

Harmonization of protocols for the manual tracing of the hippocampus - an EADC-ADNI joint effort

AUTHOR-CERTIFIED PROTOCOL FEATURES AND TRACINGS

Lehéricy S, Baulac M, Chiras J, et al. Amygdalohippocampal MR volume measurements in the early stages of Alzheimer disease. AJNR Am J Neuroradiol 1994;15:929-37

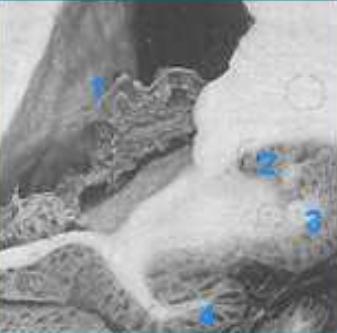
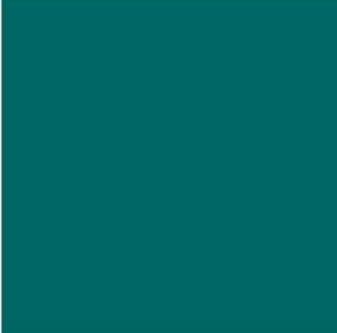
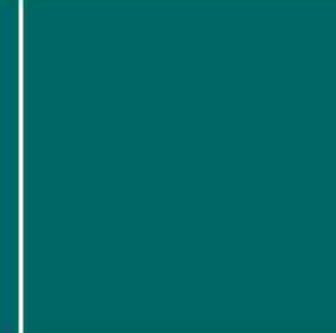
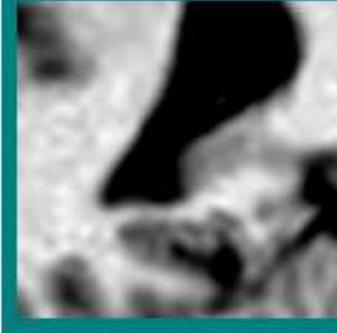
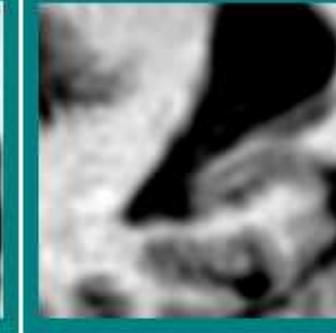
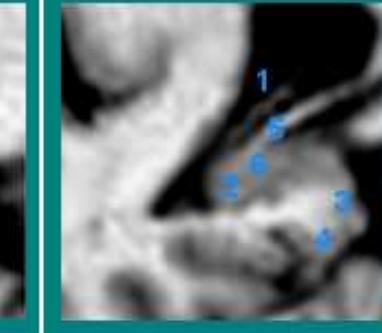
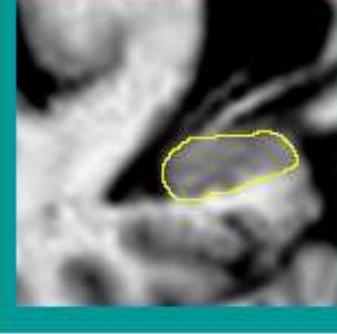
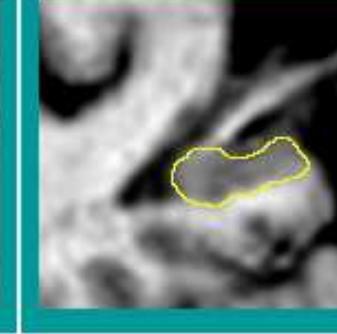
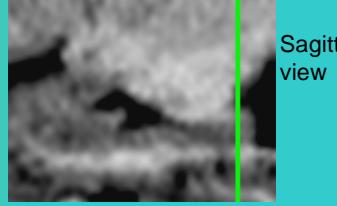
In the following section you can find:

- 1) An excerpt of the Survey of the anatomical landmarks according to Lehéricy et al.'s criteria.
- 2)The hippocampal tracing on consecutive coronal slices of a 1.5T ADNI control subject (**2A**) and AD patient (**2B**).

1) Excerpt of the Survey of anatomical landmarks according to Lehericy et al.'s criteria.

