Advanced Topics

Residents should be gradually introduced to the concepts of:

1. Instruction should include the general instrumentation principles involved in:
   - Magnetic resonance spectroscopy
   - Multi-slice computed tomography
   - Small animal imaging instrumentation

2. Residents should be introduced to the concepts of didactic instruction in molecular and cellular biology – the imaging of molecular targets, processes and events, including basic principles of molecular and cellular biology. Examples of imaging molecular and cellular processes are not limited to but include:
   - Metabolism
   - Proliferation
   - Receptors
   - Hypoxia
   - Amyloid Imaging
   - Reporter genes
   - Apoptosis
   - Angiogenesis
   - Cell trafficking

3. Residents should be familiar with the basic concepts of:
   - Imaging of the heart metabolic imaging with MIBG
   - Imaging of the heart metabolic imaging with fatty acids
   - Diagnostic use of molecular imaging with MR imaging, including use of contrast agents