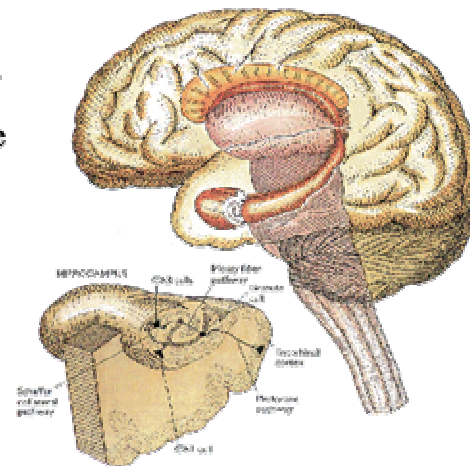


# Hippocampus

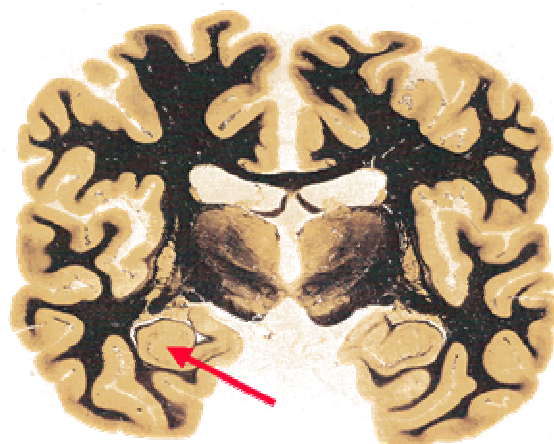
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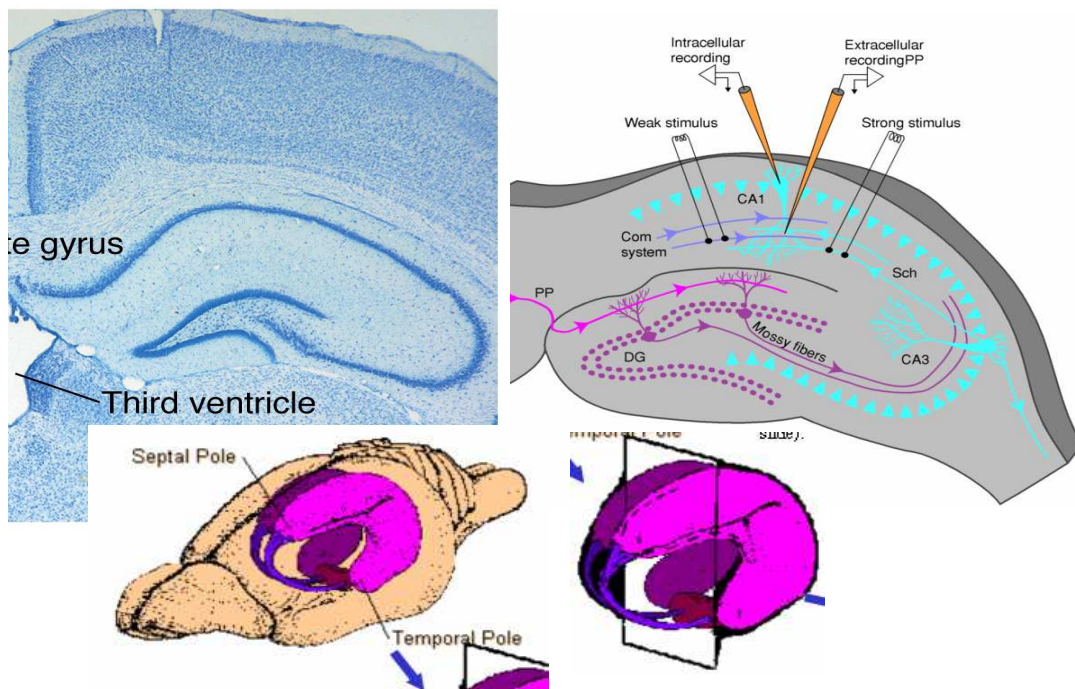
- ◆ Essential for declarative memory
- ◆ cylindrical structure
- ◆ longitudinal axis surrounds thalamus



