

DAY 1—Saturday 28 June 2008

Abstractions: Inflammation and Sepsis

Session Co-chairs: E. Neugebauer, Y. Vodovotz

1. INSIGHTS FROM COMPUTATIONAL SIMULATIONS OF THE ACUTE INFLAMMATORY RESPONSE G. An 9:15-9:25

2. AN ENSEMBLE OF MODELS OF THE ACUTE INFLAMMATORY RESPONSE. S. Daun, J. Rubin, A. Roy, J. Kellum, R. Parker, G. Clermont. 9:30-9:45

3. COMPUTATIONAL SIMULATION OF INDIVIDUAL INFLAMMATION AND OUTCOMES IN TRAUMA PATIENTS. J. Sarkar, S. Chang*, M. Zenati, J. Ochoa, T. Billiar, Y. Vodovotz 9:50-10:05

4. AGENT-BASED MODEL OF LUNG INFLAMMATION. B. Brown, I. Price, Y. Chu, N. Konduru, G. Clermont, Y. Vodovotz. 10:10-10:30

Discussion: What is an ideal abstraction? What must the abstraction account for? 10:35-10:50

BREAK 10:50-11:10

Untangling inflammation from infection

Session Co-chairs: A. Nierhaus, G. An

5. THE TRANSCRIPTOME: RIBOLEUKOGRAPHY J. McDunn 11:15-11:35

6. TEMPORAL ANALYSIS OF SIGNALING PATHWAYS IN MULTIPLE ORGAN FAILURE. M. McGuire, M. Iyengar, D.W. Mercer 11:40-12:00

7. ST-2- DYNAMICS AND ENDOTOXIN TOLERANCE MODELLING. P Flondor, M Olteanu, R. Dobrescu, C. Vasilescu 12:00-12:15

8. THE RIDDLE OF ENDOCRINE PULSATILITY: WHY DOES IT EXIST? G. Meyfroidt 12:20-12:40

Discussion: In acute illness, how do we distinguish inflammation from infection? What do models tell us? 12:45-13:00

LUNCH 13:00-14:00

Variability: Predictions

Session Co-chairs: T. Buchman, V. Papaioannou,

9. HIGH-THROUGHPUT PATIENT DATA INTEGRATION TO SUPPORT CLINICAL DATA MANAGEMENT AND FACILITATE KNOWLEDGE DISCOVERY M. Cohen
14:00-14:10

10. EARLY LOSS OF COMPLEXITY IS ASSOCIATED WITH VENTILATOR ASSOCIATED PNEUMONIA IN 2032 TRAUMA PATIENTS P. R. Norris, R.J. Carnevale, R.A. Miller, B.A. Cotton, J.M. Jenkins, J.A. Morris Jr. 14:15-14:25

11. PRE-TREATMENT WITH A STRESS-DOSE BUT NOT A HIGH DOSE INFUSION OF HYDROCORTISONE MAINTAINS HEART RATE VARIABILITY DURING HUMAN ENDOTOXEMIA A.J. Rassias; P.M. Guyre; M. P.Yeager 14:20-14:40

12. EXPLORATION OF HEART-RATE COMPLEXITY TO DETERMINE THE NEED FOR LIFESAVING INTERVENTIONS IN COMBAT CASUALTIES. A. Batchinsky, J. Salinas, J.Skinner, D. Weiss, C. Wade, J. Holcomb, L. Cancio. 14:45-14:55

13. EARLY DETECTION OF INFECTION WITH CONTINUOUS HEART RATE VARIABILITY ANALYSIS IN NEUTROPENIC PATIENTS S Ahmad, S Flanagan, L McIntyre, T Ramsay, D Fergusson, D Maziak, FM Shamji, R S Sundaresan, L Huebsch, AJE Seely 15:00-15:10

14. RELATION OF HEART RATE VARIABILITY TO SERUM LEVELS OF C-REACTIVE PROTEIN IN PATIENTS WITH SEVERE SEPSIS AND SEPTIC SHOCK. V. Papaioannou, C. Dragoumanis, I. Pneumatikos 15:15-15:25

15. DO NON-LINEAR MEASURES OF HEART RATE VARIABILITY (HRV) TRACK MUSCLE SYMPATHETIC NERVE ACTIVITY (MSNA) DURING CENTRAL HYPOVOLEMIA IN HUMANS? C.A. Rickards, K.L. Ryan, W.H. Cooke, V.A .Convertino 15:30-15:40

Discussion: If compromised physiologic variability is clinically important, what is needed to get it more widely accessible/used?15:45-16:00

BREAK AND POSTER SESSION-16:00-17:15

16. SEVERE SEPSIS AND SEPTIC SHOCK DURING PREGNANCY AND PUERPERIUM : THE INCIDENCE, THE ETIOLOGY AND THE OUTCOME. K. Baccar, N. Baffoun ,Z. Zaghdoudi , S. Abassi ,M.Magouri, R. Souissi C. Kaddour

17. CORRELATION BETWEEN ADIPONECTIN AND APACHE-II IN PATIENTS WITH INTRA-ABDOMINAL SEPSIS. M. Kerem, Ö Taşçılar, B. Salman, K.t Dikmen, H. Paşaoğlu, E. Ofloğlu, A. Uğur Emre ,A. Bedirli*, T.Utku Yılmaz*, M. Oğuz*

18. RESISTIN IS INCREASED IN INTRA ABDOMINAL SEPSIS: CORRELATION WITH PROINFLAMATUARY CYTOKINES AND APACHE-II SCORES. T. Utku Yılmaz, M

