

1. Kamisoglu K, Acevedo A, Almon RR, Coyle S, Corbett S, Dubois DC, Nguyen TT, Jusko WJ, Androulakis IP. Understanding Physiology in the Continuum: Integration of Information from Multiple -Omics Levels. *Front Pharmacol.* 2017;8:91. doi: 10.3389/fphar.2017.00091. PubMed PMID: 28289389; PMCID: PMC5327699.<http://www.ncbi.nlm.nih.gov/pubmed/28289389>
2. Bae SA, Androulakis IP. The Synergistic Role of Light-Feeding Phase Relations on Entraining Robust Circadian Rhythms in the Periphery. *Gene Regul Syst Bio.* 2017;11:1177625017702393. doi: 10.1177/1177625017702393. PubMed PMID: 28469414; PMCID: PMC5404903.<http://www.ncbi.nlm.nih.gov/pubmed/28469414>
3. Rao RT, Pierre KK, Schlesinger N, Androulakis IP. The Potential of Circadian Realignment in Rheumatoid Arthritis. *Crit Rev Biomed Eng.* 2016;44(3):177-91. doi: 10.1615/CritRevBiomedEng.2016018812. PubMed PMID: 28605351.<http://www.ncbi.nlm.nih.gov/pubmed/28605351>
4. Rao R, Yang Q, Orman MA, Berthiaume F, Ierapetritou MG, Androulakis IP. Burn trauma disrupts circadian rhythms in rat liver. *Int J Burns Trauma.* 2016;6(2):12-25. PubMed PMID: 27335693; PMCID: PMC4913229.<http://www.ncbi.nlm.nih.gov/pubmed/27335693>
5. Rao R, DuBois D, Almon R, Jusko WJ, Androulakis IP. Mathematical modeling of the circadian dynamics of the neuroendocrine-immune network in experimentally induced arthritis. *Am J Physiol Endocrinol Metab.* 2016;311(2):E310-24. doi: 10.1152/ajpendo.00006.2016. PubMed PMID: 27221115; PMCID: PMC5005970.<http://www.ncbi.nlm.nih.gov/pubmed/27221115>
6. Pierre K, Schlesinger N, Androulakis IP. The role of the hypothalamic-pituitary-adrenal axis in modulating seasonal changes in immunity. *Physiol Genomics.* 2016;48(10):719-38. doi: 10.1152/physiolgenomics.00006.2016. PubMed PMID: 27341833; PMCID: PMC5243227.<http://www.ncbi.nlm.nih.gov/pubmed/27341833>
7. Hartmanshenn C, Scherholz M, Androulakis IP. Physiologically-based pharmacokinetic models: approaches for enabling personalized medicine. *J Pharmacokinet Pharmacodyn.* 2016;43(5):481-504. doi: 10.1007/s10928-016-9492-y. PubMed PMID: 27647273; PMCID: PMC5204363.<http://www.ncbi.nlm.nih.gov/pubmed/27647273>
8. Bae SA, Acevedo A, Androulakis IP. Asymmetry in Signal Oscillations Contributes to Efficiency of Periodic Systems. *Crit Rev Biomed Eng.* 2016;44(3):193-211. doi: 10.1615/CritRevBiomedEng.2017019658. PubMed PMID: 28605352.<http://www.ncbi.nlm.nih.gov/pubmed/28605352>
9. Androulakis IP. Quantitative Systems Pharmacology: A Framework for Context. *Curr Pharmacol Rep.* 2016;2(3):152-60. doi: 10.1007/s40495-016-0058-x. PubMed PMID: 27570730; PMCID: PMC4996481.<http://www.ncbi.nlm.nih.gov/pubmed/27570730>
10. Wu TY, Huang Y, Zhang C, Su ZY, Boyanapalli S, Khor TO, Wang H, Lin H, Gounder M, Kagan L, Androulakis IP, Kong AN. Pharmacokinetics and pharmacodynamics of 3,3'-diindolylmethane (DIM) in regulating gene expression of phase II drug metabolizing enzymes. *J Pharmacokinet Pharmacodyn.* 2015;42(4):401-8. doi: 10.1007/s10928-015-9421-5. PubMed PMID: 26138223.<http://www.ncbi.nlm.nih.gov/pubmed/26138223>
11. Rao R, Orman MA, Berthiaume F, Androulakis IP. Dynamics of hepatic gene expression and serum cytokine profiles in single and double-hit burn and sepsis animal models. *Data Brief.* 2015;3:229-33. doi: 10.1016/j.dib.2015.02.018. PubMed PMID: 26217749; PMCID: PMC4510136.<http://www.ncbi.nlm.nih.gov/pubmed/26217749>
12. Piaditis G, Markou A, Papanastasiou L, Androulakis, II, Kaltsas G. Progress in aldosteronism: a review of the prevalence of primary aldosteronism in pre-hypertension and hypertension. *Eur J Endocrinol.* 2015;172(5):R191-203. doi: 10.1530/EJE-14-0537. PubMed PMID: 25538205.<http://www.ncbi.nlm.nih.gov/pubmed/25538205>

