

## 4<sup>th</sup> International Conference and Exhibition on **Biometrics & Biostatistics**

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### **An engineering approach to cancer therapy design**

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Cancer encompasses various diseases associated with loss of cell-cycle control, leading to uncontrolled cell proliferation and/or reduced apoptosis. Cancer is usually caused by malfunction(s) in the cellular signaling pathways. Malfunctions occur in different ways and at different locations in a pathway. Consequently, therapy design should first identify the location and type of malfunction and then arrive at a suitable drug combination. We consider the Growth Factor (GF) signaling pathways, widely studied in the context of cancer. Interactions between different pathway components are modeled using Boolean logic gates. All possible single malfunctions in the resulting circuit are enumerated and responses of the different malfunctioning circuits to a 'test' input are used to group the malfunctions into classes. Effects of different drugs, targeting different parts of the Boolean circuit, are taken into account in deciding drug efficacy, thereby mapping each malfunction to an appropriate set of drugs.

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### **Impact of mobile phone usage on health of undergraduate medical students**

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The objective of this study was to know the impact of mobile phone usage on undergraduate medical students' health. This cross sectional survey was done on 300 (apparently healthy) medical students (physiotherapy and allied health science) from various institutes of Lahore, Pakistan. Students with musculoskeletal or other physical disability were excluded from the study. We gave self-designed proforma to 300 students (18-26 years) in which return rate of questionnaire was almost 100% because questionnaires were filled during class lecture of Biostatistics and Research Methodology taught by the principal investigator of this research. The average age of students was  $20.34 \pm 2.1$  years. There were more female students as compared to male students. The prevalence of mobile usage among those students was 99.96% (299/300). The main purpose of mobile usage was talking, texting, internet browsing and radio/music listening. Most common musculoskeletal disorder was pain in carpo-metacarpal joint, neck and shoulder pain, eyes strain and warmth behind ears. Many students reported sleep disturbance and lack of interest in class during lecture.

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