ATLAS OF THE DEVELOPING RAT BRAIN IN STEREOTAXIC COORDINATES

P0

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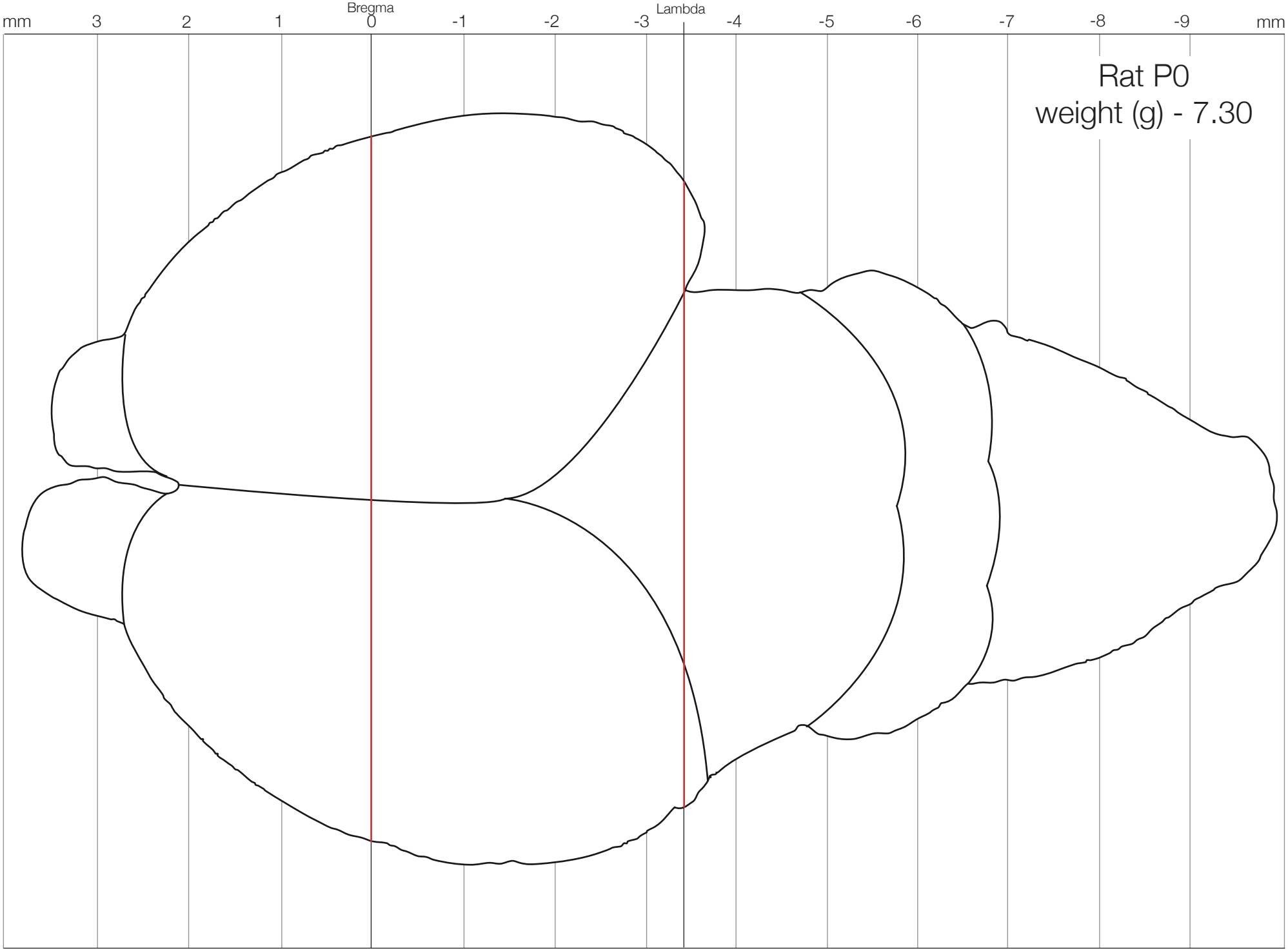
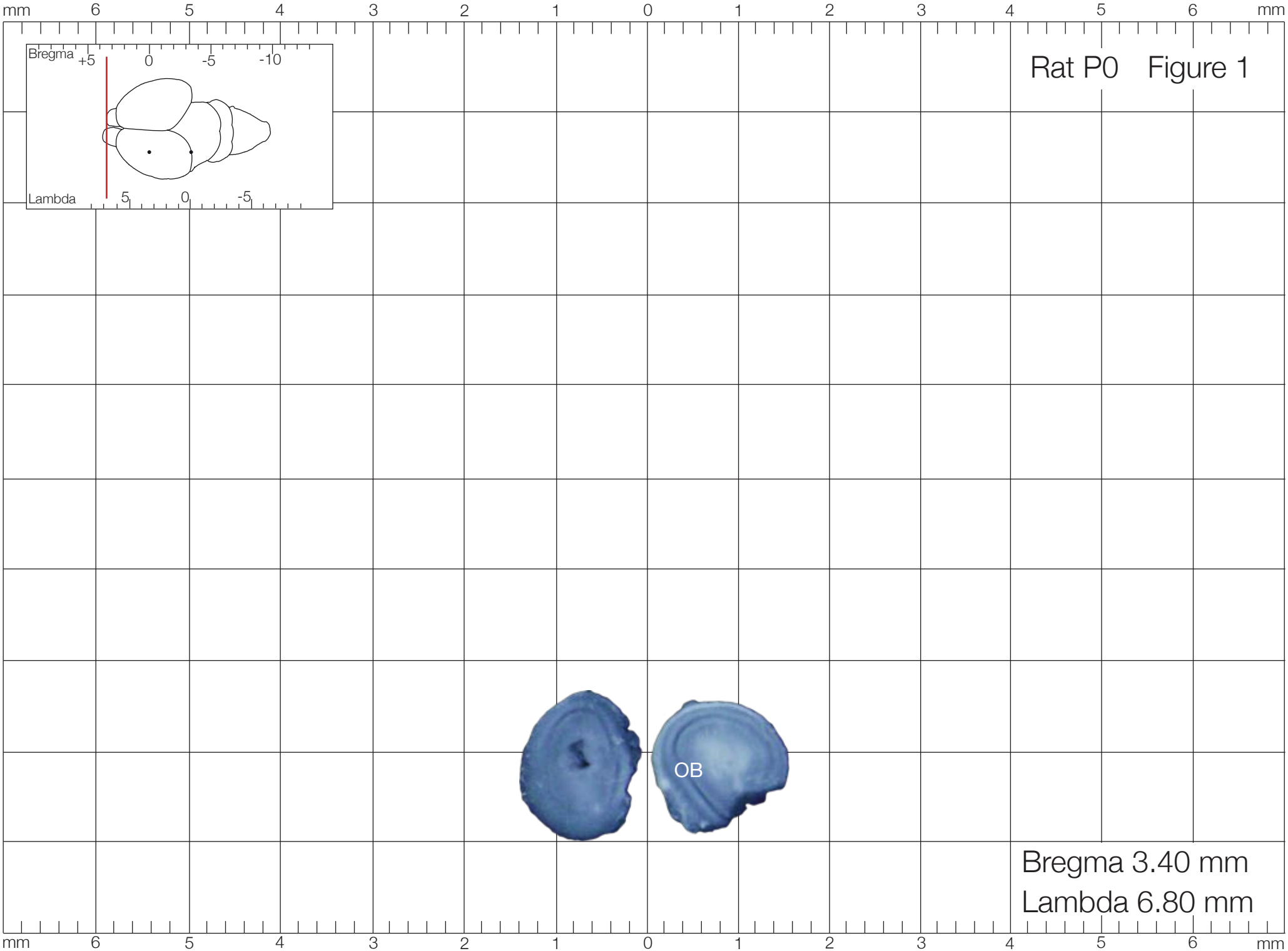
Atlas presents a series of microphotographs of coronal 200 micron brain sections of a P0 Wistar rat (weight 7.3 g). Sections were cut vertical to the horizontal plane extending from bregma to lambda. Therefore using this atlas requires position of the rat head with bregma and lambda adjusted to the same height. Sections at bregma and lambda levels are marked with DiI-trace. Additional DiI trace across the whole brain was used to control slicing vertical to the horizontal plane. Sections were prepared from the paraformaldehyde and glutaraldehyde fixed brains through vibroslicing. No coloration was used. Microphotographs were made from the wet sections in oblique light. Atlas starts with a list of abbreviations and an outline of the brain view from above.