13. Mavroudis PD, Corbett SA, Calvano SE, Androulakis IP. Circadian characteristics of permissive and suppressive effects of cortisol and their role in homeostasis and the acute inflammatory response. *Math Biosci.* 2015;260:54-64. doi: 10.1016/j.mbs.2014.10.006. PubMed PMID: 25445574; PMCID: PMC4306649. <http://www.ncbi.nlm.nih.gov/pubmed/25445574>
14. Kamisoglu K, Sukumaran S, Nouri-Nigjeh E, Tu C, Li J, Shen X, Duan X, Qu J, Almon RR, DuBois DC, Jusko WJ, Androulakis IP. Tandem analysis of transcriptome and proteome changes after a single dose of corticosteroid: a systems approach to liver function in pharmacogenomics. *OMICS.* 2015;19(2):80-91. doi: 10.1089/omi.2014.0130. PubMed PMID: 25611119; PMCID: PMC4322790. <http://www.ncbi.nlm.nih.gov/pubmed/25611119>
15. Kamisoglu K, Haimovich B, Calvano SE, Coyle SM, Corbett SA, Langley RJ, Kingsmore SF, Androulakis IP. Human metabolic response to systemic inflammation: assessment of the concordance between experimental endotoxemia and clinical cases of sepsis/SIRS. *Crit Care.* 2015;19:71. doi: 10.1186/s13054-015-0783-2. PubMed PMID: 25887472; PMCID: PMC4383069. <http://www.ncbi.nlm.nih.gov/pubmed/25887472>
16. Androulakis IY. Special issue on Mathematical Models of Inflammation. *Math Biosci.* 2015;260:1. doi: 10.1016/j.mbs.2014.10.003. PubMed PMID: 25445735. <http://www.ncbi.nlm.nih.gov/pubmed/25445735>
17. Androulakis IP. Systems engineering meets quantitative systems pharmacology: from low-level targets to engaging the host defenses. *Wiley Interdiscip Rev Syst Biol Med.* 2015;7(3):101-12. doi: 10.1002/wsbm.1294. PubMed PMID: 25778449. <http://www.ncbi.nlm.nih.gov/pubmed/25778449>
18. Sunderram J, Sofou S, Kamisoglu K, Karantza V, Androulakis IP. Time-restricted feeding and the realignment of biological rhythms: translational opportunities and challenges. *J Transl Med.* 2014;12:79. doi: 10.1186/1479-5876-12-79. PubMed PMID: 24674294; PMCID: PMC3973614. <http://www.ncbi.nlm.nih.gov/pubmed/24674294>
19. Scheff JD, Griffel B, Corbett SA, Calvano SE, Androulakis IP. On heart rate variability and autonomic activity in homeostasis and in systemic inflammation. *Math Biosci.* 2014;252:36-44. doi: 10.1016/j.mbs.2014.03.010. PubMed PMID: 24680646; PMCID: PMC4159048. <http://www.ncbi.nlm.nih.gov/pubmed/24680646>
20. Nguyen TT, Mattick JS, Yang Q, Orman MA, Ierapetritou MG, Berthiaume F, Androulakis IP. Bioinformatics analysis of transcriptional regulation of circadian genes in rat liver. *BMC Bioinformatics.* 2014;15:83. doi: 10.1186/1471-2105-15-83. PubMed PMID: 24666587; PMCID: PMC3987685. <http://www.ncbi.nlm.nih.gov/pubmed/24666587>
21. Nguyen TT, Almon RR, Dubois DC, Sukumaran S, Jusko WJ, Androulakis IP. Tissue-specific gene expression and regulation in liver and muscle following chronic corticosteroid administration. *Gene Regul Syst Bio.* 2014;8:75-87. doi: 10.4137/GRSB.S13134. PubMed PMID: 24653645; PMCID: PMC3956809. <http://www.ncbi.nlm.nih.gov/pubmed/24653645>
22. Mavroudis PD, Corbett SA, Calvano SE, Androulakis IP. Mathematical modeling of light-mediated HPA axis activity and downstream implications on the entrainment of peripheral clock genes. *Physiol Genomics.* 2014;46(20):766-78. doi: 10.1152/physiolgenomics.00026.2014. PubMed PMID: 25073602. <http://www.ncbi.nlm.nih.gov/pubmed/25073602>
23. Kamisoglu K, Sleight K, Nguyen TT, Calvano SE, Coyle SM, Corbett SA, Androulakis IP. Effects of coupled dose and rhythm manipulation of plasma cortisol levels on leukocyte transcriptional response to endotoxin challenge in humans. *Innate Immun.* 2014;20(7):774-84. doi: 10.1177/1753425913508458. PubMed PMID: 24217219. <http://www.ncbi.nlm.nih.gov/pubmed/24217219>
