

Supplementary materials

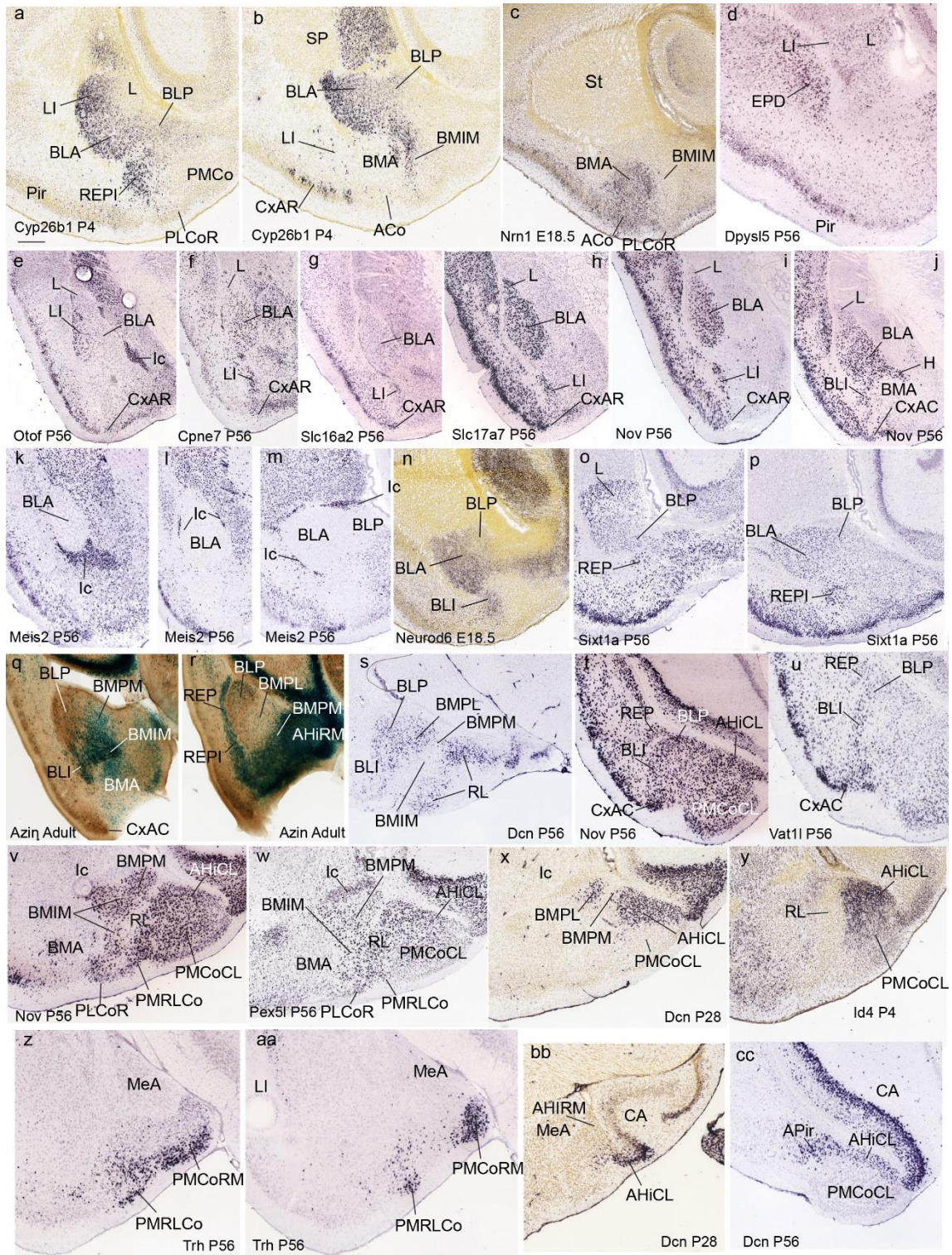
A radial histogenetic model of the mouse pallial amygdala

