From: Deepak Chopra <[redacted]>
To: Jeff Epstein <jeevacation@gmail.com>
Subject: Fw: Exploring the placebo effect
Date: Sun, 31 Jul 2016 23:49:32 +0000

After our discussion on placebo -I explored what is currently known.
Here is what Eric - a world renowned expert in gene expression and Prof at Mt Sinai School of Medicine NYC has to say .
All love

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Super Genes: Unlock the Astonishing Power of Your DNA for Optimum Health and Wellbeing

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From: Schadt, Eric <[redacted]>
Sent: Sunday, July 31, 2016 7:37 PM
To: Deepak Chopra; Rudolph Tanzi
Subject: Exploring the placebo effect

Deepak and Rudy,

Given the identification of a strong "vacation" and "meditation" molecular response signature in your SOS study, I became interested in whether such a molecular response could exist in the placebo arms of clinical trials. As you know, in the placebo arms of clinical trials there is almost always what is known as a placebo effect in which those receiving the placebo realize a significant response to the placebo that improves the condition of the trial participant in a way that directly relates to the primary hypothesis of the trial (i.e., those in the placebo arm realize a benefit from the placebo as anticipated for the drug arm of the trial).

I have been interested in whether those who respond to the placebo have a molecular profile in blood or other tissues collected in the trial that differs significantly from those who do not respond to the placebo. Today the placebo effect is acknowledged in nearly every single clinical trial. In fact, in your SOS study, controlling for the "vacation" effect was in my opinion somewhat akin to controlling for the placebo effect with respect to the meditation intervention. Deriving a molecular signature for the placebo effect would have many advantages that would aid in our understanding of wellness, establish whether a placebo response may relate to the vacation and/or meditation effects, and help elucidate the causes of the placebo effect that may aid those running clinical trials in better accounting for such effects and distinguishing them from the action of a drug (it would almost certainly significantly improve the power in clinical trials to demonstrate the efficacy of a drug).

I think there may be significant data already available toward this end. I think assembling these data, perhaps going to pharma as well and seeing how many blood samples exist from the placebo arm of clinical trials that could be molecularly profiled as we did in your study (i.e., there may be many samples in clinical studies already run and we simply identify the extreme responders and non-responders in the placebo arms and profile those), would be worth some effort. I think

pharma would be open to this given the placebo arm of the trials are unrelated to the drug arm that they typically want to keep very protected.

Worth a discussion! Let me know if any interest.

Eric