLoS Computational Biology*, **2012**, 8(11): e1002781. (*Equally contributing authors)

David Byrne, Alexandra Dumitriu and Daniel Segrè: Comparative multi-goal tradeoffs in systems engineering of microbial metabolism, *BMC Systems Biology*, **2012**, 6:127.

Hsuan-Chao Chiu, Christopher J. Marx, and Daniel Segrè: Epistasis from functional dependence of fitness on underlying traits, *Proceedings of the Royal Society B: Biological Sciences*, **2012**, 279, 4156–4164.

Bo Liu*, Lina Faller*, Niels Klitgord*, Varun Mazumdar*, Mohammad Ghodsi, Dan D. Sommer, Ted Gibbons, Todd Treangen, Shan Li, O. Colin Stine, Hatice Hastuk, Simon Kasif, Daniel Segrè#, Mihai Pop#, Salomon Amar#: Deep sequencing of the oral microbiome reveals metabolic signatures of periodontal disease, *PLoS One*, **2012**, 7(6): e37919. (*Equally Contributing Authors; #Corresponding Authors)

Qasim Beg*, Mattia Zampieri*, Sara Baldwin, Niels Klitgord, Margrethe Serres, Claudio Altafini and Daniel Segrè: Detection of transcriptional triggers in the dynamics of microbial growth: application to a respiratory-versatile bacterium, *Nucleic Acids Research*, **2012**, 40 (15): 7132-7149.ww (*Equally contributing authors)

Miriam A Rosenbaum , Haim Y Bar , Qasim K Beg , Daniel Segrè, Dr. James Booth , Michael A Cotta, Largus T Angenent: Transcriptional analysis of *Shewanella oneidensis* MR-1 with an electrode compared to soluble Fe(III) or oxygen as terminal electron acceptor, *PLoS One*, **2012**;7(2):e30827.

Mattia Zampieri, Giuseppe Legname, Daniel Segrè and Claudio Altafini: Inferring systemic response to prions infection from a transcriptional genetic network, *Bioinformatics*, **2011**, 27(24):3407-14.

Hsin-Hung Chou, Hsuan-Chao Chiu, Nigel F. Delaney, Daniel Segrè and Christopher J. Marx: Diminishing returns epistasis among beneficial mutations decelerates adaptation, *Science*, **2011**, 332, 1190.

Evan Snitkin and Daniel Segrè: A multi-phenotype map of epistatic interactions and its evolutionary implications, *PLoS Genetics*, **2011**, 7(2): e1001294.

Moritz Schuette, Alexander Skupin, Daniel Segrè and Oliver Ebenhoeh: Modeling the complex dynamics of enzyme-pathway coevolution, *Chaos*, **2010**, (2010), 20, 045115.

Miriam Rosenbaum, Haim Y. Bar, Qasim Beg, Daniel Segrè, James Booth, Michael A. Cotta, Largus T. Angenent: *Shewanella oneidensis* in a lactate-fed pure-culture and a glucose-fed co-culture with *Lactococcus lactis* with an electrode as electron acceptor, *Bioresource Technology*, **2011,** 102, 2623-2628 *[Journal Cover]*.

Niels Klitgord and Daniel Segrè: Environments that induce synthetic microbial ecosystems, *PLoS Computational Biology*, **2010**, 6(11): e1001002.

Ed Reznik and Daniel Segrè: On the stability of metabolic cycles, *Journal of Theoretical Biology*, **2010**, 266, 536-549.

William Riehl, Paul Krapivsky, Sidney Redner and Daniel Segrè: Signatures of arithmetic simplicity in metabolic network architecture, *PLoS Computational Biology*, **2010**, 6(4): e1000725.

Varun Mazumdar, Evan Snitkin, Salomon Amar* and Daniel Segrè*: Metabolic network model of a human oral pathogen, *Journal of Bacteriology*, **2009**, 191(1), 74-90. (*Equally contributing authors)

Evan S. Snitkin, Aimée M. Dudley, Daniel M. Janse, Kaisheen Wong, George M. Church, and Daniel Segrè: Model-driven analysis of experimentally determined growth phenotypes for 465 yeast gene deletion mutants under 16 different conditions, *Genome Biology*, **2008**, Sep 22;9(9):R140.

Matthew A. Wright, Peter Kharchenko, George M. Church and Daniel Segrè**,** Chromosomal periodicity of evolutionarily conserved gene pairs, *Proc. Natl. Acad. Sci. USA*, **2007**, 104 (25), 10559-10564.