For additional information see (reference to the Frontiers in Neuroanatomy data report).

List of Structures

3V	3rd Ventricle
4V	4th Ventricle
Acb	Accumbens nu
Aq	Aqueduct Sylvius
Am	Ambiguus nu
A	Amygdala
ac	anterior commissure
Arc	Arcuate hypothalamic nu
Au	Auditory cortex
BL	Basolateral amygdala nu
CA1	CA1
CA3	CA3
CPu	Caudate Putamen
CC	Central Canal
cp	cerebral peduncle
Cg	Cingulate cortex
Cl	Claustrum
cc	corpus callossum
Cnf	Cuneiform nu
DG	Dentate Gyrus
DB	Diagonal Band
DR	Dorsal Raphe nu
DLG	Dorso Lateral Geniculate
End	Endopyriform nu
Ent	Entorhinal cortex
7n	Facial nerve
7	Facial nu
fi	fimbria
f	fornix
F	Frontal cortex
g7	genu of facial nerve
Hb	Habenula
H	Hilus
12	hypoglosal nucleus
hypo	hypothalamus
icp	inferior cerebellar peduncle
IC	Inferior Colliculus
IO	Inferior Olive
ic	internal capsule
IPR	Interpeduncular nu
La	Lateral amygdala nu
lo	lateral olfactory tract
LSD	Lateral Septal Dorsal nu
LSI	Lateral Septum Intermediate
LT	Lateral Thalamus
LV	Lateral Ventricle
LC	Locus Coeruleus
mt	mamillothalamic tract
MG	Medial Geniculate nu
MR	Medial Raphe nu
MS	Medial Septal nu
Me5	Mesencephalic trigemic nu
mcp	middle cerebellar peduncle
M	Motor cortex
M2	Motor cortex
m5	motor root trigeminus
3	oculomotor n
OB	Olfactory Bulb
ON	Olfactory Nu
Tu	olfactory Tubercle
ox	optic chiasma
opt	optic tract
O	Orbital cortex
PB	Parabraquial nu
Par	Parietal cortex
PAG	Periaqueductal Gray
Pir	Piriform cortex
Pn	Pontine nu
PnR	Pontine Raphe nu
pc	posterior commissure
M1	primary Motor cortex
py	pyramidal tract
RM	Raphe Magnus nu
RS	Retrosplenial cortex
rf	rhinal fissure
s5	sensory root trigeminus
Sol	Solitary nu
S1	Somatosensory 1
S1BF	Somatosensory 1 Barrel Field
S	Subiculum
SN	Substantia Nigra
SNC	Substantia Nigra Compacta
SNR	Substantia Nigra Reticulata
STh	Subthalamic nu
scp	superior cerebellar peduncle
SC	Superior Colliculus
SCh	Suprachiasmatic nu
VT	Ventral Thalamus
VLG	Ventro Lateral Geniculate nu
Vi	Visual cortex


mm
3
2
1
Bregma
0
-1
-2
-3
Lambda
-4
-5
-6
-7
-8
-9
mm
Rat P0
weight (g) - 7.30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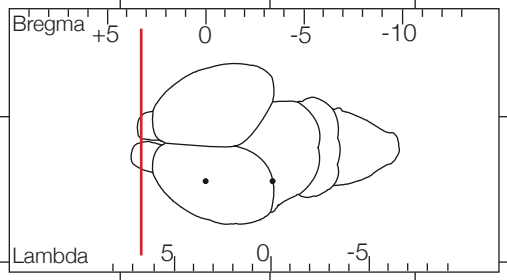
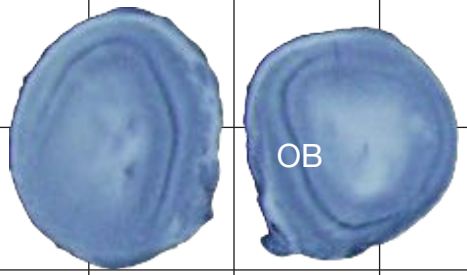
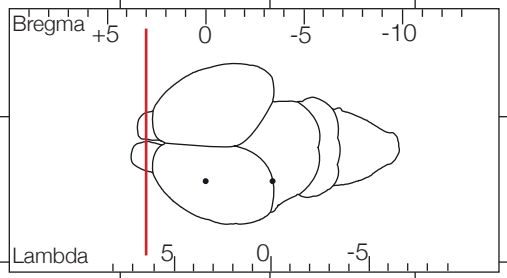
Bregma +5 0 -5 -10
Lambda 5 0 -5
Rat P0 Figure 1
OB
Bregma 3.40 mm
Lambda 6.80 mm
mm 6 5 4 3 2 1 0 1 2 3 4 5 6 mm



