

## **Information Management, Data Analysis and Ethics in Medical Research** **17th – 18th November 2017**

Faculty of Medicine, “Lucian Blaga” University of Sibiu

### **Short-courses**

**Tomasz Burzykowski** - *"Do's and Don'ts in Survival Analysis"*  
**Daniel Leucuța** - *"Using R for Statistical Analysis"*

### **Lectures**

**Liana Bera** - *"Decision Analysis in Medical Decision Making"*  
**Gabriela Cioca** - *"The Value of Databases in Pharmacovigilance"*  
**Anca Ignat** - *"Iris recognition – a study case based on statistical approach"*  
**Silviu Morar** - *"Fighting against Discrimination: Legal Forms, Mechanisms"*  
**Dana Simian** - *"A Python Perspective for Machine Learning"*  
**Anca Vitcu** - *"Introduction to Web Scraping, Data Visualization and Content Analysis"*

### **Organizing Committee (ISCB-RNG):**

**Liana Bera** (Faculty of Medicine, “Lucian Blaga” University, Sibiu)  
**Gabriela Boța** (Faculty of Medicine, “Lucian Blaga” University, Sibiu)  
**Gabriela Cioca** (Faculty of Medicine, “Lucian Blaga” University, Sibiu)  
**Adrian Iftene** (Faculty of Computer Science, “Alexandru Ioan Cuza” University of Iasi)  
**Anca Ignat** (Faculty of Computer Science, “Alexandru Ioan Cuza” University of Iasi)  
**Lucian Gadioi** (Faculty of Computer Science, “Alexandru Ioan Cuza” University of Iasi)  
**Gabriela Georgescu** (Faculty of Medicine, University of Medicine and Pharmacy, Iasi)  
**Daniel Leucuța** (“Iuliu Hațieganu” University of Medicine and Pharmacy, Cluj-Napoca)  
**Mihaela Mitariu Cernusca** (Faculty of Medicine, “Lucian Blaga” University, Sibiu)  
**Silviu Morar** (Faculty of Medicine, “Lucian Blaga” University, Sibiu)  
**Elena Podoleanu** (Faculty of Medicine, University of Medicine and Pharmacy, Bucharest)  
**Mihaela Racheriu** (Faculty of Medicine, “Lucian Blaga” University, Sibiu)  
**Dana Simian** (Department of Mathematics and Informatics, Faculty of Sciences, “Lucian Blaga” University, Sibiu)  
**Corina Vernic** (“Victor Babes” University of Medicine and Pharmacy, Timisoara)  
**Anca Vitcu** (Faculty of Computer Science, “Alexandru Ioan Cuza” University of Iasi)

**Event developed under the aegis of the International Society for Clinical Biostatistics (ISCB).**

## **Biographic Details**

### ***Short-courses invited speakers***

**Tomasz Burzykowski**, PhD - received a master degree in applied mathematics (1990) from Warsaw University (Poland), and master (1991) and PhD (2001) degrees in biostatistics from Hasselt University (Belgium). He works as Full Professor of Biostatistics/Bioinformatics at Hasselt University and as Vice-President of Research at the International Drug Development Institute (Belgium). He is also a Visiting Professor at the Medical University of Bialystok (Poland) and a Guest Lecturer at the Warsaw University of Technology (Poland). His main areas of expertise include methodology of clinical trials, meta-analysis of clinical trials, validation of surrogate endpoints, survival analysis, and analysis of “omics” data. Tomasz is author and co-author of over 150 scientific papers, including articles on statistical methodology as well as on application of statistical methods in various disease areas such as oncology, cardiovascular diseases, or orthodontics. He is also a co-author of two monographs on the surrogate-endpoint-validation methods and a book on the implementation of linear mixed-effects models in R.

