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## Reply to Murray and Schloss: Designer genes?

Murray and Schloss (1) contend that rampant flaws in the human genome (2) offer an unsound as well as superfluous argument against intelligent design (ID). I can understand how these authors might deem the philosophical argument from imperfection to be superfluous, because, as they themselves note in their letter, “the central claims of ID have been abundantly critiqued on strict empirical grounds” [examples of such scientific critiques are presented by Miller (3)]. Therefore, indeed, perhaps there was no exigency to beat what should already have been a dead horse (ID). However, I disagree that genomic flaws necessarily provide an unsound argument against “designer genes,” because much depends on the particular brand of theology under consideration. Typically, “IDers” promulgate the notion of an omnipotent and benevolent deity (a Designer God) who directly crafts life *ex nihilo*, and they vehemently oppose any suggestion that God has operated instead by setting into motion natural evolutionary processes. However, if a sentient Designer God is directly responsible for the many malfunctions that we now know characterize the human genome, that designer would seem to be quite malevolent as well as bumbling, as judged, for example, by the huge number of horrible genetic disorders that plague humanity and by the millions of genetically defective embryos and fetuses that die in utero. If IDers wish to worship such a Designer God, so be it, but they

should at least be aware that the age-old theodic dilemma extends deep into the molecular realm of genome structure and function (4). Thus, if the evolutionary sciences are to provide, ironically, any sort of philosophical salvation for theology, it will probably be because they help to solidify a long-standing pillar of science—that any “god” has acted through natural laws (in this case, evolutionary processes) that can be studied objectively. Murray and Schloss close their letter by calling for an assessment of the recent genomic findings in the light of rigorous theology and philosophy. I heartily applaud that suggestion. Science has shown that the human genome, in addition to its many marvelous workings, is rife with molecular faults that cause vast human suffering. It is now time for theologians to step up to the plate and perhaps help us to understand the philosophical implications of this rather disturbing reality.

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1. Murray MJ, Schloss JP (2010) Evolution, design, and genomic suboptimality: Does science “save theology”? *Proc Natl Acad Sci USA* 107:E121.
2. Avise JC (2010) Colloquium paper: Footprints of nonsentient design inside the human genome. *Proc Natl Acad Sci USA* 107(Suppl 2):8969–8976.
3. Miller KR (1999) *Finding Darwin's God: A Scientist's Search for Common Ground Between God and Evolution* (HarperCollins, New York).
4. Avise JC (2010) *Inside the Human Genome: A Case for Non-Intelligent Design* (Oxford Univ Press, New York).

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The author declares no conflict of interest.

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