24. Kamisoglu K, Calvano SE, Coyle SM, Corbett SA, Androulakis IP. Integrated transcriptional and metabolic profiling in human endotoxemia. *Shock.* 2014;42(6):499-508. doi: 10.1097/SHK.0000000000000248. PubMed PMID: 25061728. <http://www.ncbi.nlm.nih.gov/pubmed/25061728>

25. Androulakis IP. A Chemical Engineer's Perspective on Health and Disease. *Comput Chem Eng*. 2014;71:665-71. doi: 10.1016/j.compchemeng.2014.09.007. PubMed PMID: 25506103; PMCID: PMC4260424.<http://www.ncbi.nlm.nih.gov/pubmed/25506103>
26. Vodovotz Y, An G, Androulakis IP. A Systems Engineering Perspective on Homeostasis and Disease. *Front Bioeng Biotechnol*. 2013;1:6. doi: 10.3389/fbioe.2013.00006. PubMed PMID: 25022216; PMCID: PMC4090890.<http://www.ncbi.nlm.nih.gov/pubmed/25022216>
27. Stamatelos SK, Androulakis IP, Kong AN, Georgopoulos PG. A semi-mechanistic integrated toxicokinetic-toxicodynamic (TK/TD) model for arsenic(III) in hepatocytes. *J Theor Biol*. 2013;317:244-56. doi: 10.1016/j.jtbi.2012.09.019. PubMed PMID: 23069314; PMCID: PMC4026948.<http://www.ncbi.nlm.nih.gov/pubmed/23069314>
28. Scheff JD, Mavroudis PD, Calvano SE, Androulakis IP. Translational applications of evaluating physiologic variability in human endotoxemia. *J Clin Monit Comput*. 2013;27(4):405-15. doi: 10.1007/s10877-012-9418-1. PubMed PMID: 23203205; PMCID: PMC3664105.<http://www.ncbi.nlm.nih.gov/pubmed/23203205>
29. Scheff JD, Calvano SE, Androulakis IP. Predicting critical transitions in a model of systemic inflammation. *J Theor Biol*. 2013;338:9-15. doi: 10.1016/j.jtbi.2013.08.011. PubMed PMID: 23973206; PMCID: PMC3870185.<http://www.ncbi.nlm.nih.gov/pubmed/23973206>
30. Ovacik MA, Sen B, Euling SY, Gaido KW, Ierapetritou MG, Androulakis IP. Pathway modeling of microarray data: a case study of pathway activity changes in the testis following in utero exposure to dibutyl phthalate (DBP). *Toxicol Appl Pharmacol*. 2013;271(3):386-94. doi: 10.1016/j.taap.2010.09.008. PubMed PMID: 20850466.<http://www.ncbi.nlm.nih.gov/pubmed/20850466>
31. Ovacik MA, Androulakis IP. Enzyme sequence similarity improves the reaction alignment method for cross-species pathway comparison. *Toxicol Appl Pharmacol*. 2013;271(3):363-71. doi: 10.1016/j.taap.2010.09.009. PubMed PMID: 20851138.<http://www.ncbi.nlm.nih.gov/pubmed/20851138>
32. Orman MA, Ierapetritou MG, Androulakis IP, Berthiaume F. Effect of fasting on the metabolic response of liver to experimental burn injury. *PLoS One*. 2013;8(2):e54825. doi: 10.1371/journal.pone.0054825. PubMed PMID: 23393558; PMCID: PMC3564862.<http://www.ncbi.nlm.nih.gov/pubmed/23393558>
33. Nguyen TT, Calvano SE, Lowry SF, Androulakis IP. An agent-based model of cellular dynamics and circadian variability in human endotoxemia. *PLoS One*. 2013;8(1):e55550. doi: 10.1371/journal.pone.0055550. PubMed PMID: 23383223; PMCID: PMC3559552.<http://www.ncbi.nlm.nih.gov/pubmed/23383223>
34. Mavroudis PD, Scheff JD, Calvano SE, Androulakis IP. Systems biology of circadian-immune interactions. *J Innate Immun*. 2013;5(2):153-62. doi: 10.1159/000342427. PubMed PMID: 23006670; PMCID: PMC3717386.<http://www.ncbi.nlm.nih.gov/pubmed/23006670>
35. Mattick JS, Yang Q, Orman MA, Ierapetritou MG, Berthiaume F, Gale SC, Androulakis IP. Impact of burn priming on immune and metabolic functions of whole Liver in a rat cecal ligation and puncture model. *Int J Burns Trauma*. 2013;3(1):55-65. PubMed PMID: 23386986; PMCID: PMC3560487.<http://www.ncbi.nlm.nih.gov/pubmed/23386986>
