

## **Interview with Dr. Gregory Stock Economics of Longevity Science**

KYLE JENSEN: Welcome to SAGE Crossroads, the premier online forum in issues of human aging. These podcasts feature lively discussion with the experts on the ethical, political, economic, scientific, and societal implications of aging related science. Thank you for listening.

I'm joined now with Dr. Gregory Stock. Dr. Stock is the CEO of Signum Biosciences and the former director of the UCLA program on medicine, technology and society.

Dr. Stock, you argue fervently on the benefits of radical life extension. What would some of the economic benefits be of major strides in longevity science?

GREGORY STOCK: Well if were actually possible to extend not just longevity but human vitality, then it would have a very substantial impact on virtually everything about our society. The way we transfer wealth from one generation to the next, the educational process, or family lives...it seems you're just really beginning to understand how the world works as you begin to slow down, tire out, and you get older. And so, there's a very long time to come up to speed, and if you could extend the period of your prime essentially, it would be enormously efficient. I think the main value for society is in that kind of process and for us as individuals, people want to live longer. If offered the choice, people would give virtually anything for that, or at least there are large numbers of people who would.

KYLE JENSEN: Do you feel that Americans that are living longer would impact social security, Medicare, and various other entitlement fields negatively?

GREGORY STOCK: Well, they certainly should impact those programs. The question is that these kinds of programs which always come up in these kinds of discussions are set up so that people when they are no longer functional and vital are able to be supported in some way by society, so if you have much, much older people chronologically that can be fully active and participate in society, then they should have to do that or should have to provide for themselves. And, you know, the other point of it is that something like social security is already going to be bankrupt, so of course if you have people living longer and you don't make any adjustments and you try to support a large segment of the population that isn't going to be a good solution.

KYLE JENSEN: Do you think we are on the right track to revamp those programs?

GREGORY STOCK: I don't think we're doing much at all, but those things will clearly occur and the political process will allow them to occur and will force them to occur when there is a real problem that is proximate rather than some real distant thing that can be passed off or left to the next generation or to later politicians.

KYLE JENSEN: Are there any economic models or studies in particular that back up your beliefs on the economic benefits of longevity science?

GREGORY STOCK: Yeah. There have been estimates that about half of the rise of standard of living in the United States that has resulted since about 1900 is a result of the increase in longevity that has occurred over that period, so there has been a substantial increase from about the 40s to the current expectation of longevity to 70 or so depending on whether you are male or female, and that's had exactly those effects where people are able to remain in the work force much longer. Social security was set to kick in at 65 because that was the system in Germany at the time of Bismarck and nobody lived that long. It was a very cheap thing to implement, so as people began to live longer then it became not a very reasonable age cut off. Of course these kinds of things have huge impacts. If you look at the expansion in longevity in the last century, look at what the impacts have been on the nature of the family, on the role of women in society...huge, huge changes. I anticipate that the same kinds of things will occur as we move forward should those kinds of advances occur. There's no certainty that they will occur. The only certainty is that if it becomes possible to extend our youthfulness and our period of vitality that there is absolutely no way that it will not be broadly embraced. People right now expend huge amounts of money just for the relative appearance of youth or of continued delaying of decrepitude in some sense.

KYLE JENSEN: Lastly, the audience of SAGE Crossroads is made up of scientists, policy makers, and curious consumers. If there is one last statement that you could make to them about the economic benefits of longevity science, what would it be?

GREGORY STOCK: I think that one can get caught up in these things in way that aren't necessarily constructive to our lives. The important thing is to maintain family, to have reasonable sorts of behaviors, eating well, getting exercise, and enjoying the life that we have for ourselves at present. If we are so fortunate as to have an extension to that then that will be tremendous. If we aren't, we will be living as well as we can in the allotted time that we have.

KYLE JENSEN: Thank you. On behalf of SAGE Crossroads, I'm Kyle Jensen.