Editor’s Letter-Summer 2013

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What’s On Your Mind?

When I first heard about President Obama’s BRAIN (Brain Research through Advancing Innovative Neurotechnologies) Initiative, I was intrigued. The president described the $100 million research effort as a way “to revolutionize our understanding of the human mind.”

One of the goals is to study the many incurable diseases—such as Alzheimer’s and autism—rooted in abnormal developments in the brain.

The initiative hopes to develop new tools that will be able to map the human brain. These tools will accomplish this by detecting nerve cell interactions and tracing the path of human thoughts, behaviors and functions as they travel along the brain’s complex network of circuits.

If this sounds ambitious, it is. The project stirred up controversy even before the president officially announced the initiative’s goals. The research would be costly, critics said. Is it worth the price tag? What about guidelines to measure success and failure, others asked. Indeed, none were in place, and plans weren’t as yet clearly laid out for “scientific milestones, goals, timetables and deliverables.” These were words from Francis Collins, MD, PhD, the director of the National Institutes of Health and the man whom President Obama put in charge of the initiative.

In science, this initiative is what’s called “transformative” research. It is the kind of high-risk, high-stakes inquiry that has huge potential for a big payoff in the expansion of scientific knowledge, new ways of looking at illnesses and the potential to develop innovative technologies that might someday solve current health problems.

My fascination with brain mapping focuses on the possibility of a cure for Alzheimer’s, a degenerative disease that progressively destroys memory and other important mental functions. I watched this common cause of dementia—a group of brain disorders that results in the loss of intellectual and social skills—relentlessly steal away the quality of my mother’s last few years of life. Her memory blurred and faded, dulling her mental functions until she seemed unaware of her surroundings. She’d become a shell of her former self and hardly spoke to my siblings and me. Even her speech had changed. Her previously vibrant voice was replaced by a hoarse, raspy monotone in which she delivered flat, one-word answers accompanied by a dull stare from eyes that sent no visuals to stimulate her brain.

If brain mapping is a way to learn more about Alzheimer's and other forms of dementia, then let's get going on this research. I suspect many other people with loved ones affected by brain-related illnesses would agree with me. Actress Holly Robinson Peete recounts her struggles in accepting the diagnosis that her son, now a teenager, is autistic. In the process, she began speaking out for all families dealing with this issue. (Click here to read her story.) Until we understand such diseases better and can find cures for them, such support and advocacy can be a lifeline.

At the very least, brain mapping offers a possibility of hope, perhaps where there was none before.