36. Mattick JS, Kamisoglu K, Ierapetritou MG, Androulakis IP, Berthiaume F. Branched-chain amino acid supplementation: impact on signaling and relevance to critical illness. *Wiley Interdiscip Rev Syst Biol Med*. 2013;5(4):449-60. doi: 10.1002/wsbm.1219. PubMed PMID: 23554299; PMCID: PMC4482218.<http://www.ncbi.nlm.nih.gov/pubmed/23554299>
37. Kosmidis AK, Kamisoglu K, Calvano SE, Corbett SA, Androulakis IP. Metabolomic fingerprinting: challenges and opportunities. *Crit Rev Biomed Eng*. 2013;41(3):205-21. PubMed PMID: 24579644; PMCID: PMC4096240.<http://www.ncbi.nlm.nih.gov/pubmed/24579644>

38. Kamisoglu K, Sleight KE, Calvano SE, Coyle SM, Corbett SA, Androulakis IP. Temporal metabolic profiling of plasma during endotoxemia in humans. *Shock*. 2013;40(6):519-26. doi: 10.1097/SHK.000000000000063. PubMed PMID: 24089011; PMCID: PMC3970546. <http://www.ncbi.nlm.nih.gov/pubmed/24089011>
39. Euling SY, White LD, Kim AS, Sen B, Wilson VS, Keshava C, Keshava N, Hester S, Ovacik MA, Ierapetritou MG, Androulakis IP, Gaido KW. Use of genomic data in risk assessment case study: II. Evaluation of the dibutyl phthalate toxicogenomic data set. *Toxicol Appl Pharmacol*. 2013;271(3):349-62. doi: 10.1016/j.taap.2011.06.014. PubMed PMID: 21745491. <http://www.ncbi.nlm.nih.gov/pubmed/21745491>
40. Androulakis IP, Kamisoglu K, Mattick JS. Topology and dynamics of signaling networks: in search of transcriptional control of the inflammatory response. *Annu Rev Biomed Eng*. 2013;15:1-28. doi: 10.1146/annurev-bioeng-071812-152425. PubMed PMID: 23862674. <http://www.ncbi.nlm.nih.gov/pubmed/23862674>
41. Yang Q, Orman MA, Berthiaume F, Ierapetritou MG, Androulakis IP. Dynamics of short-term gene expression profiling in liver following thermal injury. *J Surg Res*. 2012;176(2):549-58. doi: 10.1016/j.jss.2011.09.052. PubMed PMID: 22099593; PMCID: PMC3319855. <http://www.ncbi.nlm.nih.gov/pubmed/22099593>
42. Yang Q, Mattick JS, Orman MA, Nguyen TT, Ierapetritou MG, Berthiaume F, Androulakis IP. Dynamics of hepatic gene expression profile in a rat cecal ligation and puncture model. *J Surg Res*. 2012;176(2):583-600. doi: 10.1016/j.jss.2011.11.1031. PubMed PMID: 22381171; PMCID: PMC3368040. <http://www.ncbi.nlm.nih.gov/pubmed/22381171>
43. Wang H, Khor TO, Yang Q, Huang Y, Wu TY, Saw CL, Lin W, Androulakis IP, Kong AN. Pharmacokinetics and pharmacodynamics of phase II drug metabolizing/antioxidant enzymes gene response by anticancer agent sulforaphane in rat lymphocytes. *Mol Pharm*. 2012;9(10):2819-27. doi: 10.1021/mp300130k. PubMed PMID: 22931102; PMCID: PMC3580178. <http://www.ncbi.nlm.nih.gov/pubmed/22931102>
44. Sunderram J, Androulakis IP. Molecular mechanisms of chronic intermittent hypoxia and hypertension. *Crit Rev Biomed Eng*. 2012;40(4):265-78. PubMed PMID: 23140119; PMCID: PMC3634614. <http://www.ncbi.nlm.nih.gov/pubmed/23140119>
45. Scheff JD, Mavroudis PD, Foteinou PT, Calvano SE, Androulakis IP. Modeling physiologic variability in human endotoxemia. *Crit Rev Biomed Eng*. 2012;40(4):313-22. PubMed PMID: 23140122; PMCID: PMC3604977. <http://www.ncbi.nlm.nih.gov/pubmed/23140122>
46. Scheff JD, Calvano SE, Lowry SF, Androulakis IP. Transcriptional implications of ultradian glucocorticoid secretion in homeostasis and in the acute stress response. *Physiol Genomics*. 2012;44(2):121-9. doi: 10.1152/physiolgenomics.00128.2011. PubMed PMID: 22128089; PMCID: PMC3289115. <http://www.ncbi.nlm.nih.gov/pubmed/22128089>
47. Orman MA, Mattick J, Androulakis IP, Berthiaume F, Ierapetritou MG. Stoichiometry based steady-state hepatic flux analysis: computational and experimental aspects. *Metabolites*. 2012;2(1):268-91. doi: 10.3390/metabo2010268. PubMed PMID: 24957379; PMCID: PMC3901202. <http://www.ncbi.nlm.nih.gov/pubmed/24957379>
