receptors. This was the main point of the present study to understand the effect of selective entrance of antigen into APC.

**Keywords:** Ag85B, Fcγ1, Tuberculosis

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**Oral – [A-10-1116-1]**

**High throughput screening for protein biomarkers**

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**Introduction:** Q83 is a California Institute for Science and Innovation that is committed to bringing the quantitative techniques of the physical sciences into molecular biology. One challenge we are facing is how to develop quantitative biomarkers for disease diagnosis and disease progression during treatment.

**Method:** We have been using two different techniques to measure protein synthesis rates and protein degradation. Protein synthesis is measured by ribonuclease digestion of polysomal RNA followed by deep DNA sequencing of the protected fragments (“ribosomal profiling”). Protein degradation has been followed by using a protein ligase to attach trapping peptides to the free amino terminals of caspase products.

**Results:** Quantifying ribosome protected stretches of RNA has allowed researchers in Q83 to show up to a 300 fold variation between mRNA levels and protein translation rates, illustrating the importance of translational control. Measuring caspase products has revealed hundreds of new targets of caspases.

**Conclusion:** Although hundreds of reports are made of potential biomarkers of disease progression it is hard to compare their relative usefulness. By looking at all the changes in protein synthesis or degradation during disease progression it should be easier to identify the most useful.

**Keywords:** Protein biomarkers, Deep DNA sequencing, Ribosomal profiling

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**Oral – [A-10-1401-1]**

**New paradigm in medicine - The secrets of quantum field**

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In the world of unraveling the DNA strands and genetics code we open the door to design drugs specifically directed at particular human genome sequences for particular sequences. However, there is one issue we have yet to fully understand and explore, the mind – body connection. The question is how the mind-body connection interferes with the healing process and our designer drugs.

In the new paradigm, our methodology is to look at the body at the subatomic level as an energetic field and not atomic and molecular or cellular level which belongs to the old paradigm.

The leading edge molecular biologist, Bruce Lipton has examined in great detail the processes by which cells receive information. The implications of this research radically change our understanding of life. The result shows that genes and DNA do not control our biology; that instead the frequency field of DNA which is so governing our lives is shaped by signals from outside the cell, including the energetic messages emanating from our positive and negative thoughts. The synthesis of the latest and best research in cell biology and quantum physics is being hailed as a major breakthrough showing that our bodies can be changed as we retrain our thinking. Is it possible to think beyond our genes?

We've all heard stories of people who've experienced seemingly miraculous recoveries from illness, but can the same thing happen to each of us? After all, maybe we all have a conscious choice in directing the flow of this energetic field that we are to create that which is unrecognizable to our current paradigm.

**Keywords:** Metabolomics, Leishmania, NMR, PCA

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**Bioinformatics: Applications in Biochemistry**

**Oral – [A-10-161-1]**

**Implication of molecular docking in the study of structure-activity relationship of receptor tyrosine kinases inhibitors**

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