Plane				
axis of the hippocampus				
Start tracing				
from tail to head				
Areas explicitly included	Areas explicitly excluded	Most anterior slice	Most posterior slice	
CA regions, subiculum, dentate gyrus, alveus and fimbria	parahippocampal gyrus, isthmus of the cingulate gyrus	level at which the head of hippocampus first appears below the amygdala	slice where the crus of fornix was visible	
BOUNDARIES				
HEAD	Lateral border	Inferior border	Medial border	Superior border
medial wall of the temporal horn		parahippocampal gyrus	a oblique line following the same inclination of WM of PG connect the inferior part of the subiculum to the quadrigeminal cistern	hippocampal recess or uncal recess of alveus. If nothing was visible the limit was arbitrarily drawn as an orizontal line connecting the middle of the medial border of the lateral ventricle to the surface of the uncus
BODY	lateral ventricle	white matter of parahippocampal gyrus	a oblique line following the same inclination of WM of PG connect the inferior part of the subiculum to the quadrigeminal cistern	CSF of the temporal horn of the lateral ventricle
TAIL	lateral ventricle	isthmus	a oblique line following the same inclination of WM of PG connect the inferior part of the subiculum to the quadrigeminal cistern	CSF of the lateral ventricle

2A)CTRL

	155	154	153	152	151
Anatomical section					
Native MRI					
Tracing					
Notes	1= Lateral ventricle 2= Cornu Ammonis 3= Isthmus 4= Parahippocampal gyrus			Most posterior slice: slice where the crus of fornix was visible  Sagittal view	1= Lateral ventricle 2= Cornu Ammonis 3= Isthmus 4= Parahippocampal gyrus 5= Crus of fornix 6= Gyrus dentatus

2A)CTRL

Anatomical section	150	149	148	147	146
Native MRI					
Tracing					
Notes			<p>1= Lateral ventricle 2= Cornu Ammonis 3= Subiculum 4= Parahippocampal gyrus 5= Fimbria 6= Perimesencephalic cystern</p>		

2A)CTRL

Anatomical section	145	144	143	142	141
Native MRI					
Tracing					
Notes				<p>1= Lateral ventricle 2= Cornu Ammonis 3= Subiculum 4= Parahippocampal gyrus 5= Fimbria 6= Perimesencephalic cistern</p>	

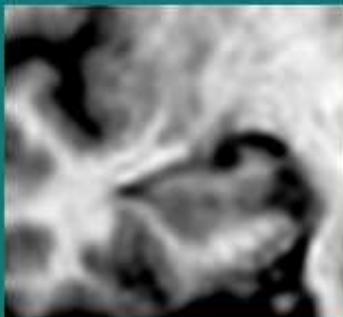
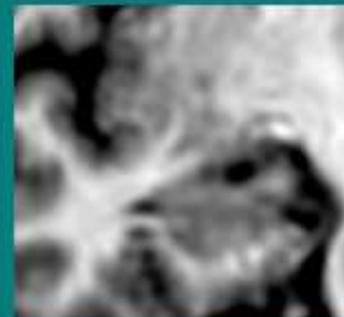
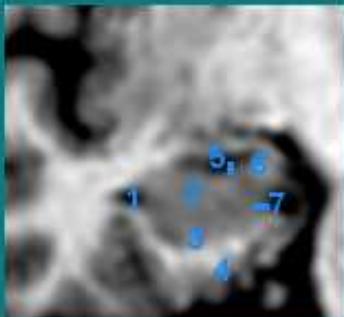
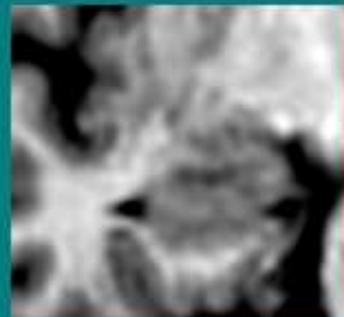
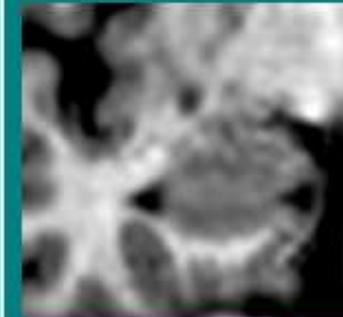
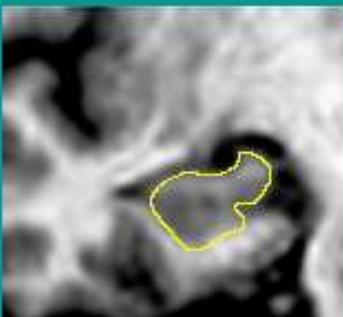
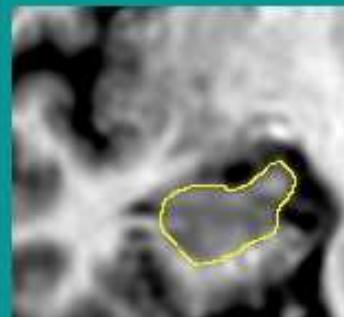
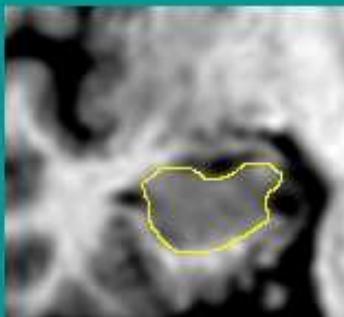
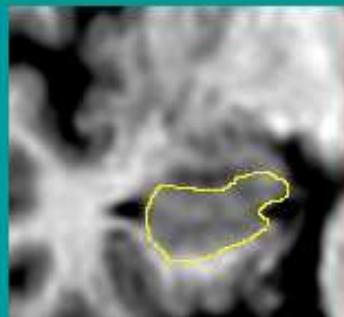
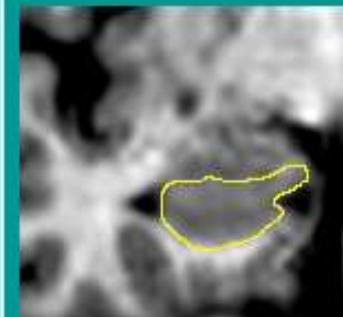
2A)CTRL