48. Orman MA, Ierapetritou MG, Berthiaume F, Androulakis IP. Long-term dynamic profiling of inflammatory mediators in double-hit burn and sepsis animal models. *Cytokine*. 2012;58(2):307-15. doi: 10.1016/j.cyto.2012.01.017. PubMed PMID: 22402033; PMCID: PMC3355995. <http://www.ncbi.nlm.nih.gov/pubmed/22402033>
49. Orman MA, Androulakis IP, Berthiaume F, Ierapetritou MG. Metabolic network analysis of perfused livers under fed and fasted states: incorporating thermodynamic and futile-cycle-associated regulatory constraints. *J Theor Biol*. 2012;293:101-10. doi: 10.1016/j.jtbi.2011.10.019. PubMed PMID: 22037644. <http://www.ncbi.nlm.nih.gov/pubmed/22037644>

50. Namas R, Zamora R, Namas R, An G, Doyle J, Dick TE, Jacono FJ, Androulakis IP, Nieman GF, Chang S, Billiar TR, Kellum JA, Angus DC, Vodovotz Y. Sepsis: Something old, something new, and a systems view. *J Crit Care*. 2012;27(3):314 e1-11. doi: 10.1016/j.jcrc.2011.05.025. PubMed PMID: 21798705; PMCID: PMC3206132. <http://www.ncbi.nlm.nih.gov/pubmed/21798705>
51. Mavroudis PD, Scheff JD, Calvano SE, Lowry SF, Androulakis IP. Entrainment of peripheral clock genes by cortisol. *Physiol Genomics*. 2012;44(11):607-21. doi: 10.1152/physiolgenomics.00001.2012. PubMed PMID: 22510707; PMCID: PMC3426436. <http://www.ncbi.nlm.nih.gov/pubmed/22510707>
52. Mattick JS, Yang Q, Orman MA, Ierapetritou MG, Berthiaume F, Androulakis IP. Long-term gene expression profile dynamics following cecal ligation and puncture in the rat. *J Surg Res*. 2012;178(1):431-42. doi: 10.1016/j.jss.2012.03.052. PubMed PMID: 22572618. <http://www.ncbi.nlm.nih.gov/pubmed/22572618>
53. Dick TE, Molkov YI, Nieman G, Hsieh YH, Jacono FJ, Doyle J, Scheff JD, Calvano SE, Androulakis IP, An G, Vodovotz Y. Linking Inflammation, Cardiorespiratory Variability, and Neural Control in Acute Inflammation via Computational Modeling. *Front Physiol*. 2012;3:222. doi: 10.3389/fphys.2012.00222. PubMed PMID: 22783197; PMCID: PMC3387781. <http://www.ncbi.nlm.nih.gov/pubmed/22783197>
54. Androulakis IP. Special issue in memory of Dr. Stephen F. Lowry. *Crit Rev Biomed Eng*. 2012;40(4):259-361. PubMed PMID: 23140117. <http://www.ncbi.nlm.nih.gov/pubmed/23140117>
55. Yang Q, Calvano SE, Lowry SF, Androulakis IP. A dual negative regulation model of Toll-like receptor 4 signaling for endotoxin preconditioning in human endotoxemia. *Math Biosci*. 2011;232(2):151-63. doi: 10.1016/j.mbs.2011.05.005. PubMed PMID: 21624378. <http://www.ncbi.nlm.nih.gov/pubmed/21624378>
56. Yang Q, Berthiaume F, Androulakis IP. A quantitative model of thermal injury-induced acute inflammation. *Math Biosci*. 2011;229(2):135-48. doi: 10.1016/j.mbs.2010.08.003. PubMed PMID: 20708022; PMCID: PMC3239409. <http://www.ncbi.nlm.nih.gov/pubmed/20708022>
57. Swiss VA, Nguyen T, Dugas J, Ibrahim A, Barres B, Androulakis IP, Casaccia P. Identification of a gene regulatory network necessary for the initiation of oligodendrocyte differentiation. *PLoS One*. 2011;6(4):e18088. doi: 10.1371/journal.pone.0018088. PubMed PMID: 21490970; PMCID: PMC3072388. <http://www.ncbi.nlm.nih.gov/pubmed/21490970>
58. Scheff JD, Mavroudis PD, Calvano SE, Lowry SF, Androulakis IP. Modeling autonomic regulation of cardiac function and heart rate variability in human endotoxemia. *Physiol Genomics*. 2011;43(16):951-64. doi: 10.1152/physiolgenomics.00040.2011. PubMed PMID: 21673075; PMCID: PMC3180733. <http://www.ncbi.nlm.nih.gov/pubmed/21673075>
59. Scheff JD, Kosmides AK, Calvano SE, Lowry SF, Androulakis IP. Pulsatile glucocorticoid secretion: origins and downstream effects. *IEEE Trans Biomed Eng*. 2011;58(12):3504-7. doi: 10.1109/TBME.2011.2162236. PubMed PMID: 21775253. <http://www.ncbi.nlm.nih.gov/pubmed/21775253>