**Daniel Leucuța**, MD, MSc, PhD - is acting as senior Lecturer/Tenured Assistant Professor in the Medical Informatics and Biostatistics Department (“Iuliu Hațieganu” University of Medicine and Pharmacy, Cluj-Napoca), where he teaches Medical Informatics and Biostatistics and Medical Research Methodology. He graduated the Faculty of Medicine, University of Medicine and Pharmacy "Iuliu Hațieganu", Cluj-Napoca, respectively followed a residency of Public Health and Management. His main areas of interest are - Medical statistics: statistical errors, statistical tests parametric / nonparametric (including permutation tests, bootstrapping) regressions (single, multiple, linear, logistic, multinomial, ordinal, Cox, generalized linear model, Poisson, inverse binomial, linear mixed models), survival analysis, meta analyses ... Analyses in R environment for statistical computing and graphics (R Commander, R Studio - R scripts). Extending the graphical user interface of R Commander with new menus to ease the access to the powerful R statistical packages (ROC, EBM, coin plugins); - Research Methodology: accurate reporting (errors) of research results; evidence based medicine; quantitative research: descriptive studies, analytical (risk factors, diagnosis (Phase I, II, III), therapeutic, questionnaires / surveys), meta analyses, qualitative (interview technique, text analysis); bibliometrics; - Computer Science: Programming: PHP, MySQL, HTML, JavaScript, AJAX, JQuery / UI, R.

## Outline and Schedule

### **Friday, 17th November**

9:00-9:10 Introduction – **Anca Vitcu**

9:10-10:00 *Fighting against Discrimination: Legal Forms, Mechanisms* – **Silviu Morar**

10:00-10:50 *A Python Perspective for Machine Learning* - **Dana Simian**

10:50-11:00 *Coffee/Tea Break*

11:00-13:00 *Do's and Don'ts in Survival Analysis* - **Tomasz Burzykowski**

**Abstract** *In the lecture, I will consider the analysis of time-to-event data in the presence of right-censoring. In particular, I will review the issues related to the analysis of such data, present the basic methods of survival analysis and discuss some common mistakes that are made when applying the methods. All the methods and issues will be illustrated by using real datasets.*

13:00-13:30 **Q & A**

13:30-15:00 *Lunch* (Pardon Cafe & Bistro, Str. Cetății 14)

15:00-15:50 *The Value of Databases in Pharmacovigilance* – **Gabriela Cioca**

15:50-17:50 *Using R for Statistical Analysis* - **Daniel Leucuța**

**Abstract** *The presentation will show: R usage, capabilities and popularity. Platform availability, installation. Graphical user interfaces with examples in R Commander (data handling (importing, managing the dataset and its variables), basic statistics (descriptive statistics, parametric (tests for normality, proportions, means, variances), nonparametric tests, correlations), advanced statistics (model fitting, model diagnostics), graphics, output, useful plugin packages). R Commander for teaching statistics (free, powerful, with graphical user interface, distributions, teaching demos package). Using R in command line. Finding the documentation, getting help with functions and packages.*

17:50-18:00 **Q & A**

18:00-18:50 *Introduction to Web Scraping, Data Visualization and Content Analysis* - **Anca Vitcu**

18:50-19:30 *Decision Analysis in Medical Decision Making* - **Liana Bera**

20:00 *Dinner* (Max Restaurant)

## ***Saturday, 18th November***

9:00-9:30 – *Iris recognition – a study case based on statistical approach* - **Anca Ignat**

9:30-11:30 – *Cooperation for Improvement of Statistical Education (I)* - Round table moderated by **Tomasz Burzykowski & Anca Vitcu**

11:30-11:40 *Coffee/Tea Break*

11:40-13:40 *Cooperation for Improvement of Statistical Education (II)* - Round table moderated by **Tomasz Burzykowski & Anca Vitcu**

13:40-14:00 *Conclusions*

14:00-15:30 *Lunch* (Hermania Restaurant)

15:30 *Social Programme*

### **Participation fee:**

ISCB-RNG members - free participation

Master/PhD students - free participation

Non ISCB-RNG members – 50 RON

The fee payment is allowed until **18th November 2017**, in the following account:

**Name:** Fundația Alumni – Universitatea Alexandru Ioan Cuza din Iași

**Cont RON:**

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**Details to be mentioned:** ISCB course, 17th-18th November 2017, Sibiu, participant name

### **Contact persons:**

#### **Project Director**

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**Sponsors:** ISCB, ISCB-Romanian National Group