Kerem, Ö. Taşçılar, B. Salman, H. Paşaoğlu, K. Dikmen, A. Uğur Emre, E. Ofluoğlu*, .A. Bedirli*, M. Oğuz

19. NATURAL HISTORY OF DISSEMINATED INTRAVASCULAR COAGULATION DIAGNOSED BY THE NEWLY ESTABLISHED DIAGNOSTIC CRITERIA FOR CRITICALLY ILL PATIENTS. T Mayumi , S Gando, D Saitoh , H Ogura , K Koseki , T Ikeda , H Ishikura , T Iba , M Ueyama , Y Eguchi , Y Ohtomo , K Okamoto S Kushimoto , S Endo , S Shimazaki;

20. ERGOTHIONEINE PREVENTS ACUTE LUNG INJURY IN MESENTERIC ISCHEMIA AND REPERFUSION INJURY IN RATS. Ö. Sakrak, M.Kerem, A.Bedirli, H Pasaoğlu, M Alper, E. Ofluoğlu, T. Utku Yılmaz*

21. ESTABLISHMENT OF AN ACUTE SUPERIOR MESENTERIC ARTERY INJURY MODEL FOR DAMAGE CONTROL SURGERY. W Ding,, X.Wu, J. Li,

22. TEMPORARY INTRAVASCULAR SHUNTS AS A DAMAGE CONTROL ADJUNCT TO MAINTAIN INTESTINE PERFUSION AFTER SUPERIOR MESENTERIC ARTERY INJURY IN SWINE MODEL. W Ding., X Wu, J Li

23. A CLOSED LOOP MODEL OF PULMONARY GAS EXCHANGE. A Reynolds, G. Clermont, G.B.Ermentrout.

24. MESENTERIC MICROCIRCULATORY DYSFUNCTION ASSOCIATED WITH INDIGENOUS BACTERIAL TRANSLOCATION AFTER INTESTINAL OBSTRUCTION AND ISCHEMIA IN RATS. P. Sannomiya , FL Zanoni , S Benabou , KV Greco , AC Moreno , JWMC Cruz,, FP Filgueira , MB Martinez , LF Poli de Figueiredo , M Rocha e Silva.

25. IMMUNE RESPONSE TO INFLUENZA A. I. Price, D.Swigon, B. Ermentrout, T. Ross, F. Toapanta, G. Clermont

26. LIPOPOLYSACCHARIDE-CAUSED NEURODEGENERATIVE DISEASES
I. Niehaus

27. SHORT-TERM REGULATION OF THE CARDIOVASCULAR SYSTEM: AN ODE BASED MODEL M. Lücking , T Tjardes

28. EARLY AND MAJOR DECREASE IN PLASMA SELENIUM CONCENTRATION IN AN OVINE MODEL OF PERITONITIS X. Forceville, Z. Wang, P. Van Antwerpen, P. Moreau, M. Piagnerelli, J. Nève, J-L Vincent.

29. A BOLUS OF SODIUM SELENITE LEADS TO A BENEFICIAL PEAK OF PRO-OXIDATIVE PLASMA SE CONCENTRATION X. Forceville, Z. Wang, P. Van Antwerpen, P. Moreau, M. Piagnerelli, J. Nève, J-L Vincent.

BUSINESS MEETING 17:15-18:00

END OF DAY 1

DAY 2-Sunday, 29 June 2008

Modeling: Frontiers

Session Co-chairs: K. Brohi, C. Vasilescu

30. IN SILICO CLINICAL TRIALS IN SEPSIS – Steve Chang 09:00-09:10
31. UNBIASED INFERENCE OF PARAMETER DISTRIBUTIONS FOR NONLINEAR MODELS: THE UNDERDETERMINED CASE. S. Zenker, J. Rubin, G. Clermont 09:15-09:30
32. BIO-CARTOGRAMOGRAPHY TO PRESENT COMPLEX PHYSIOLOGICAL DATA SETS. T.B. Bentley 09:35-09:50
33. OPTIMIZING HEMADSORPTION THERAPY WITH MODEL PREDICTIVE CONTROL. J. Hogg, G. Clermont, J. Kellum, R. Parker. 09:55-10:10
34. BIOLOGICAL COMPLEXITY AND ANALYTICAL TECHNIQUES TO PROMOTE SIMPLIFICATION AND UNDERSTANDING S. Chang, F. Busche 10:15-10:30

Discussion: What is needed? New techniques? Adapted techniques? Different questions? Testable hypotheses? 10 :35-10 :50

BREAK 10:50-11:10

Spectroscopy

Session Co-chairs: W. Petrich, H. Mertsching

35. "FT-IR, RAMAN AND SUCH - A 10-MINUTE GUIDE THROUGH THE SPECTROSCOPY OF MOLECULAR VIBRATIONS" W.Petrich 11:10-11:20
36. CHARACTERIZATION OF AUTOLOGOUS TRANSPLANTS BY RAMAN SPECTROSCOPY H. Mertsching 11:25-11:45
34. RAPID IDENTIFICATION OF PATHOGENS FROM BLOOD CULTURES BY FT-IR MICROSPECTROSCOPY: A PROSPECTIVE STUDY D. Naumann 11:50-12:10

35. CLINICAL TRIAGING OF ACUTE CHEST PAIN PATIENTS BY MEANS OF
INFRARED SPECTROSCOPY 12:15-12:35 W. Petrich

Discussion: How can spectroscopy illuminate complexity in acute illness? 12:40-13:00

MEETING ENDS—Free Afternoon