60. Scheff JD, Almon RR, Dubois DC, Jusko WJ, Androulakis IP. Assessment of pharmacologic area under the curve when baselines are variable. *Pharm Res*. 2011;28(5):1081-9. doi: 10.1007/s11095-010-0363-8. PubMed PMID: 21234658; PMCID: PMC3152796. <http://www.ncbi.nlm.nih.gov/pubmed/21234658>
61. Orman MA, Nguyen TT, Ierapetritou MG, Berthiaume F, Androulakis IP. Comparison of the cytokine and chemokine dynamics of the early inflammatory response in models of burn injury and infection. *Cytokine*. 2011;55(3):362-71. doi: 10.1016/j.cyto.2011.05.010. PubMed PMID: 21652218; PMCID: PMC3148335. <http://www.ncbi.nlm.nih.gov/pubmed/21652218>
62. Orman MA, Ierapetritou MG, Berthiaume F, Androulakis IP. The dynamics of the early inflammatory response in double-hit burn and sepsis animal models. *Cytokine*. 2011;56(2):494-502. doi: 10.1016/j.cyto.2011.07.001. PubMed PMID: 21824784; PMCID: PMC3185215. <http://www.ncbi.nlm.nih.gov/pubmed/21824784>

63. Orman MA, Ierapetritou MG, Androulakis IP, Berthiaume F. Metabolic response of perfused livers to various oxygenation conditions. *Biotechnol Bioeng.* 2011;108(12):2947-57. doi: 10.1002/bit.23261. PubMed PMID: 21755498; PMCID: PMC3193557. <http://www.ncbi.nlm.nih.gov/pubmed/21755498>
64. Orman MA, Berthiaume F, Androulakis IP, Ierapetritou MG. Pathway analysis of liver metabolism under stressed condition. *J Theor Biol.* 2011;272(1):131-40. doi: 10.1016/j.jtbi.2010.11.042. PubMed PMID: 21163266; PMCID: PMC3038651. <http://www.ncbi.nlm.nih.gov/pubmed/21163266>
65. Orman MA, Berthiaume F, Androulakis IP, Ierapetritou MG. Advanced stoichiometric analysis of metabolic networks of mammalian systems. *Crit Rev Biomed Eng.* 2011;39(6):511-34. PubMed PMID: 22196224; PMCID: PMC3634616. <http://www.ncbi.nlm.nih.gov/pubmed/22196224>
66. Nguyen TT, Foteinou PT, Calvano SE, Lowry SF, Androulakis IP. Computational identification of transcriptional regulators in human endotoxemia. *PLoS One.* 2011;6(5):e18889. doi: 10.1371/journal.pone.0018889. PubMed PMID: 21637747; PMCID: PMC3103499. <http://www.ncbi.nlm.nih.gov/pubmed/21637747>
67. Foteinou PT, Calvano SE, Lowry SF, Androulakis IP. A physiological model for autonomic heart rate regulation in human endotoxemia. *Shock.* 2011;35(3):229-39. doi: 10.1097/SHK.0b013e318200032b. PubMed PMID: 21063241; PMCID: PMC3045969. <http://www.ncbi.nlm.nih.gov/pubmed/21063241>
68. Treiser MD, Yang EH, Gordonov S, Cohen DM, Androulakis IP, Kohn J, Chen CS, Moghe PV. Cytoskeleton-based forecasting of stem cell lineage fates. *Proc Natl Acad Sci U S A.* 2010;107(2):610-5. doi: 10.1073/pnas.0909597107. PubMed PMID: 20080726; PMCID: PMC2818905. <http://www.ncbi.nlm.nih.gov/pubmed/20080726>
69. Scheff JD, Calvano SE, Lowry SF, Androulakis IP. Modeling the influence of circadian rhythms on the acute inflammatory response. *J Theor Biol.* 2010;264(3):1068-76. doi: 10.1016/j.jtbi.2010.03.026. PubMed PMID: 20307551. <http://www.ncbi.nlm.nih.gov/pubmed/20307551>
70. Scheff JD, Almon RR, DuBois DC, Jusko WJ, Androulakis IP. A new symbolic representation for the identification of informative genes in replicated microarray experiments. *OMICS.* 2010;14(3):239-48. doi: 10.1089/omi.2010.0005. PubMed PMID: 20455749; PMCID: PMC3133780. <http://www.ncbi.nlm.nih.gov/pubmed/20455749>
71. Ovacik MA, Sukumaran S, Almon RR, DuBois DC, Jusko WJ, Androulakis IP. Circadian signatures in rat liver: from gene expression to pathways. *BMC Bioinformatics.* 2010;11:540. doi: 10.1186/1471-2105-11-540. PubMed PMID: 21040584; PMCID: PMC2990769. <http://www.ncbi.nlm.nih.gov/pubmed/21040584>