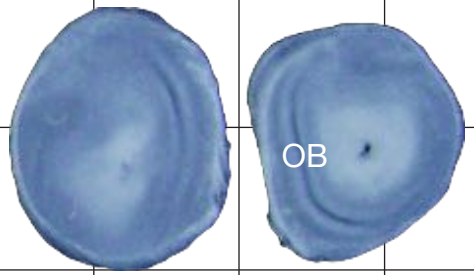
Rat P0 Figure 2



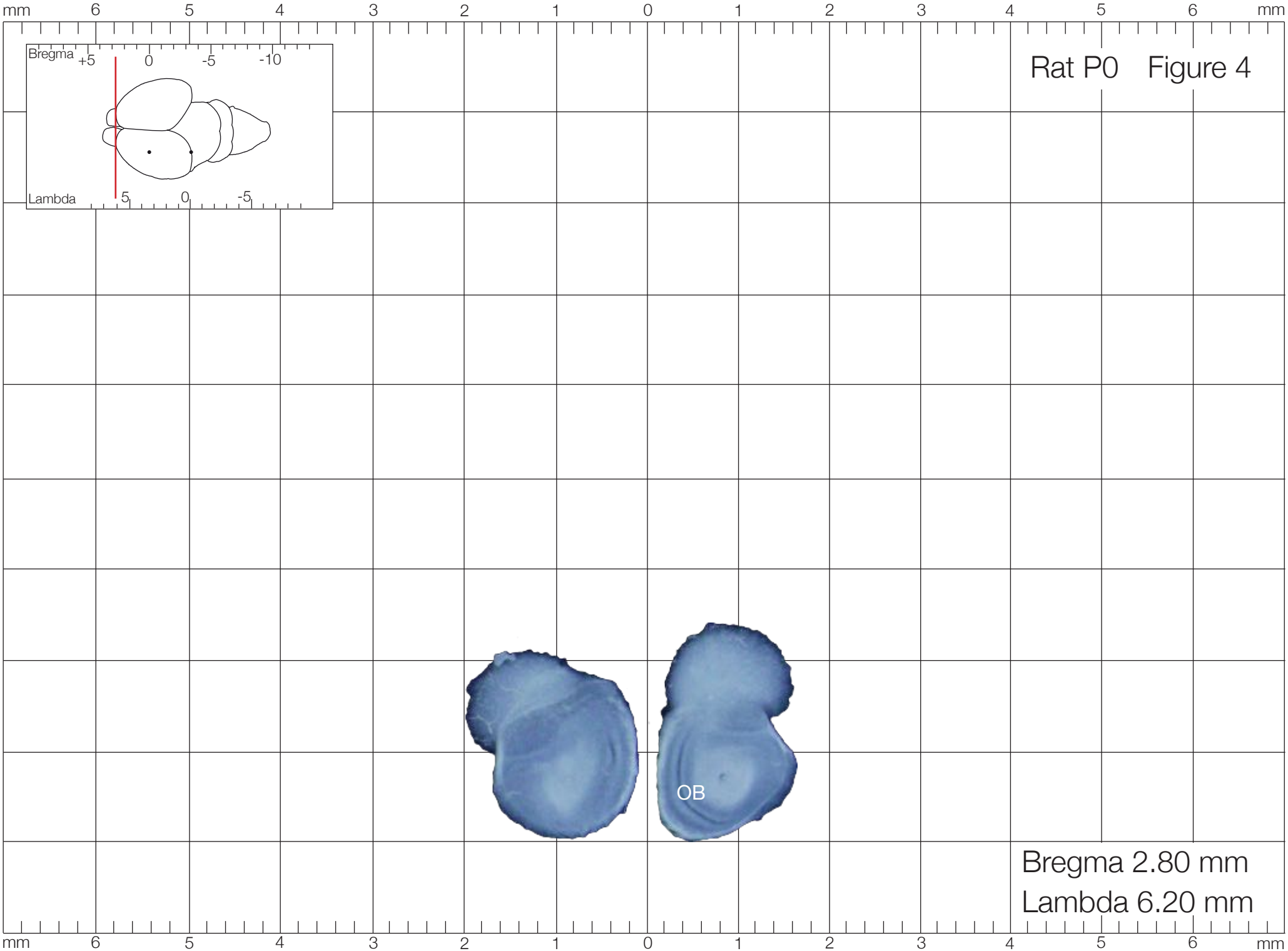
Bregma 3.20 mm
Lambda 6.60 mm



Rat P0 Figure 3



Bregma 3.00 mm
Lambda 6.40 mm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Bregma +5 0 -5 -10
Lambda 5 0 -5
Rat P0 Figure 4
OB
Bregma 2.80 mm
Lambda 6.20 mm
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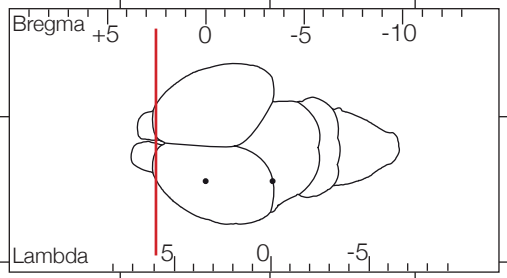
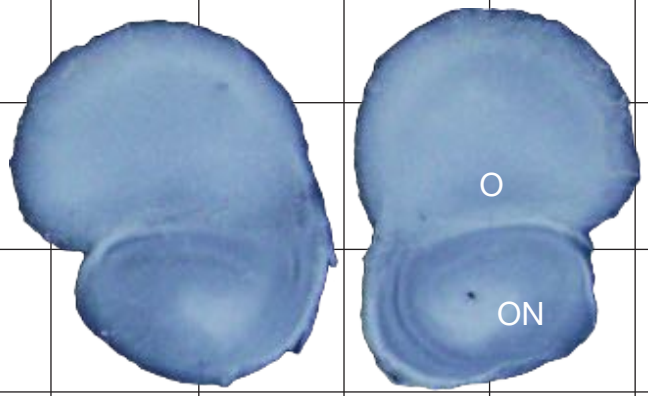
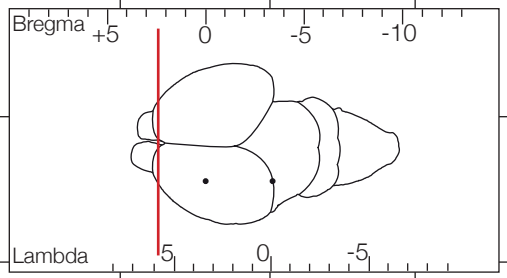


