

# LEONIDAS G. ALEXOPOULOS

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*Group Leader*, Systems Biology and Bioengineering Group  
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## Education

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- 11/04- 06/08 **Postdoctoral Fellow**  
Dept of Systems Biology, **Harvard Medical School**  
Dept of Biological Engineering **Massachusetts Institute of Technology (MIT)**  
*Research Topic: Systems Biology approaches for modeling signaling pathways*  
Advisors: Dr. Peter Sorger, Dr. Douglas Lauffenburger
- 08/00-05/04 **Doctor of Philosophy**  
Department of Biomedical Engineering, **Duke University**, Durham, NC  
*Research Topic: The mechanical environment of cells in articular cartilage*  
Advisor: Dr. Farshid Guilak
- 08/00-05/04 **Certificate** in Biomolecular and Tissue Engineering, Interdisciplinary program  
**Duke University**, Durham, NC
- 08/98-08/00 **Master of Science**, Department of Mechanical Engineering  
**Duke University**, Durham, NC  
*Research Topic: Mathematical Modeling for cell mechanics*  
Advisor: Dr. Farshid Guilak
- 09/92-09/97 **Diploma**, Department of Mechanical Engineering (2<sup>nd</sup> in class)  
**Aristotle University of Thessaloniki**, Thessaloniki, Greece

## Honors / Awards

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- 2010 **“Best Practice Award”** Bio-IT word conference and expo.
- 2005 Student Achievement Award (Center of Biomolecular & Tissue Engineering, Duke University)
- 2005 Finalist at the Orthopaedic Research Society's New Investigator Recognition Awards (NIRA)
- 2003 **2003 Richard Skalak Award (Best paper published in Journal of Biomechanical Engineering) by the American Society of Mechanical Engineering (ASME)**
- 2002 - 2004 Duke Graduate Fellow, Biomolecular and Tissue Engineering Program, Duke University
- 1998 - 2002 Tuition fellowship (Depts BME and ME), Duke University

- 1997 Commencement speaker (2<sup>nd</sup> out of 150 in class of Mechanical Engineering, 1<sup>st</sup> in graduation ceremony of the Engineering School), Aristotle University of Thessaloniki (Greece)
- 1997 Award for academic excellence (Top 1%). National Engineering Society (TEE), for (Greece)
- 1996 - 1997 Annual awards for academic performance (Top 1%). National Scholarship Foundation (IKY), Greece
- 1989 Excelled in the Annual National Mathematical Olympiad, Hellenic Mathematical Society (Greece)

### **Research / Industrial Experience**

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- 11/06 – 05/08 Post-Doctoral Research Fellow, Department of Systems Biology, **Harvard Medical School**, Boston, MA
- 11/06 - 05/08 Research collaborator, **Pfizer Pharmaceutical**, RTC, Cambridge, MA
- 09/04 -11/06 Post-Doctoral Research Fellow, Department of Biological Engineering, **MIT**, Cambridge, MA
- 05/04 -06/04 Summer Intern, **Becton, Dickinson and Company**, Durham, NC
- 08/99 - 05/04 Graduate Research Assistant, Department of Biomedical Engineering, **Duke University**, Durham, NC
- 08/98-08/99 Graduate Research Assistant, Department of Mechanical Engineering and Materials Science, **Duke University**, Durham, NC
- 08/97-08/98 Research Technician, Department of Mechanical Engineering, **Aristotle University of Thessaloniki**, Greece
- 02/96-08/97 Undergraduate Research Assistant, Department of Mechanical Engineering, **Aristotle University of Thessaloniki**, Greece
- 06/95-08/95 Summer intern, **Polytechnic Institute of Glivice**, Poland

### **Peer-reviewed publications**

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Dr Alexopoulos have published 25 papers. According to Scopus he has 501 citations (excluding self-citations), and h-index 14.