72. Orman MA, Arai K, Yarmush ML, Androulakis IP, Berthiaume F, Ierapetritou MG. Metabolic flux determination in perfused livers by mass balance analysis: effect of fasting. *Biotechnol Bioeng.* 2010;107(5):825-35. doi: 10.1002/bit.22878. PubMed PMID: 20661905. <http://www.ncbi.nlm.nih.gov/pubmed/20661905>
73. Nguyen TT, Almon RR, DuBois DC, Jusko WJ, Androulakis IP. Importance of replication in analyzing time-series gene expression data: corticosteroid dynamics and circadian patterns in rat liver. *BMC Bioinformatics.* 2010;11:279. doi: 10.1186/1471-2105-11-279. PubMed PMID: 20500897; PMCID: PMC2889936. <http://www.ncbi.nlm.nih.gov/pubmed/20500897>
74. Nguyen TT, Almon RR, Dubois DC, Jusko WJ, Androulakis IP. Comparative analysis of acute and chronic corticosteroid pharmacogenomic effects in rat liver: transcriptional dynamics and regulatory structures. *BMC Bioinformatics.* 2010;11:515. doi: 10.1186/1471-2105-11-515. PubMed PMID: 20946642; PMCID: PMC2973961. <http://www.ncbi.nlm.nih.gov/pubmed/20946642>
75. Iyer VV, Ovacik MA, Androulakis IP, Roth CM, Ierapetritou MG. Transcriptional and metabolic flux profiling of triadimefon effects on cultured hepatocytes. *Toxicol Appl Pharmacol.* 2010;248(3):165-

77. doi: 10.1016/j.taap.2010.07.015. PubMed PMID: 20659493. <http://www.ncbi.nlm.nih.gov/pubmed/20659493>
76. Foteinou PT, Calvano SE, Lowry SF, Androulakis IP. Multiscale model for the assessment of autonomic dysfunction in human endotoxemia. *Physiol Genomics*. 2010;42(1):5-19. doi: 10.1152/physiolgenomics.00184.2009. PubMed PMID: 20233835; PMCID: PMC2888557. <http://www.ncbi.nlm.nih.gov/pubmed/20233835>
77. Dong X, Foteinou PT, Calvano SE, Lowry SF, Androulakis IP. Agent-based modeling of endotoxin-induced acute inflammatory response in human blood leukocytes. *PLoS One*. 2010;5(2):e9249. doi: 10.1371/journal.pone.0009249. PubMed PMID: 20174629; PMCID: PMC2823776. <http://www.ncbi.nlm.nih.gov/pubmed/20174629>
78. Yang EH, Almon RR, Dubois DC, Jusko WJ, Androulakis IP. Identification of global transcriptional dynamics. *PLoS One*. 2009;4(7):e5992. doi: 10.1371/journal.pone.0005992. PubMed PMID: 19593450; PMCID: PMC2705787. <http://www.ncbi.nlm.nih.gov/pubmed/19593450>
79. Yang E, Yarmush ML, Androulakis IP. Transcription factor network reconstruction using the living cell array. *J Theor Biol*. 2009;256(3):393-407. doi: 10.1016/j.jtbi.2008.09.040. PubMed PMID: 18996398; PMCID: PMC3208267. <http://www.ncbi.nlm.nih.gov/pubmed/18996398>
80. Yang E, Androulakis IP. Assessing and selecting gene expression signals based upon the quality of the measured dynamics. *BMC Bioinformatics*. 2009;10:55. doi: 10.1186/1471-2105-10-55. PubMed PMID: 19208252; PMCID: PMC2653486. <http://www.ncbi.nlm.nih.gov/pubmed/19208252>
81. Nguyen TT, Nowakowski RS, Androulakis IP. Unsupervised selection of highly coexpressed and noncoexpressed genes using a consensus clustering approach. *OMICS*. 2009;13(3):219-37. doi: 10.1089/omi.2008.0074. PubMed PMID: 19445647. <http://www.ncbi.nlm.nih.gov/pubmed/19445647>
82. Gerecke DR, Chen M, Isukapalli SS, Gordon MK, Chang YC, Tong W, Androulakis IP, Georgopoulos PG. Differential gene expression profiling of mouse skin after sulfur mustard exposure: Extended time response and inhibitor effect. *Toxicol Appl Pharmacol*. 2009;234(2):156-65. doi: 10.1016/j.taap.2008.09.020. PubMed PMID: 18955075; PMCID: PMC3066660. <http://www.ncbi.nlm.nih.gov/pubmed/18955075>
83. Foteinou PT, Yang E, Androulakis IP. Networks, Biology and Systems Engineering: A Case Study in Inflammation. *Comput Chem Eng*. 2009;33(12):2028-41. doi: 10.1016/j.compchemeng.2009.06.027. PubMed PMID: 20161495; PMCID: PMC2796781. <http://www.ncbi.nlm.nih.gov/pubmed/20161495>