# Frontal section of human brain

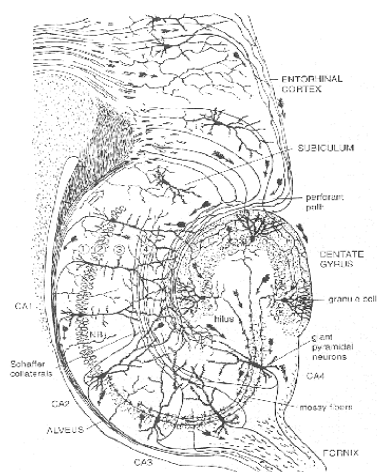
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## Three principal pathways

- ◆ perforant
  - entorhinal cortex to DG
  - granule cells
- ◆ mossy fiber
  - DG to CA3
  - pyramidal cells
- ◆ Schaffer collateral
  - CA3 to CA1
  - pyramidal cells



Hippocampus

hippo + kampos  
Ammon-szarv, cornu ammonis

formatio hippocampalis területei:  
gyrus dentatus  
hippocampus proper (CA1, CA3)  
subiculum  
entorhinalis cortex  
fimbria

Sejttípusok:

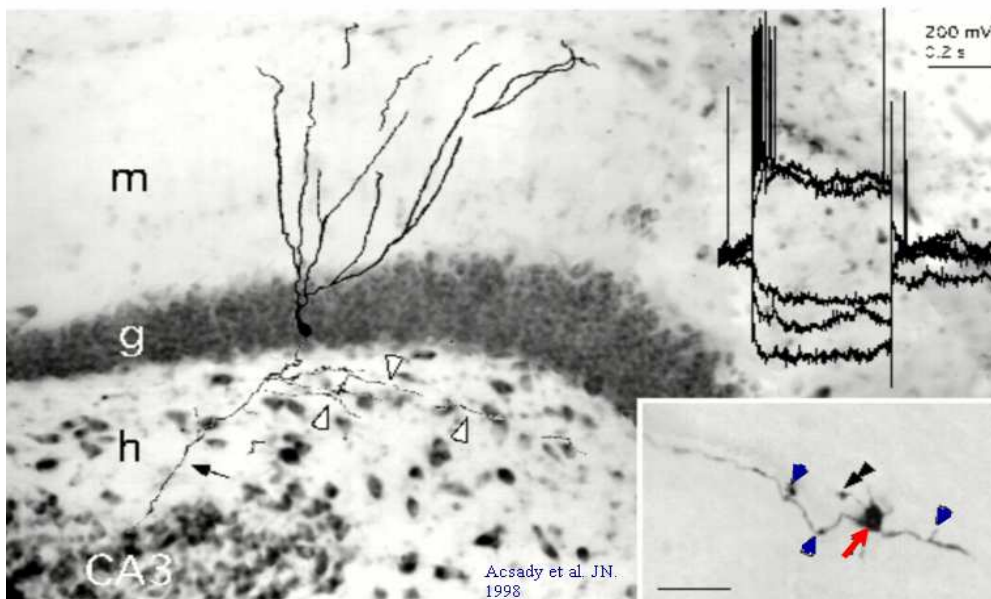
principális sejtek	DG szemcsesejt	H	CA3, CA1 piramissejt
interneuronok	kosársejt axo-axonikus HICAP HIPP MOPP	moha	kosársejt axo-axonikus bistratified O-LM