Verification of systems biology research in the age of collaborative competition. P Meyer, LG Alexopoulos, C Cho, A Fuente, D Graaf, AJ Hartemink, J Hoeng, NV Ivanov, H Koeppe, R Linding, D Marbach, R Norell, MC Peitsch, JJ Rice, A Royyuru, F Schacherer, J Sprengell, D Vitkup, G Stolovitzky, Sept *2011 Nat Biotech* 29: 9

Comparing Signaling Networks between Normal and Transformed Hepatocytes Using Discrete Logical Models. J Saez-Rodriguez\*, LG Alexopoulos\*, M Zhang, MK Morris, DA Lauffenburger, PK Sorger (\*Equal contributors) *2011 Cancer Res* 15;71(16):5400-11

Crowdsourcing Network Inference: The DREAM Predictive Signaling Network Challenge. RJ Prill, J Saez-Rodriguez, LG Alexopoulos, PK Sorger, G Stolovitzky. Sept 2011 Science Signal. *Accepted*

Combined logical and data-driven models for linking signalling pathways to cellular response. IN Melas, A Mitsos, DE Messinis, TS Weiss, LG Alexopoulos. Jul 2011 BMC Syst Biol. 5;5:107 [**Highly accessed' paper**]

Setting the standards for signal transduction research. J Saez-Rodriguez\*, LG Alexopoulos\*, G Stolovitzky. (\*Equal contributors) 2011 Science Signal. 15;4(160):pe10.

Construction of signaling pathways and identification of drug effects on the liver cancer cell HepG2. Alexopoulos LG, Melas IN, Chairakaki AD, Saez-Rodriguez J, Mitsos A. 2010 Conf Proc IEEE Eng Med Biol Soc.;2010:6717-20.

Networks inferred from biochemical data reveal profound differences in TLR and inflammatory signaling between normal and transformed hepatocytes. LG Alexopoulos\*, J Saez-Rodriguez\*, BD Cosgrove, DA Lauffenburger, PK Sorger. (\*Equal contributors) 2010 Molecular & Cellular Proteomics [**Subset of this paper's dataset have become case-study for international competition in computational biology - DREAM 2008 & 2009 conferences**]

Cytokine-associated drug toxicity in human hepatocytes is associated with signaling network dysregulation. BD Cosgrove\*, LG Alexopoulos\*, Ta-chun Hang, BS Hendriks, PK Sorger, LG Griffith, DA Lauffenburger. (\*Equal contributors) 2010 Molecular BioSystems doi: 10.1039/b926287c

Towards a Rigorous Assessment of Systems Biology Models: The DREAM3 Challenges. RJ Prill, D Marbach, J Saez-Rodriguez, PK Sorger, LG Alexopoulos, X Xue, ND Clarke, G Altan-Bonnet, G Stolovitzky. 2010 PLoS ONE 5(2): e9202. doi:10.1371/journal.pone.0009202

Developmental and osteoarthritic changes in Col6a1-knockout mice: Biomechanics of type VI collagen in the cartilage pericellular matrix. Alexopoulos LG, Youn I, Bonaldo P, Guilak F. 2009 Arthritis Rheum. ;60(3):771-9.

Identifying Drug Effects via Pathway Alterations using an Integer Linear Programming Optimization Formulation on Phosphoproteomic Data. A Mitsos, I Melas, P Siminelakis, A Chairakaki, J Saez-Rodriguez, and LG Alexopoulos. Dec 2009 PLoS Comp Biol. 5(12): e1000591. [**Best Practice Award, Bio-IT World Conference and Expo, Patent Pending**]

Discrete logic modeling to link pathway maps and functional analysis of mammalian signal transduction J Saez-Rodriguez\*, LG Alexopoulos\*, J Epperlein, R Samaga, DA Lauffenburger, S Klamt, PK. Sorger. (\*Equal contributors). 2009 Molecular Systems Biology 5;331. doi:10.1038/msb.2009.87

The logic of EGFR/ErbB signaling: theoretical properties and analysis of high-throughput data. Samaga R, Saez-Rodriguez J, Alexopoulos LG, Sorger PK, Klamt S. 2009 PLoS Comput Biol. 5(8):e1000438.