Anatomical section	140	139	138	137	136
Native MRI					
Tracing					
Notes					

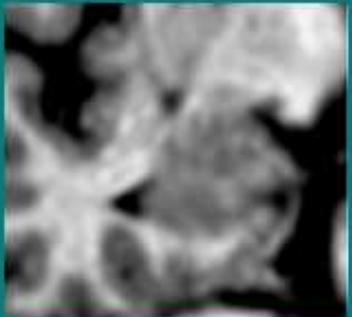
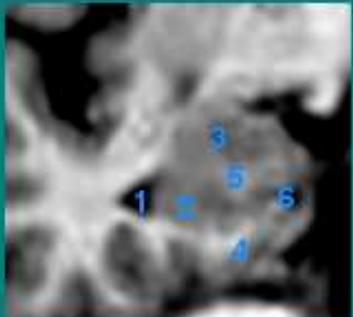
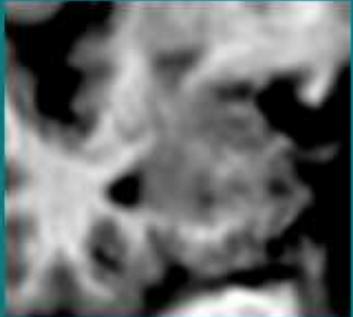
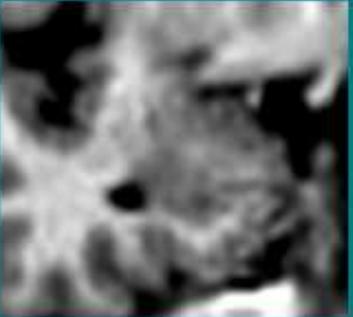
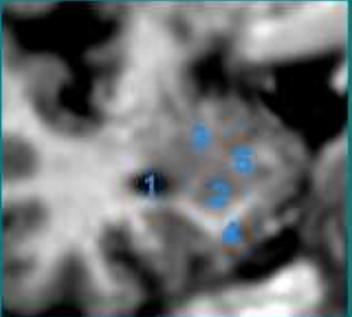
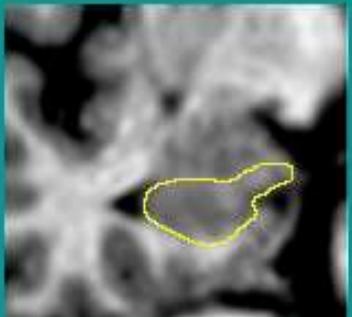
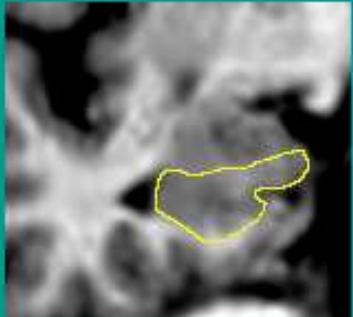
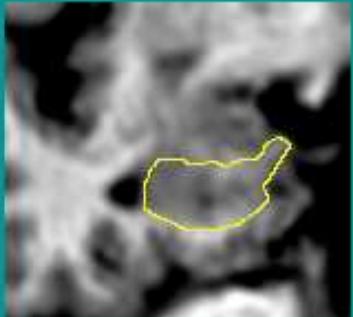
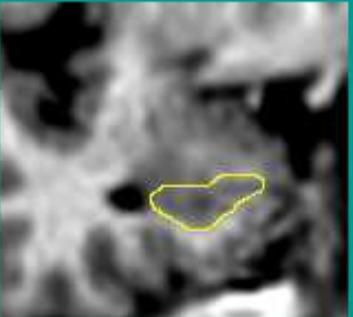
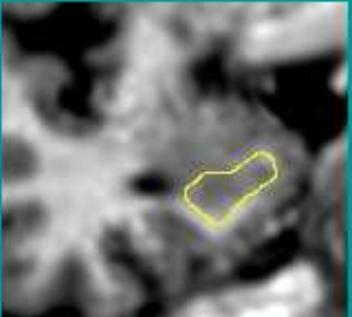
2A)CTRL