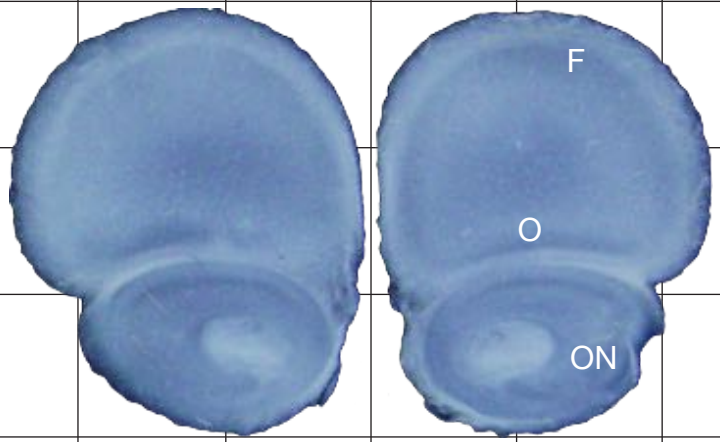
Rat P0 Figure 5



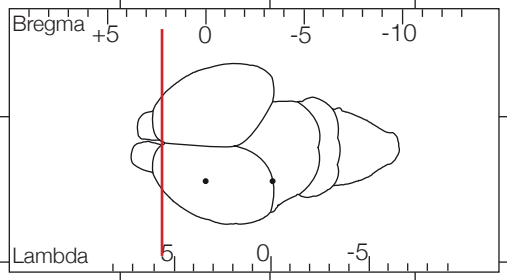
Bregma 2.60 mm
Lambda 6.00 mm



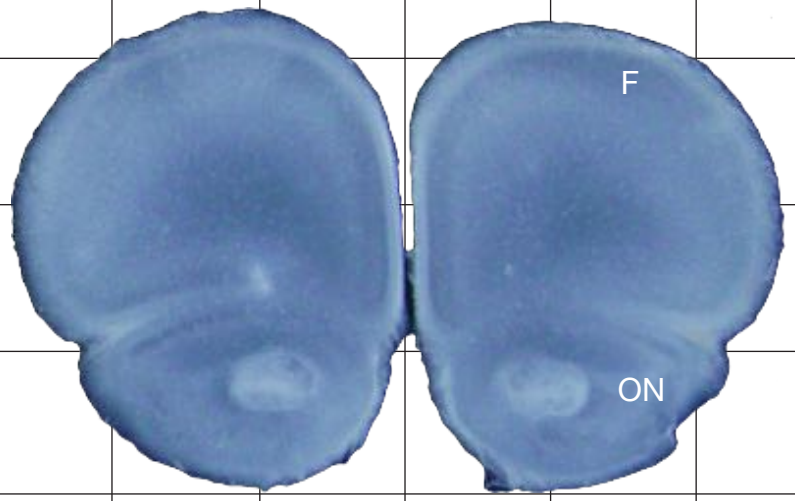
Rat P0 Figure 6



Bregma 2.40 mm
Lambda 5.80 mm



Rat P0 Figure 7



