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Technical reports  
Obaveštenja**PROGRAM NAUČNIH, STRUČNIH SKUPOVA I EDUKATIVNIH SEMINARA  
U 2012. GODINI**

- 10–13. oktobar 2012, Dubrovnik, Hrvatska  
**2<sup>nd</sup> European Joint Congress of EFCC and UEMS Laboratory Medicine at the Clinical Interface**  
[www.dubrovnik2012.com](http://www.dubrovnik2012.com)
- Oktobar 2012, Dubrovnik, Hrvatska  
**12. EFCC kurs kontinuirane posle diplomске edukacije iz kliničke hemije (12<sup>th</sup> EFCC Continuous Postgraduate Course in Clinical Chemistry at IUC)**
- Oktobar 2012, Beograd  
**37. Medident – Beogradski sajam**  
**Tema: Novine u laboratorijskoj dijagnostici**  
Vrsta skupa: stručni skup; učešće bez kotizacije
- Decembar 2012, Beograd  
**Petnaesta naučna konferencija »Profesor Ivan Berke«**  
Vrsta skupa: naučna konferencija; učešće bez kotizacije
- 19–23. May 2013, Milano, Italy  
**EuroMedLab 2013 – 20<sup>th</sup> IFCC-EFLM European Congress of Clinical Chemistry and Laboratory Medicine – 45<sup>th</sup> Congress of the Italian Society of Clinical Biochemistry and Clinical Molecular Biology**  
For more information please visit:  
[www.milan2013.org](http://www.milan2013.org)
- 6–9. October 2013, Bali, Indonesia  
**APCCB 2013 – 13<sup>th</sup> Congress of the Asia-Pacific Federation for Clinical Biochemistry and Laboratory Medicine**  
For more information please visit:  
[www.apccb2013.org](http://www.apccb2013.org)
- 29. October – 1. November 2013, Lima, Peru  
**COLABIOCLI 2013 – XXI Congreso Latinoamericano de Bioquímica Clínica**
- 22–26. June 2014, Istanbul, Turkey  
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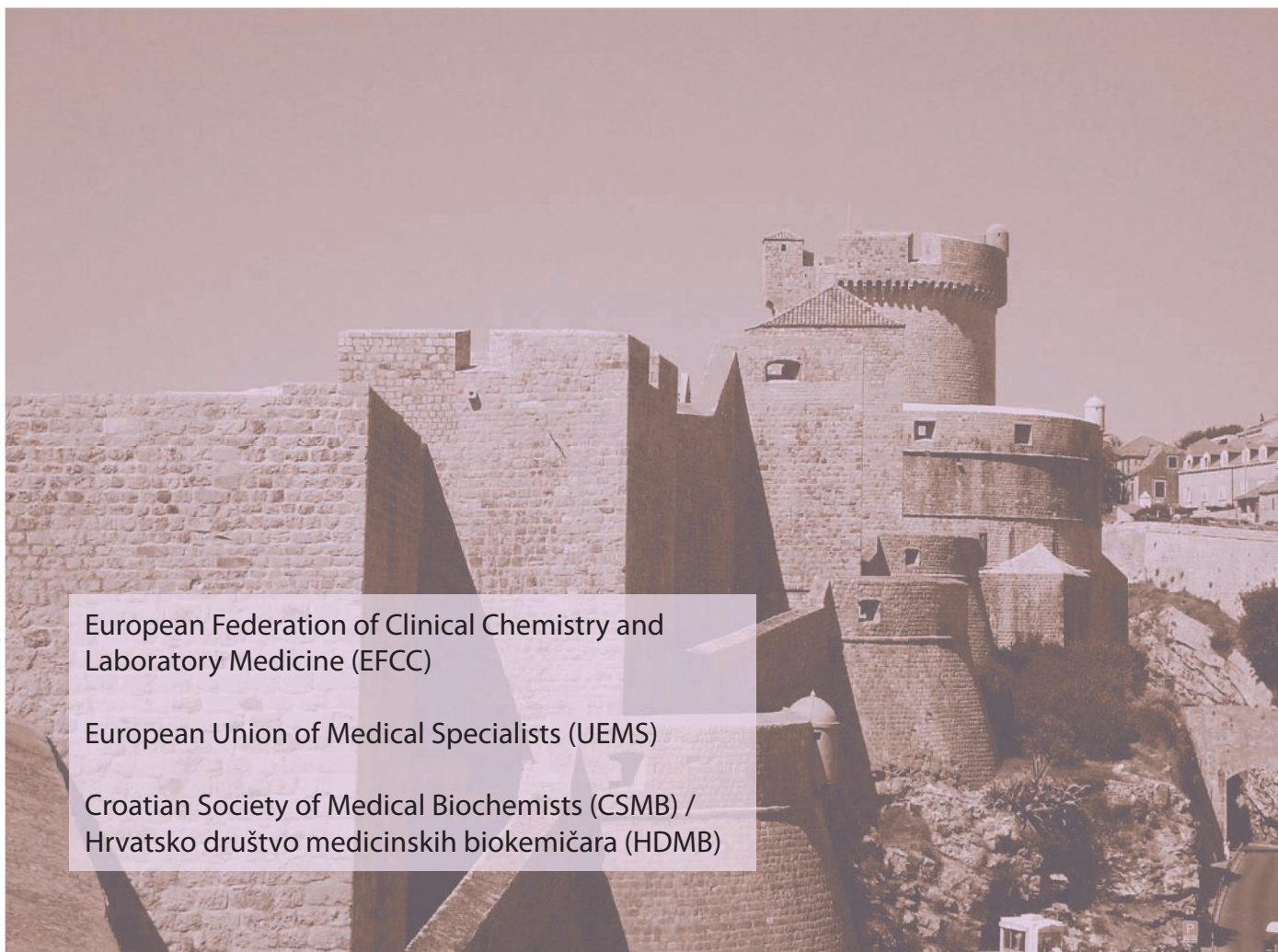