Jason Raymond and Daniel Segrè, The effect of oxygen on biochemical networks and the evolution of complex life, *Science*, **2006**, 311, 1764-1767.

Daniel Segrè, Alexander De Luna, George M. Church and Roy Kishony: Modular epistasis in yeast metabolism, *Nature Genetics*, **2005**, 37(1), 77-83.

Daniel Segrè, Jeremy Zucker, Jeremy Katz, Xiaoxia Lin, Patrik D'haeseleer, Wayne P. Rindone, Peter Kharchenko, Dat Nguyen, Matthew A. Wright and George M. Church: From annotated genomes to metabolic flux models and kinetic parameter fitting, *Omics*, **2003**, 7(3), 301-316.

Barak Shenhav, Daniel Segrè and Doron Lancet: Mesobiotic emergence: molecular assemblies that self-replicate without biopolymers, *Advances in Complex Systems*, **2003**, 6(1), 15-35.

Daniel Segrè, Dennis Vitkup and George M. Church: Analysis of optimality in natural and perturbed metabolic networks, *Proc. Natl. Acad. Sci. USA*, **2002**, 99(23), 15112-15117.

Daniel Segrè, Barak Shenhav, Ron Kafri and Doron Lancet: The molecular roots of compositional inheritance, *J. Theor. Biol.*, **2001**, 213, 481-491.

Daniel Segrè, Dafna Ben-Eli, David W. Deamer and Doron Lancet: The Lipid World, *Origins of Life and Evolution of the Biosphere*, **2001**, 31, 119-145.

Yoav Gilad, Daniel Segrè, Karl Skorecki, Michael W. Nachmann, Doron Lancet and Dror Sharon: Dichotomy of single-nucleotide polymorphism haplotypes in olfactory receptors genes and pseudogenes, *Nature Genetics*, **2000**, 26(2):221-224.

Daniel Segrè, Dafna Ben-Eli and Doron Lancet: Compositional genomes: prebiotic information transfer in mutually catalytic non-covalent assemblies, *Proc. Natl. Acad. Sci. USA*, **2000**, 97(8), 4112-4117.

Daniel Segrè, Yitzhak Pilpel and Doron Lancet: Mutual catalysis in sets of prebiotic organic molecules: evolution through computer simulated chemical kinetics, *Physica A*, **1998**, 249, Nos. 1-4, 558-564.

Daniel Segrè, Ora Kedem, Doron Lancet and Yitzhak Pilpel: Graded Autocatalysis Replication Domain (GARD): kinetic analysis of self-replication in mutually catalytic sets, *Origins of Life and Evolution of the Biosphere*, Vol.28, **1998**, 501-514.

REVIEWS, COMMENTARIES AND BOOK CHAPTERS

Arion Stettner and Daniel Segrè: The cost of efficiency in energy metabolism, *Proc. Natl. Acad. Sci. USA*, **2013**, Vol. 110, no. 24, 9629-9630.

Christpher Jacobs and Daniel Segrè: Organization principles in genetic interaction networks, *Adv Exp Med Biol*, **2012,** 751:53-78. (Special volume on Evolutionary Systems Biology, Orkun Soyer Editor).

Niels Klitgord and Daniel Segrè: Ecosystems biology of microbial metabolism, *Current Opinions in Biotechnology*, **2011**, 22:1-6 (Invited Review for special issue on Evolutionary Systems Biology).

Richard J. Roberts, Yi-Chien Chang, Zhenjun Hu, John N. Rachlin, Brian P. Anton, Revonda M. Pokrzywa, Han-Pil Choi, Lina L. Faller, Jyotsna Guleria, Genevieve Housman, Niels Klitgord, Varun Mazumdar, Mark G. McGettrick, Lais Osmani, Rajeswari Swaminathan, Kevin R. Tao, Stan Letovsky, Dennis Vitkup, Daniel Segrè, Steven L. Salzberg, Charles Delisi, Martin Steffen and Simon Kasif: COMBREX: a project to accelerate the functional annotation of prokaryotic genomes, *Nucleic Acids Research*, **2010**, Advance Access online November 21, 2010, doi:10.1093/nar/gkq1168.

Daniel Segrè and Christopher Marx: Introduction to Focus Issue: Genetic Interactions, *Chaos*, **2010**, 20, 026101.

Daniel Segrè: Dynamics and evolution of metabolic networks, book chapter, in M. Vendruscolo, G. Caldarelli, and P. De Los Rios (ed.), *Networks in Cell Biology*, Cambridge University Press, Cambridge, United Kingdom, **2010**, p. 93-116.

