

January 22, 2009

President Barack Obama  
The White House  
1600 Pennsylvania Avenue, NW  
Washington, DC 20500

Dear President Obama:

We represent a broad spectrum of physicians, scientists and researchers and are writing to express our strong support for your commitment to expand scientific research. As you consider this increased investment in science, we want to highlight a very important and potentially far-reaching area of inquiry. Specifically, greater understanding of the mitochondria could provide insights into treatments for a wide range of diseases and conditions that affect millions of Americans.

Mitochondria are often called the “powerhouses of the cell.” They are specialized compartments within almost every cell and are responsible for producing the energy needed by our body to sustain life. Mitochondria combine oxygen from the air we breathe with calories from food to produce the energy required for all bodily functions. If the mitochondria fail to produce sufficient energy, the cell will not function properly and organ systems will fail.

Research has revealed that mitochondrial dysfunction is at the core of many common illnesses and chronic conditions such as Alzheimer’s disease, Parkinson’s disease, diabetes, heart disease, obesity, osteoporosis, cancer and even the aging process. Autoimmune diseases such as multiple sclerosis, lupus and rheumatoid arthritis also may have a mitochondrial basis. There also is new evidence that mitochondrial dysfunction plays a role in the cause of some children’s autism.

There also are “primary” mitochondrial diseases that usually result from genetic defects that reduce the ability of the mitochondria to produce energy. Mitochondrial disease was recognized relatively recently with the first cases diagnosed in adults in the 1960s and in children in the 1980s. Every 30 minutes a child is born who will develop a mitochondrial disease by age ten. Research published six months ago showed that more than 1 in 200 people have mitochondrial DNA mutations that could lead to mitochondrial disease.

Acknowledging the potentially far-reaching implications that would result from a deeper understanding of the mitochondria, The National Institutes of Health recently committed to establish a mitochondria research initiative that would involve all NIH institutes. This initiative will play a significant role in advancing science and medicine. In the 2008 appropriations legislation, the United States Congress expressed its support for intensified mitochondrial research within NIH.

While some steps are being taken, much more could be done to increase our understanding of this critical area of human health. Because mitochondria are so

important to the health of cells, a full understanding of their function and dysfunction will have a significant impact on the health of our citizens and will lead to prevention and cures for medical problems that currently affect millions of Americans. We respectfully urge your Administration to include research into mitochondrial medicine among your top medical and research priorities.

Respectfully,

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