Synergistic drug-cytokine induction of hepatocellular death as an in vitro approach for the study of inflammation-associated idiosyncratic drug hepatotoxicity. Cosgrove BD, King BM, Hasan MA, Alexopoulos LG, Farazi PA, Hendriks BS, Griffith LG, Sorger PK, Tidor B, Xu JJ, Lauffenburger DA. 2009 Toxicol Appl Pharmacol. 237(3):317-30

Flexible informatics for linking experimental data to mathematical models via DataRail. Saez-Rodriguez J, Goldsipe A, Muhlich J, Alexopoulos LG, Millard B, Lauffenburger DA, Sorger PK. 2008 Bioinformatics 15;24(6):840-7.

The pericellular matrix as a transducer of biomechanical and biochemical signals in articular cartilage. Guilak F, Alexopoulos LG, Upton ML, Youn I, Choi JB, Cao L, Setton LA, Haider MA. 2006 Ann N Y Acad Sci.;1068:498-512.

IL-1beta decreases the elastic modulus of human tenocytes. Qi J, Fox AM, Alexopoulos LG, Chi L, Bynum D, Guilak F, Banes AJ. 2006 J Appl Physiol. 101(1):189-95

Determination of the Poisson's ratio of the cell: recovery properties of chondrocytes after release from complete micropipette aspiration. Trickey WR, Baaijens FP, Laursen TA, Alexopoulos LG, Guilak F. 2006 J Biomech. ;39(1):78-87.

The biomechanical role of the chondrocyte pericellular matrix in articular cartilage. Alexopoulos LG, Setton LA, Guilak F. 2005 Acta Biomater. May;1(3):317-25

Zonal uniformity in mechanical properties of the chondrocyte pericellular matrix: micropipette aspiration of canine chondrons isolated by cartilage homogenization. Guilak F, Alexopoulos LG, Haider MA, Ting-Beall HP, Setton LA. 2005 Ann Biomed Eng. Oct;33(10):1312-8.

Osteoarthritic changes in the biphasic mechanical properties of the chondrocyte pericellular matrix in articular cartilage. Alexopoulos LG, Williams GM, Upton ML, Setton LA, Guilak F. 2005 J Biomech. ;38(3):509-17.

Alterations in the mechanical properties of the human chondrocyte pericellular matrix with osteoarthritis. Alexopoulos LG, Haider MA, Vail TP, Guilak F. 2003 J Biomech Eng.;125(3):323-33. **[Richard Skalak Best Paper Award, American Society of Mechanical Engineers]**

A method for quantifying cell size from differential interference contrast images: validation and application to osmotically stressed chondrocytes. Alexopoulos LG, Erickson GR, Guilak F. 2002 J Microsc.;205(Pt 2):125-35.

Hyper-osmotic stress induces volume change and calcium transients in chondrocytes by transmembrane, phospholipid, and G-protein pathways. Erickson GR, Alexopoulos LG, Guilak F. 2001 J Biomech.;34(12):1527-35

Automated standardized pupillometry with optical method for purposes of clinical practice and research. Fotiou F, Fountoulakis KN, Goulas A, Alexopoulos L, Palikaras A. 2000 Clin Physiol.;20(5):336-47.