Anatomical section	135	134	133	132	131
Native MRI					
Tracing					
Notes					<p>1= Lateral ventricle 2= Cornu Ammonis 3= Subiculum 4= Parahippocampal gyrus 5= Fimbria 6=Uncal apex 7= Uncal sulcus</p>

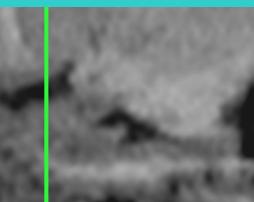
2A)CTRL

	130	129	128	127	126
Anatomical section					
Native MRI					
Tracing					
Notes			<p>1= Lateral ventricle 2= Cornu Ammonis 3= Subiculum 4= Parahippocampal gyrus 5= Alveus 6=Uncal apex 7= Uncal sulcus</p>		

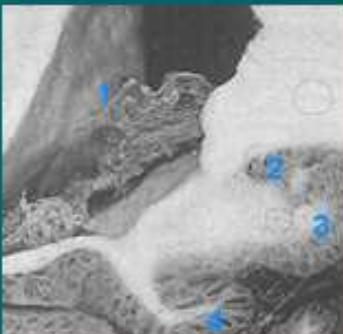
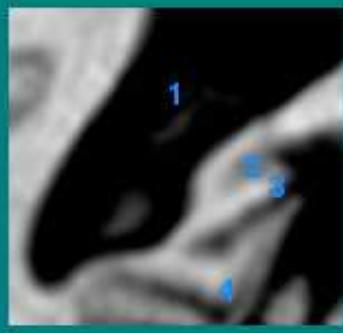
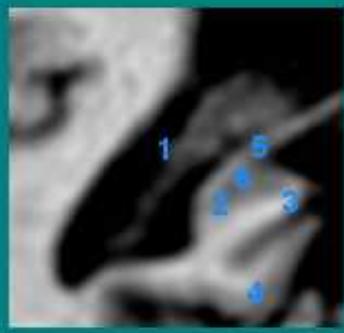
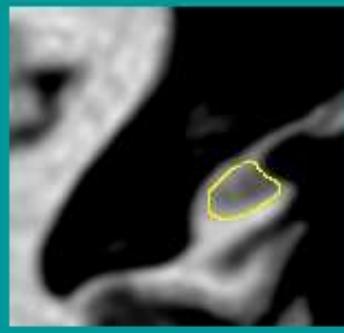
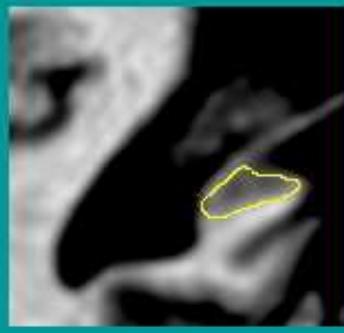
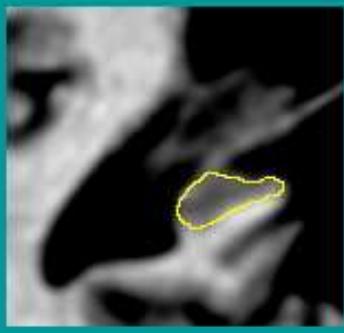
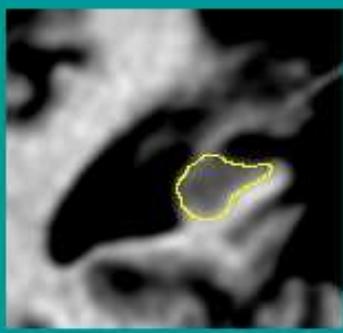
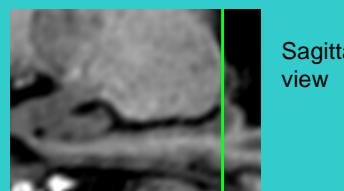
2A)CTRL

	125	124	123	122	121
Anatomical section					
Native MRI					
Tracing					
Notes		<p>1= Lateral ventricle 2= Hippocampal Head 3= Amygdala 4= Parahippocampal gyrus 5= Alveus 6=Uncal sulcus</p>			<p>1= Lateral ventricle 2= Hippocampal Head 3= Amygdala 4= Parahippocampal gyrus 5= Alveus 6=Uncal sulcus</p>