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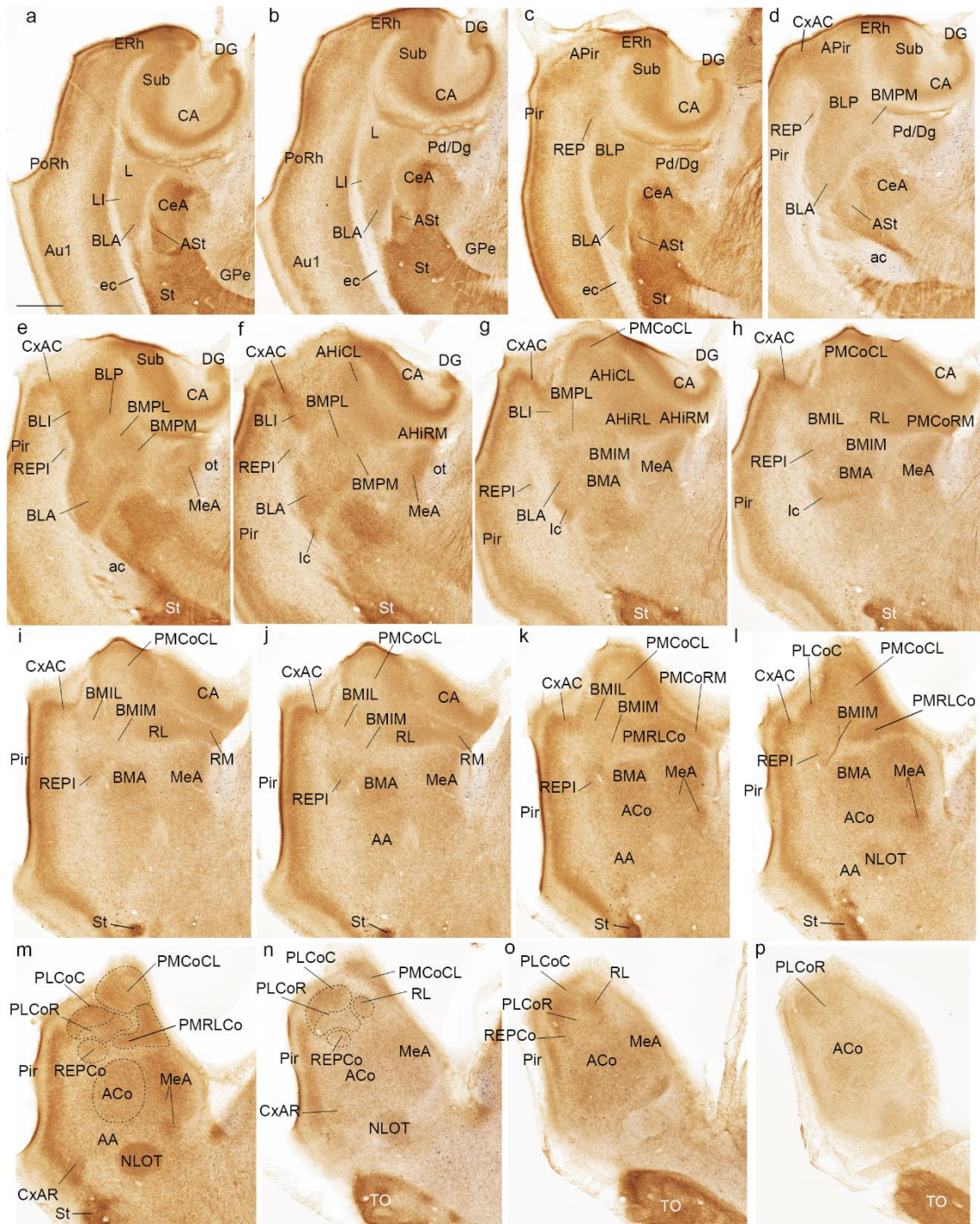
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Suppl. Fig.1



Suppl. Fig.1 Sample images downloaded from Allen Developmental Mouse Brain Atlas. These panels show a gallery of selected adult gene expression patterns in the pallial amygdala (largely at P56) serving to illustrate the types of patterns which we classified as given amygdalar structures in our Tables 1-5 and Suppl.Table 1. The mapped gene and specific mouse stage are indicated in every figure. (**a-d**, **m-p**, **v-y**, **bb**) are sagittal sections, with rostral oriented to the left and dorsal up, whereas (**e-l**, **q-u**, **z**, **aa**, **cc**) are standard coronal sections with the midline oriented to the right. (**q**, **r**) show AZIN2-LacZ material cut in the amygdalar radial plane; (**q**) shows the place where a thin AZIN2-positive part of BMPM reaches up to the BPL, and thus covers dorsally BMPL; compare with Fig.6a. (**r**) Shows another example of the radial continuity of the REP complex up to superficial levels, coursing lateral to BPL. Scale bar represent 400 μ m.