## Abstracts (partial list)

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- [C1] Fotiou F, Fountoulakis K, Tsorlinis H, Goulas A, **Alexopoulos L.**, "Disorders of the central cholinergic system in Myasthenia Gravis and possible therapeutical interventions", International Journal of Psychophysiology (1998) 30/1-2: 160-161
- [C2] Fotiou F, Fountoulakis K, Tsolaki M, Tsorlinis H, Goulas A, **Alexopoulos L.**, "Changes in the pupil reaction to light in Alzheimer's disease patients", International Journal of Psychophysiology (1998) 30/1-2: 159-160
- [C3] **Alexopoulos L.G.**, Haider M.A and Guilak F, "An axisymmetric elastic layered half-space model for micropipette aspiration of the chondrocyte pericellular matrix", American Society of Mechanical Engineers (ASME)- Bioengineering division (BED) (2001) Vol.51
- [C4] **Alexopoulos L.G.**, Haider M.A. and Guilak F., "A theoretical model for micropipette aspiration of an elastic layer", Annals of Biomedical Engineering (2001) Vol.29, Sup.1: S-29
- [C5] **Alexopoulos L.G.**, Haider M.A., and Guilak F., "The mechanical role of the chondrocyte pericellular matrix: Micropipette aspiration of mechanically isolated chondrons", 2<sup>nd</sup> European Symposium on Biomedical Engineering , Patra, Greece (2002)
- [C6] Guilak F., **Alexopoulos L.G.**, Nielsen R., Ting Beal, H.P., Haider M.A., "The biomechanical properties of the chondrocyte pericellular matrix: micropipette aspiration of mechanically isolated chondrons", Transactions of the 48th Annual meeting of the Orthopaedic Research Society (ORS) (2002) Vol 27
- [C7] **Alexopoulos L.G.**, Haider, M.A., Vail, T.P., Williams, G.M., Guilak, F., "Alterations in the mechanical properties of the human chondrocyte pericellular matrix with osteoarthritis", Transactions of the 49th Annual meeting of the Orthopaedic Research Society (ORS) (2003) Vol 28
- [C8] **Alexopoulos L.G.**, Williams, G.M., Upton M.L., Setton L.A., Guilak, F., "Biphasic properties of normal and