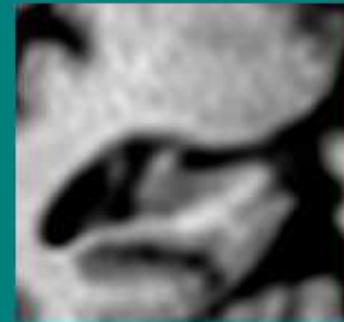
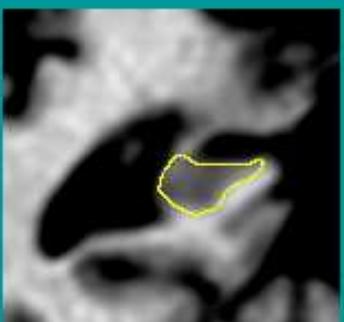
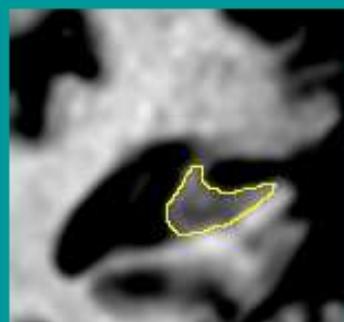
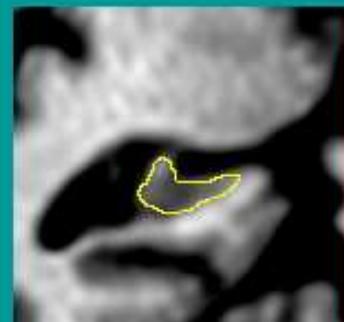
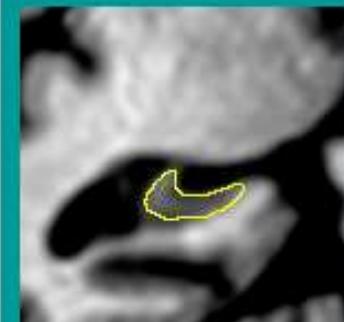
2A)CTRL

Anatomical section	120	119	118	117
Native MRI				
Tracing				
Notes			<p><u>Most anterior slice</u>: level at which the head of hippocampus first appears below the amygdala</p>  <p>Sagittal view</p>	

2B) AD

	211	210	209	208	207
Anatomical section					
Native MRI					
Tracing					
Notes	<p>1= Lateral ventricle 2= Cornu Ammonis 3= Isthmus 4= Parahippocampal gyrus</p>	<p><u>Most posterior slice</u>: slice where the crus of fornix was visible</p>  <p>Sagittal view</p>	<p>1= Lateral ventricle 2= Cornu Ammonis 3= Isthmus 4= Parahippocampal gyrus 5= Crus of fornix 6= Gyrus dentatus</p>		

2B) AD

	206	205	204	203	202
Anatomical section					
Native MRI					
Tracing					
Notes			<p>1= Lateral ventricle 2= Cornu Ammonis 3= Subiculum 4= Parahippocampal gyrus 5= Fimbria 6= Perimesencephalic cystern</p>		

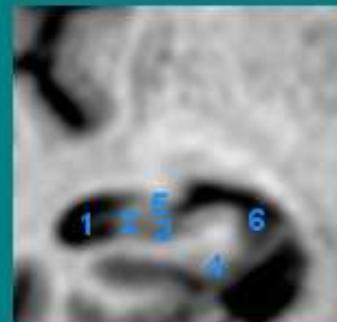
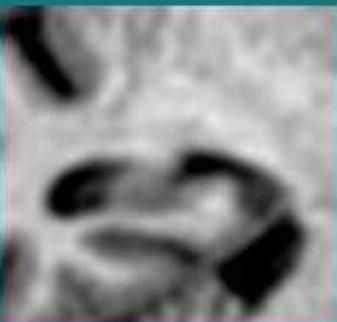
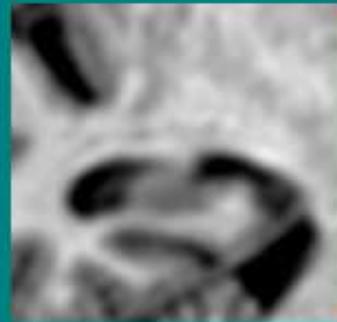
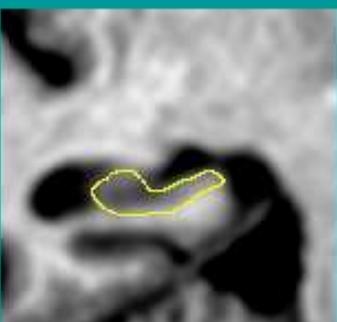
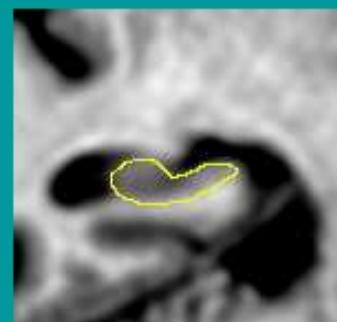
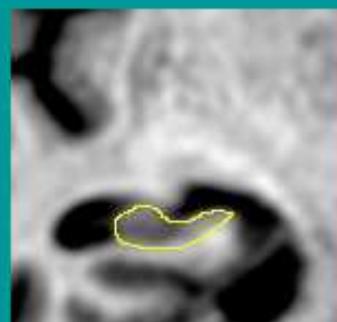
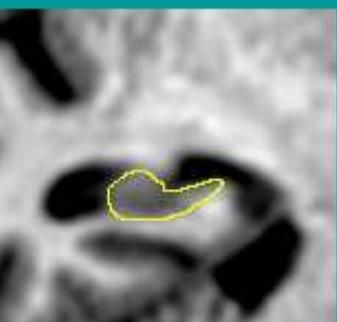
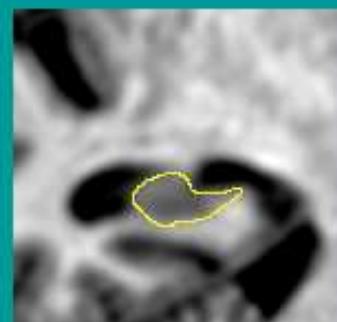
2B) AD