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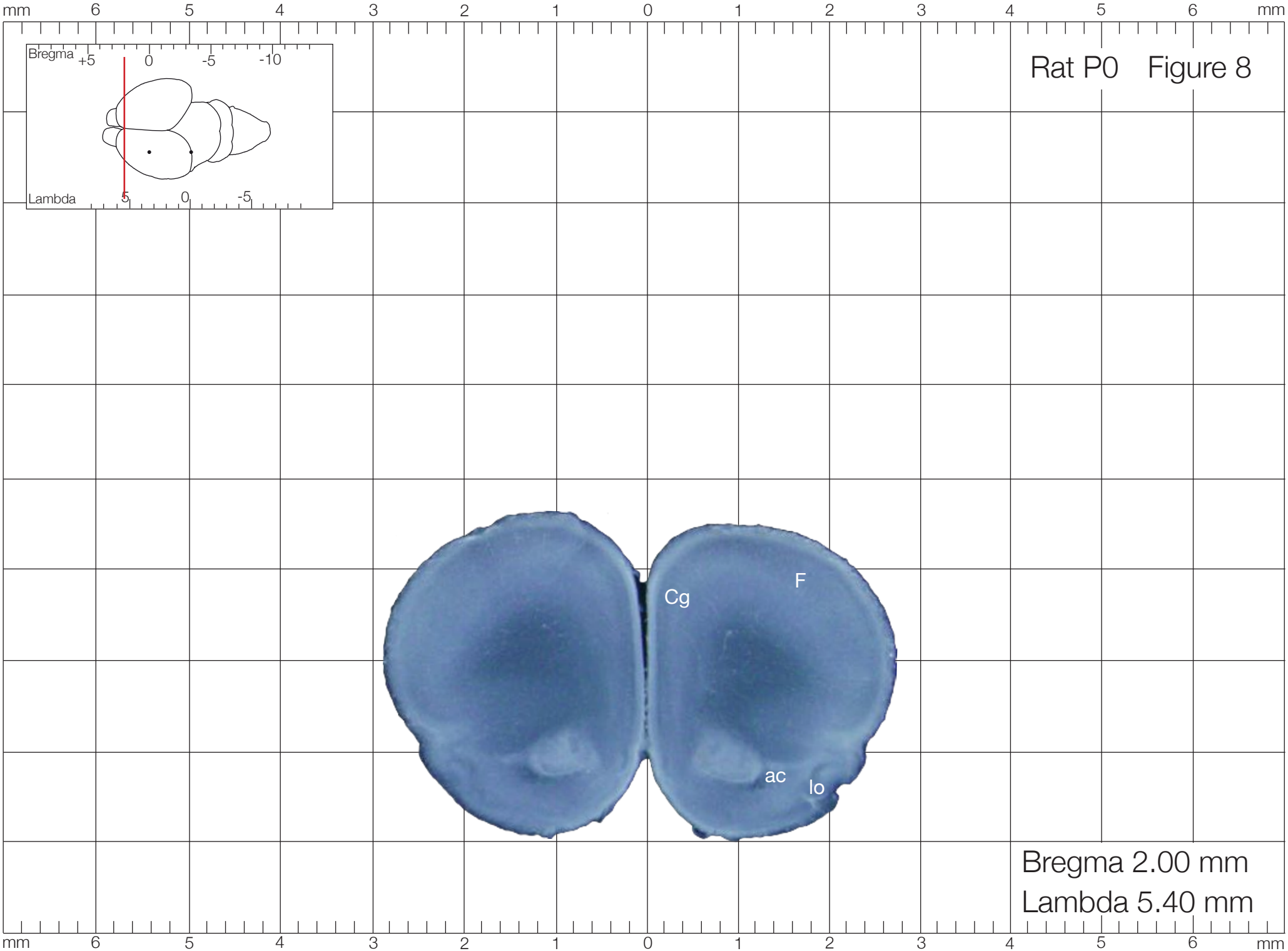
Lambda 5.60 mm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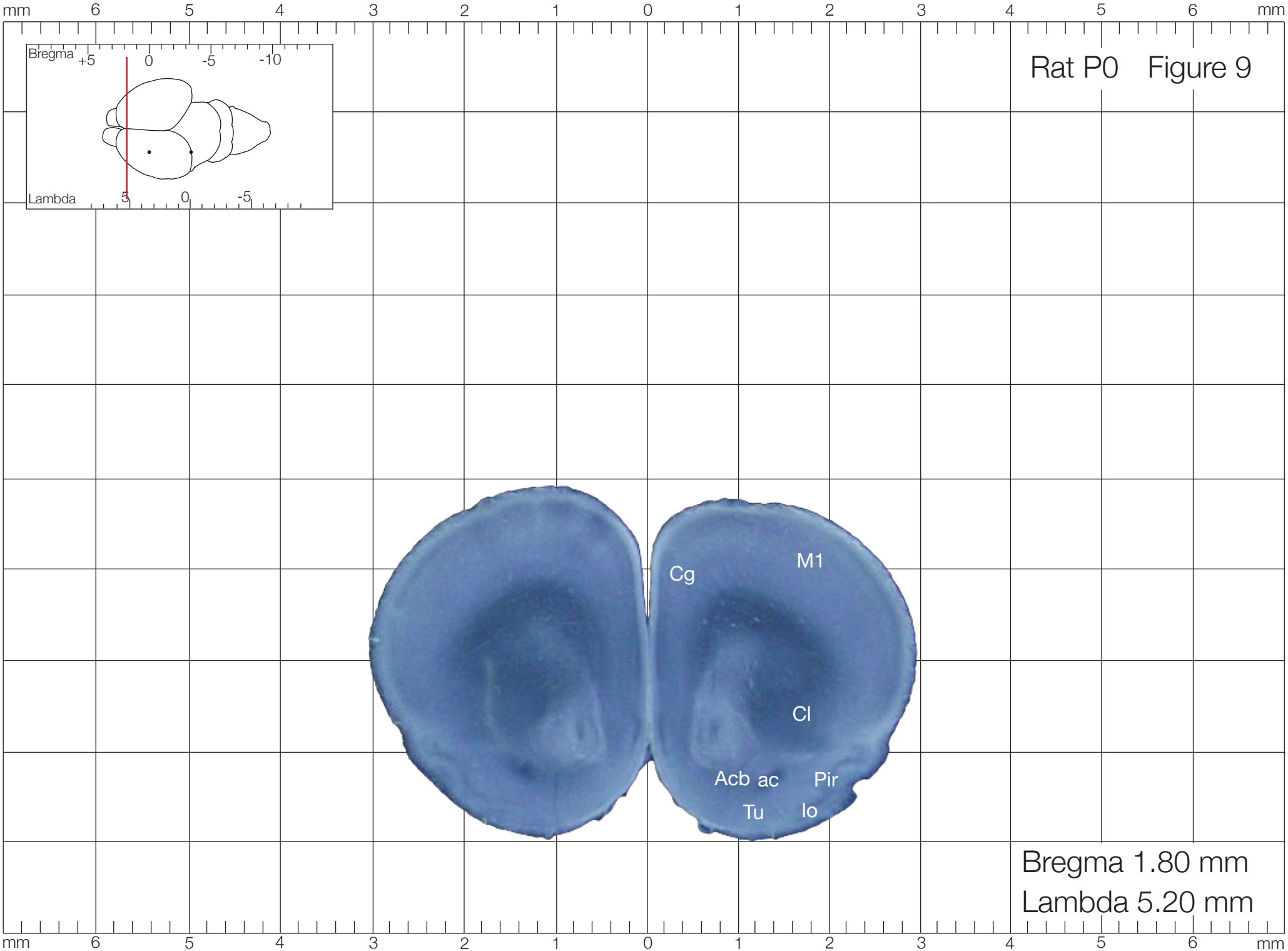
Bregma +5 0 -5 -10
Lambda 5 0 -5
Rat P0 Figure 8
Cg
F
ac
lo
Bregma 2.00 mm