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LABORATORY MEDICINE AT THE CLINICAL INTERFACE

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7th Congress of the Croatian Society  
of Medical Biochemists (CSMB)

10-13 October 2012, Dubrovnik, Croatia



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FT3	30402	60 tests
T3	30403	60 tests
T4	30404	60 tests
Anti-TPO	30461	30 tests
Anti-Tg	30462	30 tests
<b>REPRODUCTION/FERTILITY</b>		
Estradiol II	30431	60 tests
FSH	30407	60 tests
HCG	30405	60 tests
LH	30406	60 tests
Prolactin	30410	60 tests
Progesteron	30409	60 tests
Testosteron	30418	30 tests
<b>TUMOUR MARKERS</b>		
TPSA	30428	60 tests
FPSA	30440	30 tests
CEA (S)	30453	60 tests
AFP	30413	60 tests
CA 15-3*	30429	30 tests
CA 19-9™	30427	30 tests
CA 125™	30426	30 tests
<b>ALLERGY</b>		
Total IgE	30419	60 tests
Stallertest (Respiratory allergy screening)	30800	30 tests
Stallertroph <sup>2</sup> (Food allergy screening)	30830	10 tests
Stallergy (Reagent strip for Stallergy tests)	30801	60strips
Stallergy range <sup>3</sup> (20 specific IgE available)		10 tests
<b>OTHERS</b>		
Cortisol S	30451	60 tests
Ferritin	30411	60 tests
Protein C	30115	30 tests
vWF	30436	30 tests
β2 Microglobulin	30420	30 tests

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hsCRP*	412556	60 tests
Digoxin	30603	60 tests
<b>VENOUS THROMBOEMBOLISM</b>		
D-Dimer Exclusion™	30442	60 tests
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HAV IgM	30307	30 tests
Anti-HAV Total	30312	30 tests
Anti-HCV*	30308	60 tests
<b>HIV</b>		
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HIV DUO Quick	30447	60 tests
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HIV P24 II Confirmation	30444	60 tests
<b>ToRC</b>		
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CMV IgM	30205	30 tests
CMV IgG Avidity	30203	30 tests
Rub IgG II	30221	60 tests
Rub IgM	30214	30 tests
Toxo IgG II	30210	60 tests
Toxo IgG Avidity	30222	30 tests
Toxo IgM	30202	60 tests
Toxo Competition	30211	60 tests
<b>ANTIGEN DETECTION</b>		
C. difficile Toxin A&B	30118	60 tests
Chlamydia	30101	60 tests
Chlamydia Blocking Assay	30194	30 tests
Rotavirus	30107	60 tests
<b>OTHER SEROLOGIES</b>		
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Lyme IgM**	30319	60 tests
Lyme IgG**	30320	60 tests
Measles IgG	30219	60 tests
Mumps IgG	30218	60 tests
Varicella-Zoster IgG	30217	60 tests
H.pylori IgG	30192	30 tests
EBV VCA IgM	30237	30 tests
EBV VCA/EA IgG	30236	30 tests
EBV EBNA IgG	30235	30 tests

