**TRIBE TEČAJ**
Fascination for Statistics
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**OBJECTIVE**
- Interest in and knowledge about statistical methods for biomedical research
- Practical application in Excel
- Preparation, analysis, interpretation, and presentation of data (basics)

**OUTLINE**Audience Ph.D. students in biomedicine, 1st/2nd year, basic/moderate knowledge
Date April 11th - 14th
Language English
Preparation Bring your own data, read as an example Gratwohl et al. (2010), JAMA
Schedule 4 afternoons
Structure Theory, practical work, discussion

**PROGRAM**

**DAY 1 - Preparation**
Realization and descriptive statistics: correlations, moments, structure
Estimated underlying distribution: probability density and cumulative distribution
Optimization criteria: mathematical arguments and the role of preferences
**Goal:** Master standard descriptive statistics and deduce tender points thereof

**DAY 2 - Analysis**
Problem statement: formulating the desired result in a testable way
Central limit theorem: the magic of the normally distributed sample means
Hypothesis testing: statement, interpretation, and justification
**Goal:** Formulate your problem statement and understand 'significance'

**DAY 3 - Interpretation**
Correlation: causality from content, not statistics
Linear regression: standard ordinary least squares (OLS)
Transformations: necessities and consequences for the error term
Goal: Discern correlation and causality and set up a meaningful OLS model

**DAY 4 - Visualization**
Driving your point home: visual support or manipulation?
Graphs: alternatives for distributions, proportions, models, time series, shares
Statistical information: empirical or estimated confidence intervals
**Goal:** Realize the power of framing and depiction to make your point

**INFORMATION AND REGISTRATION**: **tribe@mefst.hr**