	201	200	199	198	197
Anatomical section					
Native MRI					
Tracing					
Notes					

2B) AD

	196	195	194	193	192
Anatomical section					
Native MRI					
Tracing					
Notes					

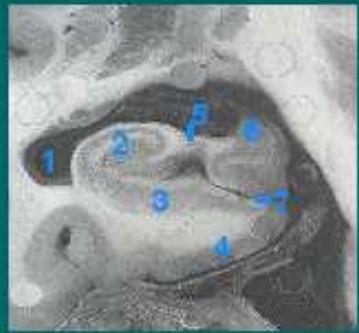
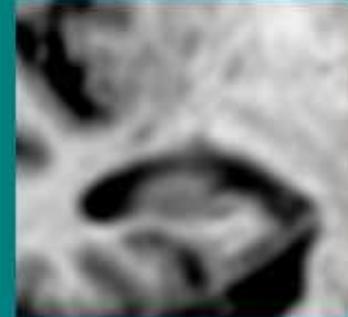
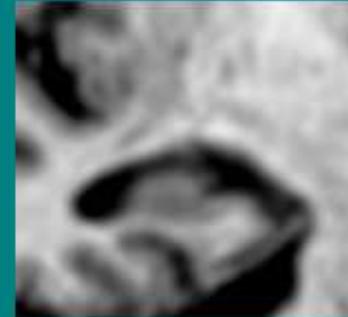
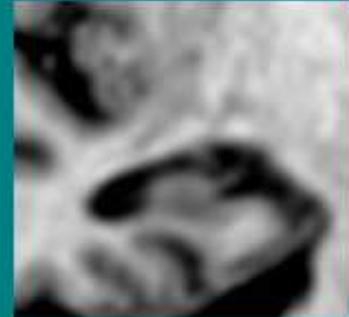
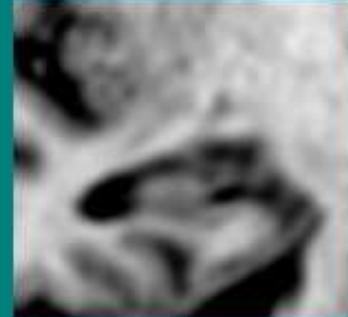
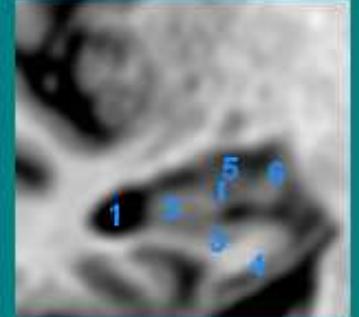
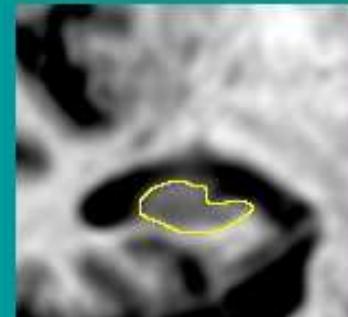
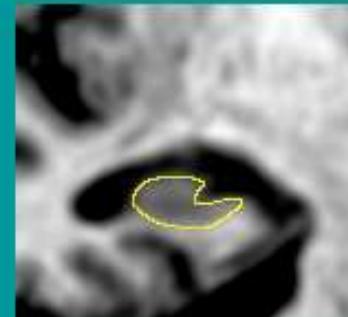
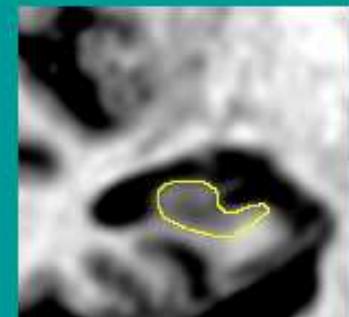
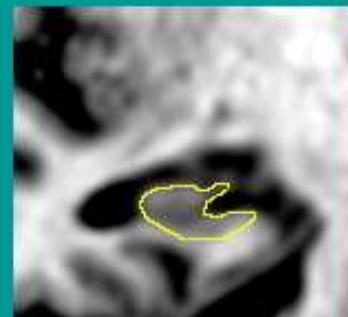
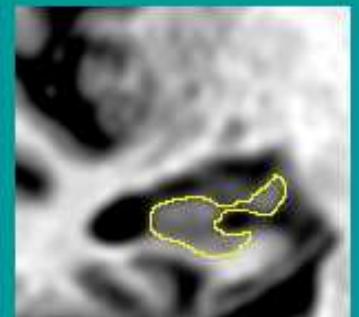
2B) AD