Suppl. Fig.2



Suppl. Fig.2 Summary mapping of amygdalar radial units and their subplial superficial centers. We present here a continuous dorsoventral series of horizontal sections through the adult mouse amygdalar region which serendipitously happens to display different background densities which help to identify diverse amygdalar components. The pattern

that emerges distinctly corroborates our model. The material in question is an adult series from our collection which had been reacted for *Nkx2.2* ISH; the blue ISH signal only appears in these images as tiny labelled oligodendrocytes in the major fiber tracts (e.g., the optic tract), and are irrelevant for our purposes. The series was further weakly counterstained with TH immunoreaction, whose brown result can be seen best at the olfactory tuberculum, striatum and central amygdala neuropiles (TO, St, CeA), as well as intercalate nuclei (Ic). The remaining staining is due to background of the immunoreaction, which happens to make discernible a number of amygdalar elements. **(a-d)** these dorsal levels show appearance of the L, LI, BLP and BLA nuclei, jointly with the REP. Note clearcut boundaries of the pallial amygdala with both laterally placed cortex and rostromedially placed subpallial elements (St, ASt, CeA, MeA), as well as the amygdalar part of the lateral ventricle, separating the hippocampal complex. **(e-h)** These levels show the transition of BLP/BLA via BLI into CxAC **(e-g)**, adjacent REP band, appearance of BMPL and BMPM nuclei and related BMIL and BMIM intermediate elements, emergence of the BMA nucleus under the medial part of BLA, extending into ACo **(i-l)**, and begin of the AHiRM just under the end of the ventricle and its ulterior extension into AHiRL and AHiCL, before reaching underlying PMCo intermediate and superficial levels. **(i-l)** These levels bring us closer to the brain surface, without yet reaching it; we detect the BMIL/BMIM elements, which converge jointly with the REP and the RL part of PMCo towards the neighborhood of the PLCo.

(m-p) At these levels the CL and RM parts of PMCo start disappearing, as we start to enter into the PLCo (this reveals the section plane was not exactly horizontal). At the brain surface we recognize the NLOT nucleus, as well as the CxAR, the REPCo, the PLCoR, PLCoC and the PMRLCo, in characteristic respective positions, according to the model. Scale bar represents 900 μ m.

Suppl.Table1.

	L	LI	CxAR	BLP	BLA	BLI	CxAC	BMPL	BMIL	PLCoL	BMPM	BMIM	PLCM	AOS	BMA	ACo	RMp	RMi	RMx	RL	CLp	CLi	CLx	REP	APir	Pir	AA	LOT	BAOT	IC
Adcyap1																														
Ba1ap3																														
Bdnf																														
Cacng5																														
Cadh8																														
Cadps2																														
Calb2																														
Camk2a																														
Cbln4																														
Cck																														
Cdh9																														
Col11a1																														
Col6a1																														
Cpne7																														
Crh																														
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Dcn																														
Dkk3																														
Dlk1																														
Dpysl5																														
Ecel1																														
Enc1																														
Er81																														
Fezf2																														
Fgfr1																														
Galanin																														
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Gira3																														
Gpr165																														
Gpr83																														
Grin3a																														
Grp																														
Hap1																														
Id2																														
Id4																														
Kitl																														
Lhx2																														
Lhx9																														
Lmo1																					</									

Suppl.Table1. Expression mapping of 81 gene markers from the Allen Developing Mouse Brain Atlas according to the radial amygdala model. The anatomic structures are grouped according to radial units or subunits, as well as according to the strata they occupy; the names appear above, some of them abbreviated due to space considerations (see below). Red color entries code for positive expression at the specified loci. Abbreviations used for the habitual name tags: RMp instead of AHiRM; RMi instead of PMCoIRM; RMs instead of PMCoRM; RL instead of AHiRL and PMCoRL; CLp instead of AHiCL; CLi instead of PMCoCLi; CLs instead of PMCoCLs.