

To: Jackson, Ryan[jackson.ryan@epa.gov]
From: Jeremy Christopher Carl
Sent: Mon 6/26/2017 2:51:31 AM
Subject: FW: EPA science-- another candidate
Gregory Cochran's CV.doc

Ryan,

I wanted to pass along another candidate for your assistant administrator position for science (if you are still looking for folks)— this guy is actually quite a distinguished scientist— though with some quirks.

I'm in town Monday-Thursday for the launch of my new book. Would love to meet up to introduce myself in person and see how I might be able to be helpful to you from my perch at Hoover.

I have some time Monday early afternoon if that works— I also have some time in between my Hill launch event Tuesday that will end around 1:30 and a meeting with Sen. Sullivan at 4:30.

Wednesday and Thursday can also work if those are easier— my schedule is more flexible on those days.

Best,

Jeremy

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From: Gregory Cochran <[Ex. 6 - Personal Privacy]>
To: [Ex. 6 - Personal]
Sent: Monday, June 19, 2017, 4:25:28 PM PDT
Subject: EPA science

The position you described, coordinating scientific research for the EPA, sounds interesting. It's not an area I've worked in but I'm familiar with many of the issues, especially those involving air pollution and toxicity analysis. Anyhow, when you manage research, a broad understanding is about all you can hope for: it's not as if you have to step in and solve the sticky problems yourself. Tempting though that is.

One angle that seems promising to me is taking advantage of the recent tremendous advances in gene sequencing, particularly in tackling problem in chemical toxicity (particularly carcinogens) and radiation risks. For both carcinogens and radiation, the key step is mutation. For a long time there have been outstanding questions about the risks of low levels of mutagens and radiation [the linear no-threshold model, LNT]. At this point nobody knows the true of risk of such low exposures: obviously they are small per individual, , but even small risks matter if millions of people are exposed to them.

Through gene sequencing, we can now directly measure low levels of mutations in lab animals and in humans. Already we've learned quite a bit about natural causes of mutation - it turns out that the largest source is old fathers, whose germ cells have experienced hundreds of rounds of replication, so that mutations accumulate steadily with age. We also know more about about the impact of such mutations, which cause a whole range of health problems in future generations, including many cases of mental illness. People tend to think more about cancer, and that is a threat, but it's not the only one: schizophrenia and autism are too.

Supporting research using these newly available genetic tools should allow us to actually answer some of these long-standing questions - which allow us to more accurately identify threats to public health. We are almost certainly worrying too much about some factors while not even realizing the dangers of others: better to know, always.

Investing research dollars into the new opportunities flowing from advances in genetics could have a high

payoff, and I'd love the chance to play a part in it.

Gregory Cochran