Lambda 5.40 mm
mm 6 5 4 3 2 1 0 1 2 3 4 5 6 mm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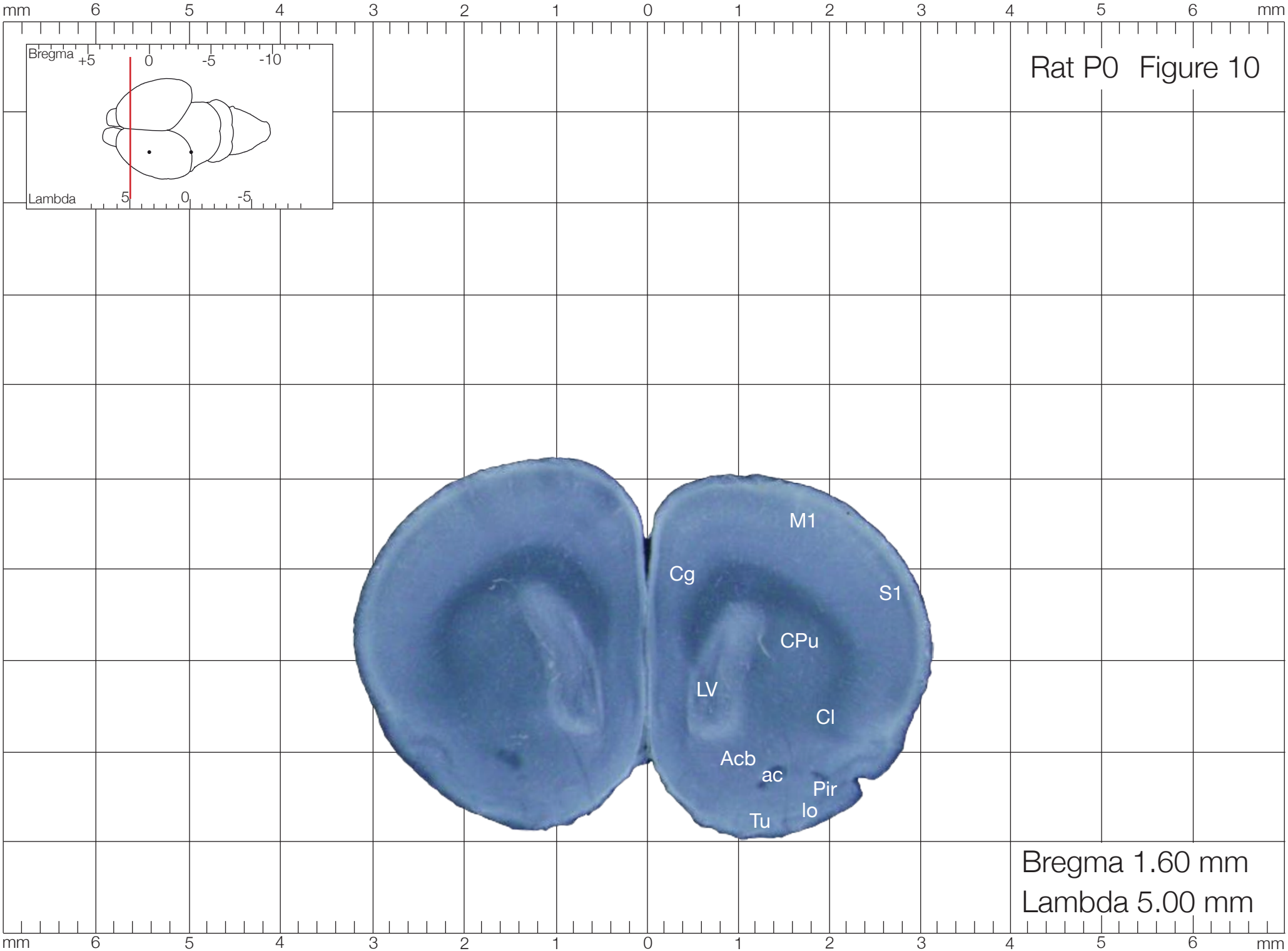
Bregma +5 0 -5 -10
Lambda 5 0 -5
Rat P0 Figure 9
Cg
M1
Cl
Acb
ac
Pir
Tu
lo
Bregma 1.80 mm
