1. The topic of your lecture today is An Update on the treatment & Research of Treatment Resistant Depression and Bipolar Disorder. What can we expect from your lecture today?

Answer: In terms of my lecture today on An Update on the treatment & Research of Treatment Resistant Depression and Bipolar Disorder, what we will discuss today are what are the current regions for treatment resistant depression, what are the current treatments we have for the treatment resistant depression and bipolar disorder. It is clear that these are the complex brain diseases associated with many other medical and psychiatric conditions that perhaps is one of the common reasons why that leads to treatment resistant depression. I will review those factors as well as what are the current treatment strategies for the treatment resistant depression and bipolar disorder.

Now, it’s clear that we do have a number of treatments but not everybody responds to that treatment, there are limitations besides the side effects. One of the major limitations is that lag of onset of the treatment it takes weeks or longer for fully depression effects to take place and my research as well as others are geared towards the developing new treatments that work rapidly that produce and effect in minutes or hours for depression as supposed to weeks or longer with the current treatment.

2. So what are some of the new things that we have come up with now, with all the research having been done on treating resistant?

Answer: Well, in terms of the new research directions for developing better treatments for treatment resistant depression and bipolar disorder there are different paths. The path we are taking is using interventions or tools that will produce a rapid response within a few hours or few days. We thought we learned better with the Neurobiological what the nerve biology of treatment response to use for better treatments. (Continued)
(Continued) In addition, the information we collect on biomarkers, the baseline factors of producing a response will hopefully be applicable to the other treatments we have. With other treatments that we have, so we think the strategy and the other treatment what we have. So I think the strategy, a paradigm of rapid antidepressants will lead us to a better knowledge of why is... so that people can respond rapidly to medication and in turn use it better treatments.

3. In discussion earlier you talked about Ketamine being one of the treatments that is been looked at. Could you throw more light on this?

**Answer:** So Ketamine is one of the investigational tools that we are using to develop better antidepressants that work rapidly. Ketamine is a drug that moderates the system, ...system. And the other drug that has been looked at is the .....which is for seasickness and we give it ... And between two drugs we compare what they share in common in terms of the biology in response and also what they do share in common, which will give us very important clues of what are the circuits that activate or deactivate in the brain that leads to improvement of the symptom domains and depression.

4. Does gender or age differences play a role? How differently do the antidepressants react in women and men or with age?

**Answer:** In terms of clinical and treatment characteristics that are predictive response with approximately 150 patients that we have studied in drug free condition with human resistant depression. We have done an extensive analysis might predict response in that age, gender, history of trauma sub type of depression. And none of those factors are involved in the...