84. Foteinou PT, Calvano SE, Lowry SF, Androulakis IP. Modeling endotoxin-induced systemic inflammation using an indirect response approach. *Math Biosci*. 2009;217(1):27-42. doi: 10.1016/j.mbs.2008.09.003. PubMed PMID: 18840451; PMCID: PMC3045970. <http://www.ncbi.nlm.nih.gov/pubmed/18840451>
85. Foteinou PT, Calvano SE, Lowry SF, Androulakis IP. Translational potential of systems-based models of inflammation. *Clin Transl Sci*. 2009;2(1):85-9. doi: 10.1111/j.1752-8062.2008.00051.x. PubMed PMID: 20443873; PMCID: PMC5350791. <http://www.ncbi.nlm.nih.gov/pubmed/20443873>
86. Foteinou PT, Calvano SE, Lowry SF, Androulakis IP. In silico simulation of corticosteroids effect on an NFkB- dependent physicochemical model of systemic inflammation. *PLoS One*. 2009;4(3):e4706. doi: 10.1371/journal.pone.0004706. PubMed PMID: 19274080; PMCID: PMC2651450. <http://www.ncbi.nlm.nih.gov/pubmed/19274080>
87. Yang E, Almon RR, Dubois DC, Jusko WJ, Androulakis IP. Extracting global system dynamics of corticosteroid genomic effects in rat liver. *J Pharmacol Exp Ther*. 2008;324(3):1243-54. doi: 10.1124/jpet.107.133074. PubMed PMID: 18086872; PMCID: PMC3725546. <http://www.ncbi.nlm.nih.gov/pubmed/18086872>
88. Almon RR, Yang E, Lai W, Androulakis IP, Ghimbovschi S, Hoffman EP, Jusko WJ, Dubois DC. Relationships between circadian rhythms and modulation of gene expression by glucocorticoids in skeletal muscle. *Am J Physiol Regul Integr Comp Physiol*. 2008;295(4):R1031-47. doi:

- 10.1152/ajpregu.90399.2008. PubMed PMID: 18667713; PMCID: PMC2576101. <http://www.ncbi.nlm.nih.gov/pubmed/18667713>
89. Almon RR, Yang E, Lai W, Androulakis IP, DuBois DC, Jusko WJ. Circadian variations in rat liver gene expression: relationships to drug actions. *J Pharmacol Exp Ther.* 2008;326(3):700-16. doi: 10.1124/jpet.108.140186. PubMed PMID: 18562560; PMCID: PMC2561907. <http://www.ncbi.nlm.nih.gov/pubmed/18562560>
90. Yang E, Simcha D, Almon RR, Dubois DC, Jusko WJ, Androulakis IP. Context specific transcription factor prediction. *Ann Biomed Eng.* 2007;35(6):1053-67. doi: 10.1007/s10439-007-9268-z. PubMed PMID: 17377845; PMCID: PMC4184431. <http://www.ncbi.nlm.nih.gov/pubmed/17377845>
91. Yang E, Maguire T, Yarmush ML, Berthiaume F, Androulakis IP. Bioinformatics analysis of the early inflammatory response in a rat thermal injury model. *BMC Bioinformatics.* 2007;8:10. doi: 10.1186/1471-2105-8-10. PubMed PMID: 17214898; PMCID: PMC1797813. <http://www.ncbi.nlm.nih.gov/pubmed/17214898>
92. Yang E, Foteinou PT, King KR, Yarmush ML, Androulakis IP. A novel non-overlapping bi-clustering algorithm for network generation using living cell array data. *Bioinformatics.* 2007;23(17):2306-13. doi: 10.1093/bioinformatics/btm335. PubMed PMID: 17827207; PMCID: PMC3208260. <http://www.ncbi.nlm.nih.gov/pubmed/17827207>
93. Maguire T, Davidovich AE, Wallenstein EJ, Novik E, Sharma N, Pedersen H, Androulakis IP, Schloss R, Yarmush M. Control of hepatic differentiation via cellular aggregation in an alginate microenvironment. *Biotechnol Bioeng.* 2007;98(3):631-44. doi: 10.1002/bit.21435. PubMed PMID: 17390383. <http://www.ncbi.nlm.nih.gov/pubmed/17390383>
94. Androulakis IP, Yang E, Almon RR. Analysis of time-series gene expression data: methods, challenges, and opportunities. *Annu Rev Biomed Eng.* 2007;9:205-28. doi: 10.1146/annurev.bioeng.9.060906.151904. PubMed PMID: 17341157; PMCID: PMC4181347. <http://www.ncbi.nlm.nih.gov/pubmed/17341157>
95. Yang EH, Androulakis IP. Assessing the information content of short time series expression data. *Conf Proc IEEE Eng Med Biol Soc.* 2006;1:5535-8. doi: 10.1109/IEMBS.2006.259573. PubMed PMID: 17945907. <http://www.ncbi.nlm.nih.gov/pubmed/17945907>