GPT-4V:

The image you've shared depicts a detailed map of an adult mouse coronal brain section. Recognizing every structure would be exhaustive. I'll try my best to identify as many regions as I can, but please note that this may not be an exhaustive list and might not cover all structures in the detail you might expect from a senior brain scientist at the Allen Institute. Here's a breakdown:

1. **RSP**: Retrosplenial Cortex
    - **Function**: Involved in a variety of cognitive functions, including episodic memory, navigation, and the processing of spatial, contextual, and emotional information.
    - **Structural features**: Located posteriorly in the parietal lobe.
2. **VIS**: Visual Cortex (Multiple areas like VISam, VISrl, etc.)
    - **Function**: Processes visual information.
    - **Structural features**: Located in the occipital lobe.
3. **CA1, CA3**: Regions of Hippocampus
    - **Function**: Important for memory and navigation.
    - **Structural features**: The hippocampus is a major component of the brain of humans and other vertebrates. It belongs to the limbic system and plays important roles in the consolidation of information from short-term memory to long-term memory, and in spatial memory that enables navigation.
4. **DG**: Dentate Gyrus
    - **Function**: Part of the hippocampal formation, and it is thought to contribute to the formation of new episodic memories and the spontaneous exploration of novel environments.
    - **Structural features**: A layer of granule cells making up one of the two primary regions of the hippocampus.
5. **LP**: Lateral Posterior Nucleus