Daniel Segrè: Ventimila geni sotto i mari dei tropici, *Darwin*, **2005**, May-June, 56-61. *[Review, in Italian]*

Daniel Segrè: Life as a cellular automaton, *Journal of Biogeography,* **2005**, 32, 1681.
[Review of the The Principles of Life by Tibor Gánti]

Daniel Segrè: The regulatory software of cellular metabolism, *Trends in Biotechnology*, **2004**, 22(6), 261-265.

Daniel Segrè and Doron Lancet: Theoretical and computational approaches to the study of the origin of life, in *Origins, evolution and biodiversity of microbial life*, *COLE series*, Kluwer, J. Seckbach (ed.), **2004**, 91-120.

Daniel Segrè and Doron Lancet: Composing Life, *EMBO Reports*, **2000**, 1(3), 217-222.

Daniel Segrè and Doron Lancet: A statistical chemistry approach to the origin of life, *Chemtracts - Biochemistry and Molecular Biology*, **1999**, G. Zubay (ed.), 12 (6), 382-397.

REFEREED CONFERENCE PROCEEDINGS

Niels Klitgord and Daniel Segrè: The importance of compartmentalization in metabolic flux models: yeast as an ecosystem of organelles, *Genome Informatics*, **2010**, 22: 41-55.

Moritz Schuette, Niels Klitgord, Daniel Segrè and Oliver Ebenhoeh: Co-evolution of metabolism and protein sequences, *Genome Informatics*, **2010**, 22: 156-166.

Hsuan-Chao Chiu and Daniel Segrè: Comparative determination of biomass composition in differentially active metabolic states, *Genome Informatics*, **2008**, 20: 171-182.

William J. Riehl and Daniel Segrè: Optimal metabolic regulation using a constraint-based model, *Genome Informatics*, **2008**, 20: 159-170.

Evan S. Snitkin and Daniel Segrè: Optimality criteria for the prediction of metabolic fluxes in yeast mutants, *Genome Informatics*, **2008**, 20: 123-134.

Lan Hu, Daniel Segrè and Temple F. Smith, Evolutionary changes in gene regulation from a comparative analysis of multiple Drosophila species, *Genome Informatics*, **2007**, 18, 12-22.

Daniel Segrè, Dafna Ben-Eli and Doron Lancet: Prebiotic evolution of amphiphilic assemblies far from equilibrium: from compositional information to sequence-based biopolymers, Astronomical Society of the Pacific Conference Series Vol.213, Sheridan Books, Michigan, **2000**, 373-378.

Daniel Segrè, Dafna Ben-Eli, Yitzhak Pilpel, Ora Kedem and Doron Lancet: GARDobes: Primordial cell nano-precursors with organic catalysis, compositional genome and capacity to evolve, in *Instruments, Methods and Missions for Astrobiology II*, SPIE's International Symposium, Denver, CO, USA, *SPIE Proceedings*, Vol. 3755, R. B. Hoover (ed.), **1999**, 144-162.

Daniel Segrè and Doron Lancet: Mutually catalytic amphiphiles: simulated chemical evolution and implications to exobiology, in *Exobiology: Matter, Energy and Information in the Origin and Evolution of Life in the Universe*, Fifth Trieste Conference on Chemical Evolution, J. Chela-Flores and F. Raulin (eds.), Kluwer Ac. Pub., **1998**, 123-131.

Daniel Segrè, Yitzhak Pilpel, Gustavo Glusman and Doron Lancet: Self-Replication and Evolution in Primordial Mutually Catalytic Sets, in: C. B. Cosmovici, S. Bowyer, D. Werthimer (eds.), *Astronomical and Biochemical Origins*, Editrice Compositori, Bologna, **1997**, 469-476.

Yitzhak Pilpel, <u>Daniel Segrè</u>, Doron Lancet, Yehudit Weissinger and Gustavo Glusman: Multiple sequence analysis of olfactory receptor genes: sequence, structure and function relationships, The 24th Aharon Katzir-Katchalsky Conference, *Folding and Design*, **1996**, Vol.1 supplement.

Doron Lancet, Gustavo Glusman, <u>Daniel Segrè</u>, Ora Kedem and Yitzhak Pilpel: Self-replication and chemical selection in primordial mutually catalytic sets, *Origins Life Evol. Biosphere*, **1996**, Vol.26, Nos. 3-5, 270-271.