- osteoarthritic human chondrons*”, American Society of Mechanical Engineers (ASME) Summer Bioengineering conference (2003)
- [C9] Banes A.J., Qi J., Granzier H., LaBeit S., Otey C., Yang X., Bynum D., Chua M., **Alexopoulos L.G.**, Williams G., Guilak F., “*Titin, a giant elastic protein in muscle: role in elastic recoil in tendon cells*”, Transactions of the 50th Annual meeting of the Orthopaedic Research Society (ORS) (2004) Vol 29
- [C10] **Alexopoulos L.G.**, Williams, G.M., Upton M.L., Setton L.A., Guilak, F., “*The biomechanical role of the chondrocyte pericellular matrix*”, Transactions of the 50th Annual meeting of the Orthopaedic Research Society (ORS) (2004) Vol 29
- [C11] Fox A.M., Qui J., Guilak F, **Alexopoulos L.G.**, Youn I., Xi Y., Banes A.J., “*The role of titin in connective tissue cell strain sensitivity*”, Biomedical Engineering Society (BMES) Annual Fall Meeting 2004
- [C12] **Alexopoulos L.G.**, Guilak F., “*Tissue Engineering for Articular Cartilage*”, International symposium on Current Concepts & Advancements in the Management of Knee Disorders – Larissa, Greece (2004)
- [C13] Qi J., Chi L., **Alexopoulos L.G.**, Guilak F., Bynum D., Banes A.J., “*IL-1 beta reduced the modulus of human tendon internal fibroblasts*”, Transactions of the 51th Annual meeting of the Orthopaedic Research Society (ORS) (2005)
- [C14] Boyd L.M., Richardson W.J., Li Y., Flahiff C.M., **Alexopoulos L.G.**, Guilak F., Olsen B.R., Bonaldo P. and Setton L.A., “*Evaluation of Intervertebral Disc Degeneration in Mice Harboring Gene Mutations for Types VI, IX and XI Collagens*”, Transactions of the 51th Annual meeting of the Orthopaedic Research Society (ORS) (2005)
- [C15] Boyd L.M., Richardson W.J., Li Y., Chen J., Flahiff C.M., **Alexopoulos L.G.**, Guilak F., Xu L., Olsen B.R., Bonaldo P. and Setton L.A., “*Intervertebral Disc Degeneration in Mice Harboring Collagen Gene Mutations*”, International Society for Study of the Lumbar Spine (2005)
- [C16] **Alexopoulos L.G.**, Bonaldo P., Guilak, F., “*Accelerated development of osteoarthritis in Col6a1 knockout mice: The biomechanical role of type VI collagen in articular cartilage*”, Transactions of the 51th Annual meeting of the Orthopaedic Research Society (ORS) (**Finalist for the 2005 ORS-NIRA award**) (2005)
- [C17] **Alexopoulos L.G.**, Cosgrove B.D., Lauffenburger D.A., de Graaf D., Sorger P.K. “*Pro-survival and pro-death responses of hepatocytes to chemical and cytokine insult*” Computational Cell Biology - Cold Spring Harbor (March 2007)
- [C18] Saez-Rodriguez J., **Alexopoulos L.G.**, Reiner R., Klamt S., de Graaf D., Lauffenburger D.A., Sorger P.K., “*Confronting Large-scale Signaling Data with Network Topology within a Boolean Framework*”. Systems Biology Centers Meeting - NIGMS-ICBP (June 2007)
- [C19] **Alexopoulos L.G.**, Saez-Rodriguez J., Cosgrove B.D., de Graaf D., Lauffenburger D.A., Sorger P.K. “*IRS1 dependant signaling crosstalk between pro-survival, pro-death, and pro-inflammatory cytokines in primary hepatocytes and HepG2s*” Systems Biology Centers Meeting - NIGMS-ICBP (June 2007)
- [C20] Saez-Rodriguez J., **Alexopoulos L.G.**, Reiner R., Klamt S., Lauffenburger D.A., Sorger P.K. “*Confronting Large-scale Signaling Data with Network Topology within a Boolean Framework*” Integrative Cancer Biology - ICBP, Washington DC (Nov 2007)
- [C21] **Alexopoulos L.G.**, “System Wide Signaling Measurements in Primary Hepatocytes and HepG2s” (invited speaker) Luminex, xSamples Metting (Sept 2007)
- [C22] Saez-Rodriguez J., **Alexopoulos L.G.**, Reiner R., Klamt S., Lauffenburger D.A., Sorger P.K. “*Confronting Large-scale Signaling Data with Network Topology within a Boolean Framework*” Dialogue for Reverse Engineering Assessments and Methods (DREAM2) New York, (Dec 2007)
- [C23] **Alexopoulos L.G.**, Saez-Rodriguez J., Cosgrove B.D., Lauffenburger D.A., Sorger P.K. “*Unraveling transformation patterns in cancer hepatocytes using high-throughput protein activity-based profiling*” Conference on Systems Biology of Mammalian Cells -SBMC (May 2008)
- [C24] Regina S., Saez-Rodriguez J., **Alexopoulos L.G.**, Sorger P.K., Klamt S. “*Logical modeling of EGFR/ErbB signaling*” Conference on Systems Biology of Mammalian Cells -SBMC (May 2008)
- [C25] Saez-Rodriguez J., **Alexopoulos L.G.**, Reiner R., Klamt S., Lauffenburger D.A., Sorger P.K. “*Confronting Large-scale Signaling Data with Network Topology within a Boolean Framework uncovers mechanistic differences between primary and cancerous hepatocytes*” Conference on Systems Biology of Mammalian Cells -SBMC (May 2008)
- [C26] **Alexopoulos L.G.**, Saez-Rodriguez J., Cosgrove B.D., Lauffenburger D.A., Sorger P.K. “*Protein-based profiling of liver cancer using multi-linear regression and boolean models*” 6th International Conference on Pathways, Networks, and Systems Medicine (June 2008)
- [C27] Cosgrove B.D, **Alexopoulos L.G.**, King B.M., Hasan M.A., Tidor B., Sorger P.K., Griffith L.G., Lauffenburger D.A “*Multi-pathway signaling network analysis of inflammation-associated idiosyncratic drug hepatotoxicity*” International Conference: Systems Biology of Human Disease (June 2008)
- [C28] Saez-Rodriguez J., **Alexopoulos L.G.**, Reiner R., Klamt S., Lauffenburger D.A., Sorger P.K. “*Confronting Large-scale Signaling Data with Network Topology within a Boolean Framework uncovers mechanistic differences between primary and cancerous hepatocytes*” International Conference: Systems Biology of Human Disease (June 2008)
- [C29] **Alexopoulos L.G.**, Saez-Rodriguez J., Cosgrove B.D., Lauffenburger D.A., Sorger P.K. “*Unraveling transformation patterns in cancer hepatocytes using high-throughput protein activity-based profiling*” 9th International Conference on Systems Biology - ICSB (Aug 2008)
- [C30] Regina S., Saez-Rodriguez J., **Alexopoulos L.G.**, Sorger P.K., Klamt S. “*Logical modeling of growth factor signaling*”. 9th International Conference on Systems Biology - ICSB (Aug 2008)
- [C31] Saez-Rodriguez J., **Alexopoulos L.G.**, Reiner R., Klamt S., Lauffenburger D.A., Sorger P.K. “*Confronting Large-scale Signaling Data with Network Topology within a Boolean Framework uncovers mechanistic differences between primary and cancerous hepatocytes*” 9th International Conference on Systems Biology - ICSB (Aug 2008)
- [C32] Cosgrove B.D, **Alexopoulos L.G.**, King B.M., Hasan M.A., Tidor B., Sorger P.K., Griffith L.G., Lauffenburger D.A “*Multi-pathway signaling network analysis of inflammation-associated idiosyncratic drug hepatotoxicity*” 2008 BMES Annual Fall Meeting (Oct 2008)
- [C33] **Alexopoulos L.G.**, Eftaxiopolou T, and Provatidis C. “*Modeling Signaling pathways in cartilage degeneration*” Annual 2008 meeting of the Hellenic Society of Biomechanics / Greek chapter of the International Society of Biomechanics. Athens / Greece 2008
- [C34] **Alexopoulos L.G.**, Lauffenburger D.A., Sorger P.K. “*Modeling pro-death signaling pathways in cancer hepatocytes*”