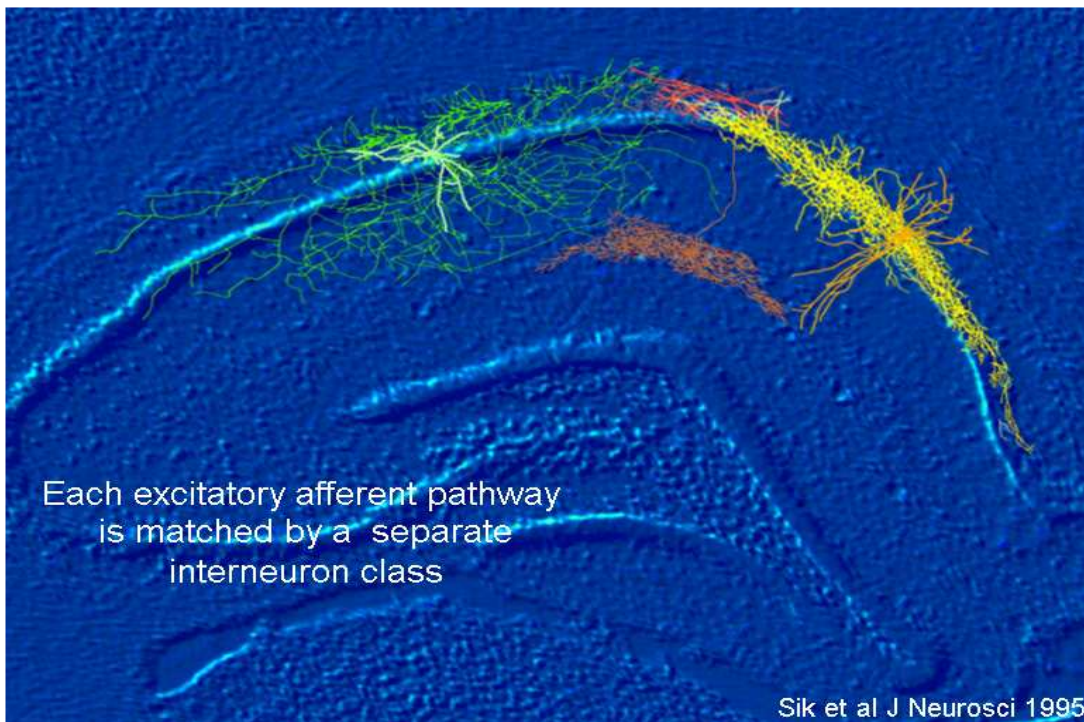
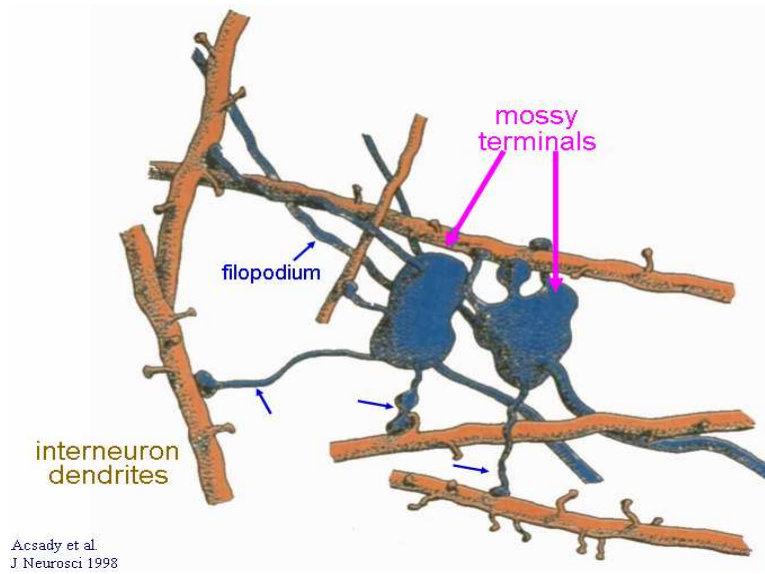
Rétegek

DG  
Molecular layer  
Granule cell layer  
Hilus

CA3, CA1  
Lacunosum-moleculare  
Radiatum  
Lucidum (CA1 nem)  
Pyramidal cell layer  
Oriens  
alveus

