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the disease's progression. Each embryo would be allowed to live about six days before being destroyed. If approved, the team plans to begin work around Easter.

"Cosmetic Neurology" May Be Just Around the Corner

While normal, healthy students already take drugs like Ritalin to help them study for exams, we may soon see more and more healthy people taking drugs to make them "better" people. Doctors writing in the journal Neurology offered examples of what they are calling "cosmetic neurology"—the taking of drugs or treatments to enhance their brains.

Among the examples of what they soon expect us to see include commercial pilots taking Alzheimer's drugs to enhance attention and memory; the administration of beta-blocking drugs to blunt the effects of emotionally traumatic events; and the performance of transcranial magnetic stimulation to improve the mood of those having an off day. The Center has already begun to address these issues with a new neuroethics working group. For more information, see the Center News section on page 8.

CBHD Review of Book by President's Council on Bioethics Published in *JAMA*

The October 6, 2004 issue of the *Journal of the American Medical Association,* included an essay by CBHD Researcher Linda Bevington analyzing *Being Human: Readings from the President's Council on Bioethics*. This book is an outstanding collection of writings that have more to say about what it means to be human than most analytical treatises on the subject—featuring excerpts from such sources as St. Augustine's *Confessions*, J. M. Barrie's *Peter Pan,* Walker Percy's *The Loss of the Creature,* and Willa Cather's *My Antonia*. Copies of the book are obtainable from the Council (www.bioethics.gov). ■

A Review of the Book
Rapture: How Biotech Became the New Religion

(by Brian Alexander; New York: Basic Books, 2003; 289 pages)

Bill Van Wyngaarden, D.Min., Director of Development,
The Center for Bioethics and Human Dignity

Former *Wired* contributing editor Brian Alexander's well-written and thoroughly documented book, *Rapture: How Biotech Became the New Religion*, traces the history of the biotech revolution. The dust jacket promises "a raucous tour" of the biotech field, and some readers may find the author irreverent to the point of irrelevance. A wholesale dismissal of Alexander's book, however, is not as beneficial as an examination of his assertions.

Alexander asserts that biotechnologies such as cloning, stem cell research, genetic engineering, and molecular nanotechnology will usher in a new age of human existence. In this new age, diseases will be eliminated and aging will be halted—humans will attain immortality. The promise of immortality makes biotechnology a religion holding forth an emotional "rapture" for our species.

Indeed, emotion runs strong in Alexander's book. Individuals who point out ethical difficulties with biotechnologies are referred to as "luddites" or "bioluddites." The term *Luddite* originated in nineteenth-century England where followers of Ned Lud destroyed newly invented machines that threatened their livelihood. Similarly, bioluddites are people who stand in the way of biotechnological progress.

The real hero of the book is William A. Haseldine. At the age of nine, Haseldine watched his mother take her own life because of mental illness. Haseldine determined that he would become a doctor so that he could prevent others from the same grave suffering. In college, it became apparent to him that he could have more influence as a medical researcher. Ultimately he found that by financing many researchers he could have an even greater impact.

Haseldine put forth a vision of what might be possible with proper funding of applied research. The kinds of things he proposed were, just two decades ago, considered science fiction, but now are leading to the reality of a brave new world. His primary goal is the extension of human life through the elimination of the effects of aging and disease. This religion calls for no pain, no suffering—no need for divine salvation.

In Alexander's view, only bioluddites are opposed to life extension. He considers Leon Kass the foremost bioluddite. Kass began stirring up trouble in the early 1970's by disagreeing with the voices of the then-burgeoning biotech movement.

According to Alexander, we should not spend our time considering ethical issues. Rather, the new regime of biotech entrepreneurs boldly proclaims that brave new world science does not need old world ethics. The goal of eliminating disease and aging is so pure, so important, and so worthwhile that it justifies any means. Additionally, no consideration is given to the costs (and how they may compare to the benefits) of biotechnology. The benefits are so obvious, he posits, that any reasonable person would want to see the results as soon as possible.

Nagging questions persisted in my mind as I read the book. If billions of dollars of tax money and venture capital are poured into this research—research that some find at best dubious—will less money be spent on practical and effective programs to, for instance, alleviate hunger and provide safe drinking water around the world? Who will be the beneficiaries of biotech programs and the cures they produce? Do bioluddites get a fair shake—are his charges correct? Aren't many of the attacks on bioluddites simply ad hominem?

The value in Alexander's book is the insight it gives into the thinking of those who would advance medical science at any cost. May that insight lead to more effective engagement on the important ethical issues that arise in the biotech arena. ■