- using multi-combinatorial treatments of inhibitors and stimuli” 8th International Conference on BioInformatics and BioEngineering. Athens/Greece 2008
- [C35] Mitsos A, Saez-Rodriguez J, Siminelakis PS, **Alexopoulos LG**. “Phosphoproteomic-derived pathway maps using Integer Linear Programming (ILP)” RECOMB: Regulatory Genomics, Systems Biology, and DREAM3. Boston, MA /USA 2008
- [C36] Chairakaki AD, Melas IN, Siminelakis PS, Klamt S, Mitsos A, Saez-Rodriguez J, and **Alexopoulos LG**. “Systems Biology for Drug Targeting, Efficacy, and Safety” 5th International Greek Biotechnology Forum. Athens / Greece 2009
- [C37] **Alexopoulos LG**, Chairakaki AD, Melas IN, Siminelakis PS, Klamt, S, Saez-Rodriguez J, Mitsos A. “Protein-based profiling using multi-linear regression and Boolean models” 7th International Conference on Pathways, Networks, and Systems Medicine. Corfu/Greece 2009
- [C38] **Alexopoulos L.G**, “Broad Exploration of signaling pathways in cartilage degeneration” International Symposium on “Cartilage Biology”. Larissa/Greece 2009
- [C39] Mylona E, **Alexopoulos LG**, Chairakaki AD, Melas I. “Substrate rigidity alters the secreted protein profile and chemotaxis response of fibrosarcoma cells”. 3rd European Meeting on Cell Mechanics. Bad Honnef / Germany 2009
- [C40] Mitsos A, Melas IN, Siminelakis PS, Chairakaki AD, Saez-Rodriguez J, **Alexopoulos LG**. “Identifying Drug Effects via Pathway Alterations using an Integer Linear Programming Optimization Formulation on Phosphoproteomic Data” Regulatory Genomics, Systems Biology, and DREAM3. Boston, MA /USA 2008
- [C41] **Alexopoulos LG** “Broad Exploration of signaling pathways using xMAP technology” Planet xMAP Europe. Amsterdam/Netherlands 2009
- [C42] Melas IN\*, Chairakaki DA\*, Mitsos A, Saez-Rodriguez J, **Alexopoulos LG** (\*equal contributors) “Drug Effects Identification Using an Integer Linear Programming Optimization”, Hellenic Society of Computational Biology and Bioinformatics HSCBB09, Athens 2009.
- [C43] Cosgrove BD, **Alexopoulos LG**, Saez-Rodriguez J, Griffith LG, Lauffenburger DA. “A multipathway phosphoproteomic signaling network model of idiosyncratic drug- and inflammatory cytokine-induced toxicity in human hepatocytes” Conf Proc IEEE Eng Med Biol Soc. 2009;1:5452-5.PMID: 19964679
- [C44] Saez-Rodriguez J, **Alexopoulos LG**, Epperlein J, Samaga R, Klamt S , Lauffenburger DA, Sorger PK “Logic modeling of a normal and transformed liver as a means to link pathway maps to cell signaling data” Computational Cell Biology 4<sup>th</sup> Cold Spring Harbor/Wellcome Trust conference, Hinxton, UK.
- [C45] Melas IN, Chairakaki DA, Mitsos A, Saez-Rodriguez J, Missinis D, Kylri-Florou D, **Alexopoulos LG**. “Identifying Drug Effects on HepG2 cells via pathway alterations using an Integer Linear Programming formulation”. European Association for the study of the liver EASL, Amsterdam, 2010.