	191	190	189	188	187
Anatomical section					
Native MRI					
Tracing					
Notes			<p>1= Lateral ventricle 2= Cornu Ammonis 3= Subiculum 4= Parahippocampal gyrus 5= Fimbria 6= Perimesencephalic cystern</p>		

2B) AD

Anatomical section	186	185	184	183	182
Native MRI					
Tracing					
Notes					

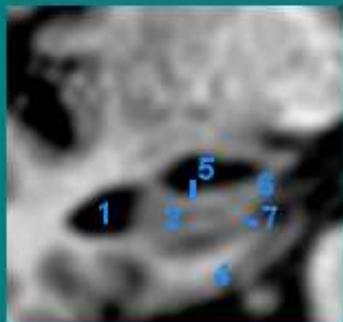
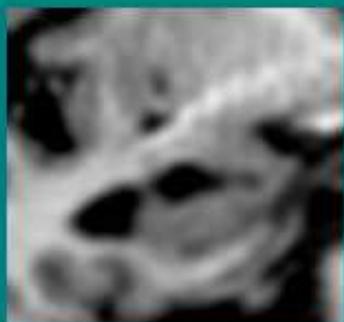
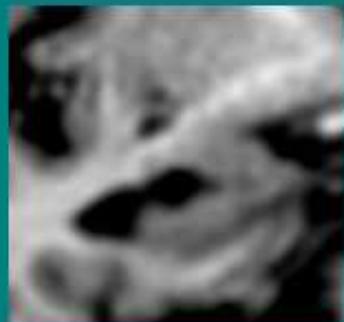
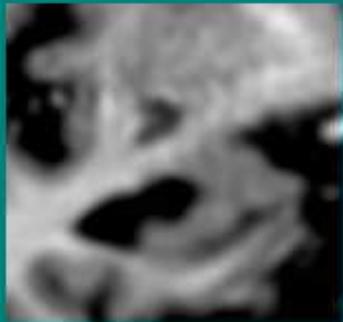
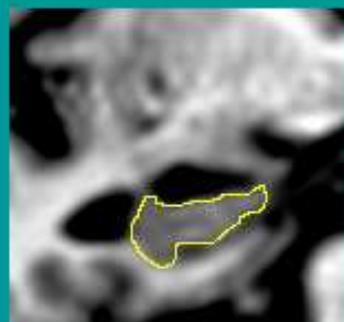
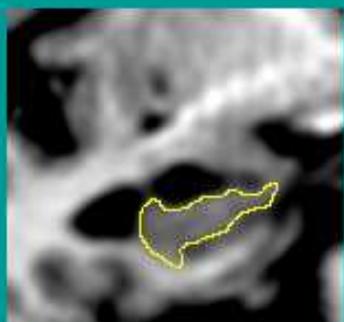
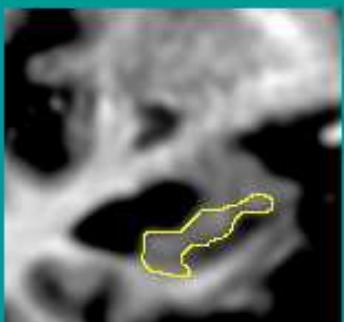
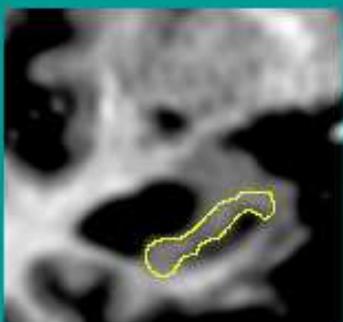
2B) AD