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<b>DETECTION</b>		
Campylobacter	30111	30 tests
E. coli O157	30112	30 tests
UP E. coli O157 (including H7)	30122	30 tests
Listeria species Xpress	30224	60 tests
Listeria Duo	30225	60 tests
Listeria	30700	60 tests
Listeria monocytogenes	30704	60 tests
Salmonella	30702	60 tests
Staph enterotoxin	30705	30 tests
Salmonella Xpress	30709	60 tests
Listeria monocytogenes Xpress	30123	60 tests
UP Salmonella	30707	60 tests
UP Listeria*	3126	60 tests
<b>IMMUNO-CONCENTRATION</b>		
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Mizon D, Piva F, Queyrel V, Balduyck M, Hachulla E, Mizon J. Urinary bikunin determination provides insight into proteinase/proteinase inhibitor imbalance in patients with inflammatory diseases. *Clin Chem Lab Med* 2002; 40: 579–86.
- Supplements:  
Williams DN. Reducing costs and hospital stay for pneumonia with home intravenous cefotaxime treatment: results with a computerized ambulatory drug delivery system. *Am J Med* 1994; 97: Suppl 2A : 50–5.
- Abstracts:  
Henney AM. Chronic plaque or acute rupture? The yin and yang of vascular tissue remodeling [abstract]. *Atherosclerosis* 1997; 134: 111.
- Books and Monographs:  
Kahn CR, Weir GC, editors, Joslin's diabetes mellitus, 13ed. Philadelphia: Lea and Febiger, 1994: 1068pp.
- Chapters:  
Karnofsky DH, Burchenal JH. The clinical evaluation of chemotherapeutic agents in cancer. In: Macleod CM, editor. Evaluation of chemotherapeutic agents. New York: Columbia University Press, 1949: 191–205.

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The number and source of data must be stated and conclusions which have a statistical basis must be substantiated by inclusion of pertinent descriptive statistics [mean or median, standard deviation (SD) or interquartile range, percentage coefficient of variation (%CV), 95% confidence limits, regression equations, etc.].

### Methods

Experimental design, subject selection and randomization procedures should be described and analytical precision quoted when appropriate. The hypotheses to be tested by a statistical procedure must be stated and where appropriate power calculations for the sample size used should be given (it is recommended that the power is <80%). In case-control studies, clearly define how cases and controls were selected and what matching has taken place.

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Normally distributed data should be described using a mean, SD and/or %CV and expressed as »mean (SD)« not »mean  $\pm$  SD«. When data are not normally distributed, following demonstration by tests such as the Shapiro-Wilk test (3), then medians and interquartile ranges should be used in place of mean and SD. Skewed data can often be normalized by logarithmic transformation or a power transformation. The statistical analysis and calculation of summary statistics should be carried out on the transformed data and the summary statistics transformed back to the original scale for presentation. If a logarithmic scale is used, then graphs should display non-transformed data on a logarithmic scale.

Graphs showing data of comparable magnitude should be of similar size and design. All individual points should be displayed where possible by displacing overlapping points. Error bars showing the standard error of the mean (SEM) or interquartile range, as appropriate, can be used to aid the interpretation of data.

The results of significance tests such as Student's and chi-squared should be presented with descriptive statistics, degrees of freedom (if appropriate) and probability  $P$ . The validity of any assumptions should be checked (e.g. conventional  $t$ -tests assume a normal distribution and equal variance for each set of data). For  $2 \times 2$  contingency table analysis by the chi-squared test the continuity correction must be applied, and for small expected frequencies Fisher's Exact Test used.

$P$  values should be reported in full in 1 or 2 significant figures. Describing  $P$  values as  $> 0.05$  or NS (not significant) should be avoided. If the results are highly significant and the calculated  $P$  value from the computer is e.g. 0.000, then the use of  $P < 0.0005$  is acceptable. Confidence intervals should be stated, particularly for non-significant results.

The conventional use of statistical significance is  $P \leq 0.005$ . If a different significance level needs to be used, then the reasons for this must be clearly stated in the statistical method section.

### Discussion

Statistical significance should not be equated to importance and  $P$  values should not be compared between different statistical tests. Association should not be interpreted as causation without additional evidence.

### Problem Areas

*Multiple comparisons* can produce spurious and misleading significance values. The primary hypothesis should always be clearly stated, and associations detected by retrospective analysis should be interpreted with caution. Whenever possible a single overall statistical test should be applied first e.g. ANOVA. If this is not significant, then multiple comparisons must not be applied. If it is significant then some form of multiple range test can be applied. If a single overall test is not possible, then multiple comparisons must use a Bonferroni type significance level.

*With paired data* the differences between individual pairs of data and the variability of the differences are more important than the individual values. Graphical representation should also show the difference between individual pairs, e.g. by plotted lines joining the paired data points.

*Standard regression analysis* requires data points to be independent (repeated measurements are not independent). The independent variable should be measured without significant error, e.g. age or time, and the points should be evenly distributed over the range and have no outliers (this can be easily examined with a scat-

ter plot). These requirements are rarely satisfied with biological data.

*Method comparison* using regression and correlation coefficients is inappropriate and should be performed using Altman and Bland difference plots (4). If a standard scatter plot and regression line are thought to be useful they can be given along with the Altman – Bland plot. Remember, if two methods are supposed to be measuring the same thing, then it is extremely likely they will be correlated so that a statistical tool correlation not tell you anything new.

If you are carrying out complicated statistical analyses, e.g. multivariate analysis, ROC analysis etc., then it is recommended that you seek advice from a statistician.

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