## Book Chapter

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- [B1] **Alexopoulos L.G.**, J. Saez-Rodriguez, C. Espelin. *High throughput protein-based technologies and computational models for drug development, efficacy and toxicity*. Drug Efficacy, Safety, and Biologics Discovery: Emerging Technologies and Tools, Ed. J. J. Xu, S. Ekins, Wiley&Sons.

## Patent

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- [Pa1] **Alexopoulos L.G.**, Mitsos A “Identification of Drug effects on Signaling Pathways” US 61/264,101.

## Grants Received (Since May 2008)

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- 2008-2011: Max Planck Institute / Hepatosys: Construction of signaling pathways using Boolean modelling (100%)
- 2008-2010: Marie-Curie MIRG-14-CT-2007-046531: Modeling Signaling Pathways in Cartilage Degeneration (100%)
- 2009-2010: Vertex Pharmaceuticals: Optimizing drug efficacy via phosphoproteomic data (100%)
- 2010: Aachen University: Construction of large signaling topologies via phosphoproteomic data (100%)

2011-2012: Max Planck Institute: Vitual Liver. Crosstalk between Insulin, HGF, and EGFR downstream signals (100%)

2010-2012: Boehringer-Ingelheim: Development of ELISA type custom beads for Luminex (100%)

### **Organizing Conferences / Workshops**

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- [O1] Co-organizing the 7<sup>th</sup> “International Conference on Pathways, Networks, and Systems Medicine” Corfu, July 2009
- [O2] Co-organizing the 8<sup>th</sup> “International Conference on Pathways, Networks, and Systems Medicine” Phodes, July 2010
- [O3] Co-organizing workshop at the International Conference on Systems Biology (ICSB 2010) “*From high-throughput protein activity data to cell-specific logic models using DataRail and CellNetOptimizer*” with Julio Saez-Rodriguez

### **Reviewer in Conferences, Journals and Grants**

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**Conferences:** IEEE Bioinformatics and Bioengineering, IEEE Mediterranean Conference on Control and Automation

**Journals:** Biotechnology Journal, Journal of Biomechanics, Journal of Biomechanical Engineering, Biomechanics and Modeling in Mechanobiology, Biophysical Journal, Journal of Anatomy, Journal of the Royal Society Interface, Medical and Biological Engineering and Computing, Cardiovascular Engineering and Technology, Transactions on Information Technology in Biomedicine, Transactions on Biomedical Engineering, PLoS ONE, Proteome Science, Cellular and Molecular Bioengineering

**Grants:** (1) Research Promotion Foundation, Cyprus, (2) Natural Sciences and Engineering Research, Council of Canada, (3) Research Foundation, Greece

### **Editorial Board**

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- Systems Biomedicine, Landes Bioscience

### **Professional Memberships**

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- American Society of Mechanical Engineers (ASME)
- Orthopaedic Research Society (ORS)
- Osteoarthritis Research Society International (OARSI)
- Biomedical Engineering Society (BMES)
- American Society for Cell Biology (ASCB)
- Technical Chamber of Greece (TEE-Greece)