	181	180	179	178	177
Anatomical section					
Native MRI					
Tracing					
Notes					

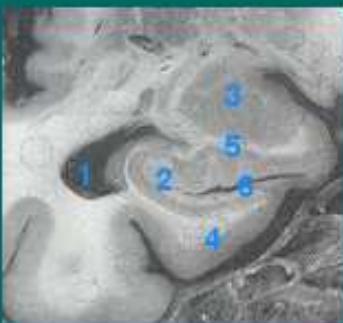
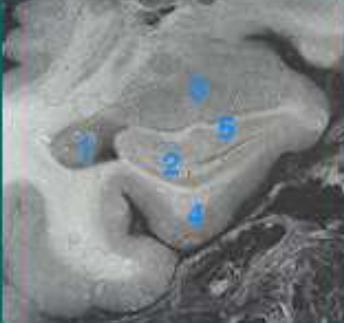
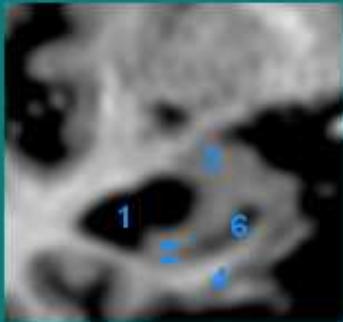
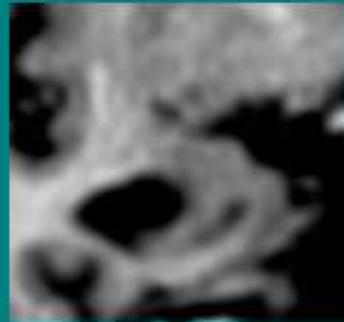
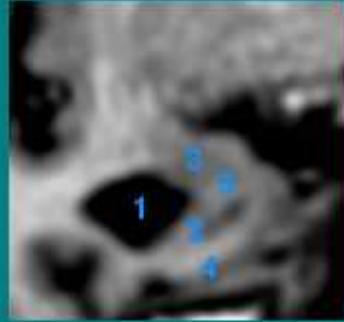
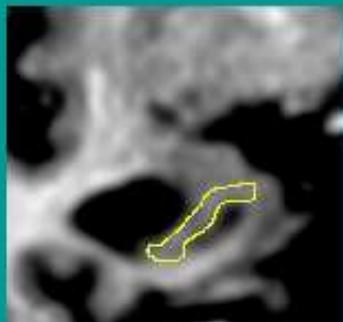
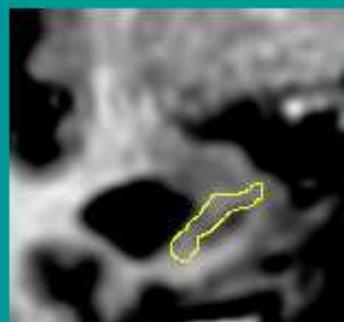
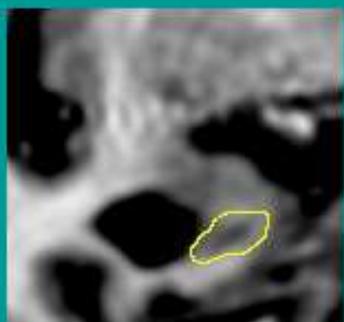
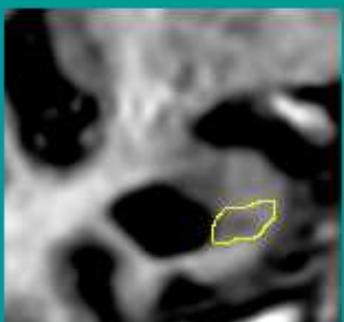
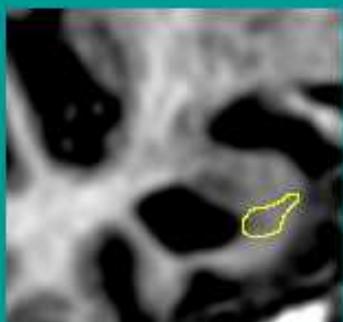
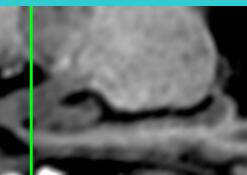
2B) AD

Anatomical section	176	175	174	173	172
Native MRI					
Tracing					
Notes					

2B) AD

	171	170	169	168	167
Anatomical section					
Native MRI					
Tracing					
Notes					

2B) AD

	166	165	164	163	162
Anatomical section					
Native MRI					
Tracing					
Notes					<p>Most anterior slice: level at which the head of hippocampus first appears below the amygdala</p>  <p>Sagittal view</p>

2B) AD

	161	160	159	
Anatomical section				
Native MRI				
Tracing				
Notes				