DEG 01
This coronal section shows cortical atrophy indicated by narrow gyri and wider sulci; the arrow points to a widened sulcus. The ventricles are enlarged as a result of decreased volume of the brain parenchyma.

DEG 02
This silver-stained section from the cortex shows a neuritic plaque in the center – an extracellular collection of degenerating neuritic processes (dark stain) and other elements surrounding a central amyloid core. Two normal neuron cell bodies are indicated by the arrows.
DEG 03
large numbers of neurofibrillary tangles in cortex
  ---composed of tau protein
  ---intracellular accumulation
  ---paired helical filaments

DEG 04
Frontotemporal dementia (e.g. Pick disease) – Gross pathology
This gross brain shows severe atrophy in frontal and temporal lobes. Note that occipital and parietal lobes show little atrophy.
DEG 05
Illustration of basal ganglia anatomy. The striatum consists of the caudate and putamen. The lenticular nucleus consists of putamen and globus pallidus. Connections with the subthalamic nucleus and substantia nigra are important in control of movement.

DEG 06
CAG repeats in an exon lead to transcription of the CAG repeats into mRNA, with translation resulting in polyglutamine repeats in the huntingtin protein.
DEG 07
The coronal section at the bottom shows severe atrophy of the caudate nucleus with ventricular dilatation ("boxcar" ventricles"), characteristic of Huntington disease. A normal coronal section (also at the level of the anterior commissure) is shown at the top for comparison.

DEG 08
This section of the midbrain shows depigmentation of substantia nigra, characteristic of Parkinson disease. The arrow indicates the location of the substantia nigra, adjacent to the cerebral peduncle.
DEG 09
This H&E-stained section of the substantia nigra shows two Lewy bodies – intracellular inclusions in neurons. The Lewy body, which contains alpha-synuclein, is characterized by a dark center with a lighter halo.

DEG 10
This coronal section shows atrophy and discoloration of putamen & globus pallidus (lenticular nucleus). The arrow indicates the putamen.

DEG 11
Spongiform encephalopathy (neuronal vacuoles) are characteristic indicates a demyelinated plaque.