Chapter highlights: Introduction

The purpose of “chapter highlights” is to offer a framework in which to think about the specific information discussed in each Brain Facts chapter. These highlights draw upon information in the chapter and on the new Brain Facts web site (http://www.brainfacts.org) and occasionally, on our own knowledge of neuroscience that may not be discussed in Brain Facts. Questions for Brain Bee will come from Brain Facts (new 2012 publication) and entries from the new Brain Facts web site that have “brainfacts.org” in the URL. Some but not all relevant entries are cited below.

The brain is the body’s most complex organ. To learn more, go to http://www.brainfacts.org/about-neuroscience/what-is-neuroscience/

The Brain is involved in regulating all other bodily functions. Every organ/tissue in the body receives and sends information to the brain, either directly or indirectly.

A main goal of neuroscience research is to understand the biological processes underlying the human condition (affect, mood, cognition, learning and memory, etc) to improve quality of life for humans by developing cures for the more than 1000 disorders of the brain and nervous system that plague humans.

The effects of genes on brain function interact with the effects of the environment / experience.

Genes may cause or predispose humans to develop disease.

Environmental factors are potent regulators of disease and can tip the scales, either favoring or preventing disease.

Neural connections in the brain change throughout the lifespan and are thought to underlie our capacity for life-long learning.

New cells are continually generated

New drugs allow insight into how the brain functions