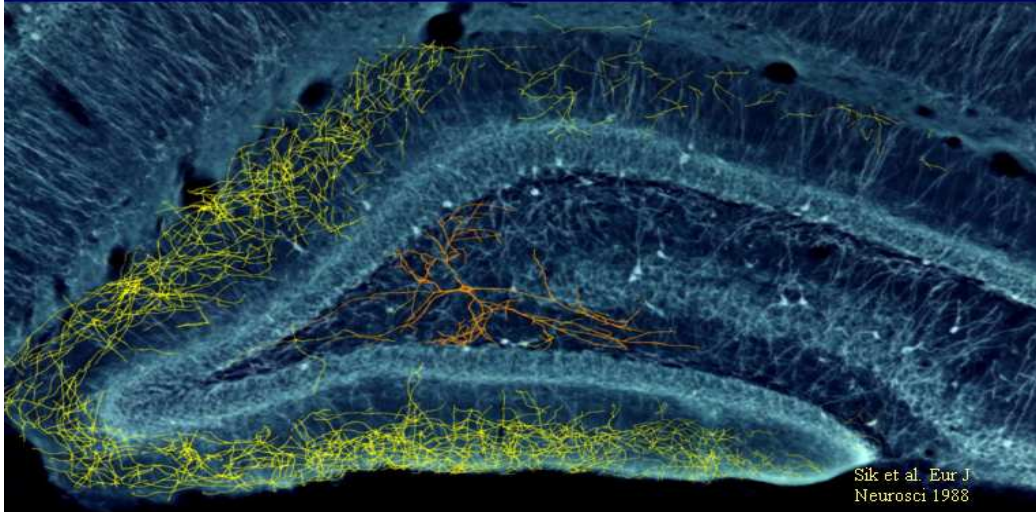
### Mossy fibers have 3 types of specialized contacts



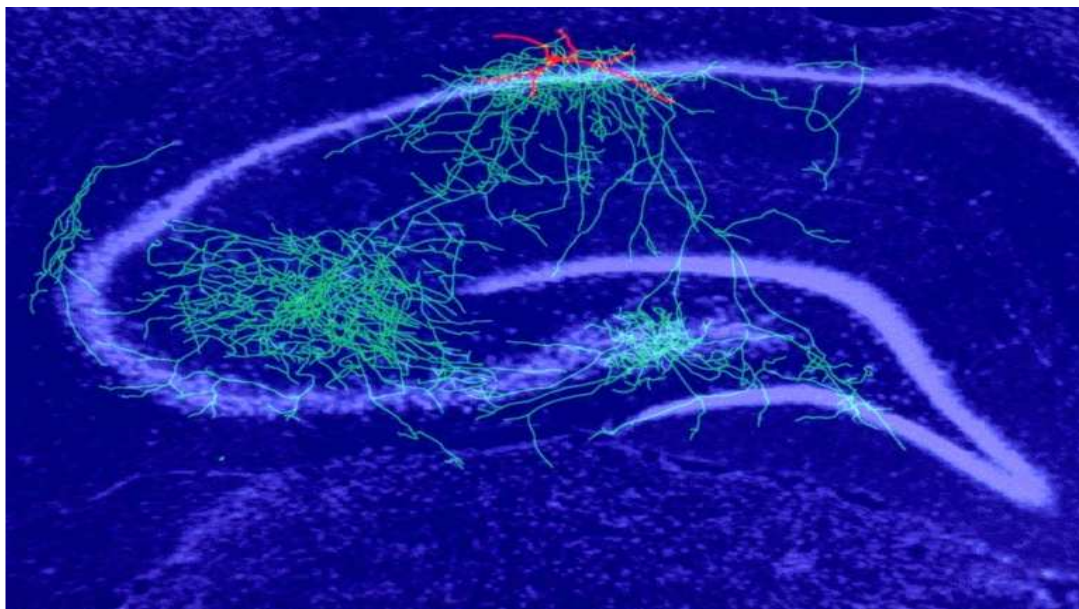




Perforant path terminals are matched by a specialized class of interneuron



Sik et al. Eur J  
Neurosci 1988



Backprojection interneurons may  
serve inter-regional coordination

Sik et al. Science 1996

A hippocampus kapcsolatai:

	DG	CA3,	CA1
bemenet	perforáns p. (PP)	PP	PP
	comissuralis/ associatios septohippocampalis	moharost (MF)	Schaffer-kollaterális
		comissuralis/ associatios septohippocampalis	
		locus coeruleus	
kimenet	Mossy Fiber (CA3)	Schaffer (CA1)	subiculum
		lateral septum	entorhinalis ctx. 5.r.