Lambda 5.20 mm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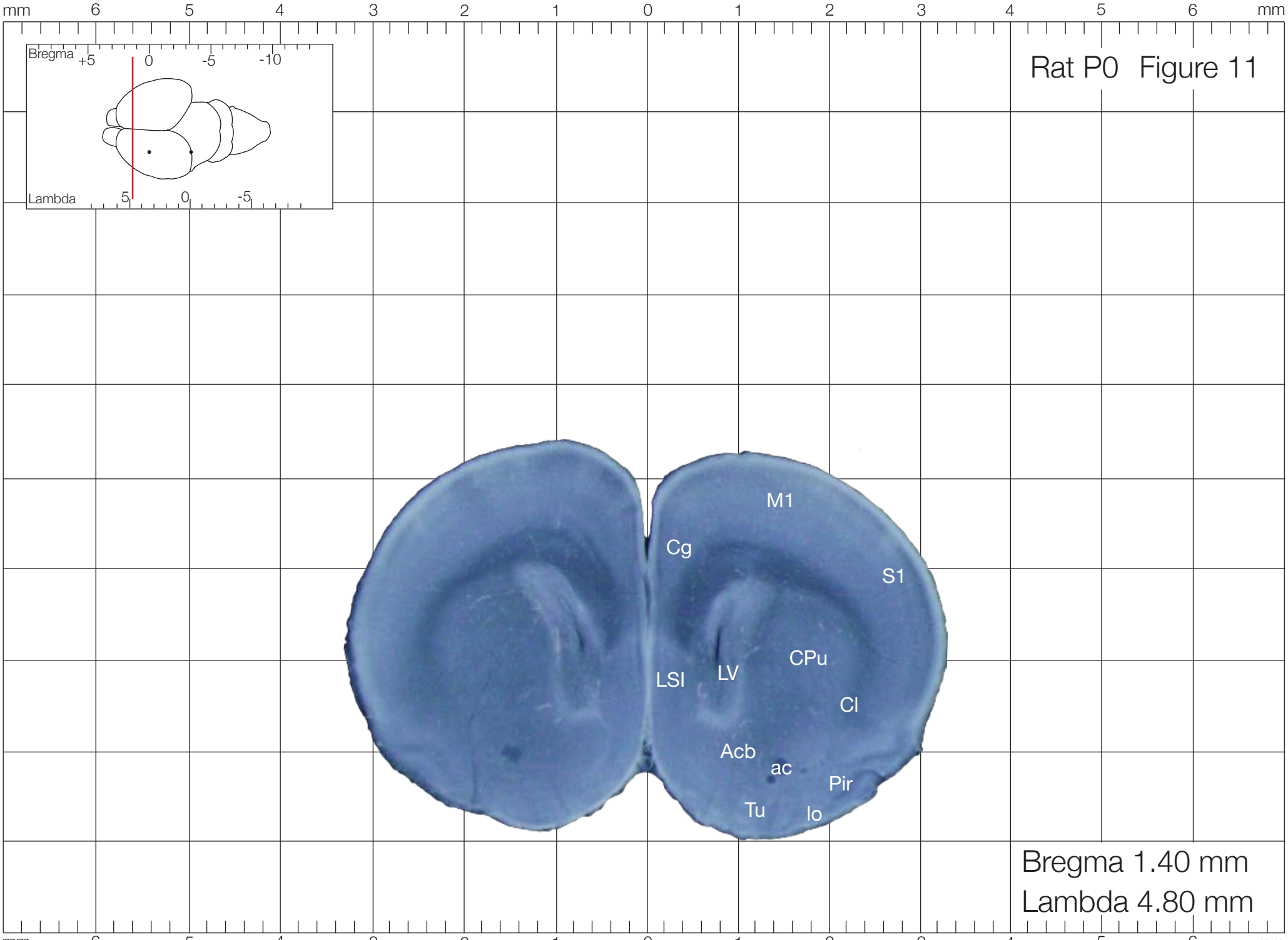
Lambda 5 0 -5
Rat P0 Figure 10
M1
Cg
S1
CPu
LV
Cl
Acb
ac
Pir
lo
Tu
Bregma 1.60 mm
Lambda 5.00 mm
mm 6 5 4 3 2 1 0 1 2 3 4 5 6 mm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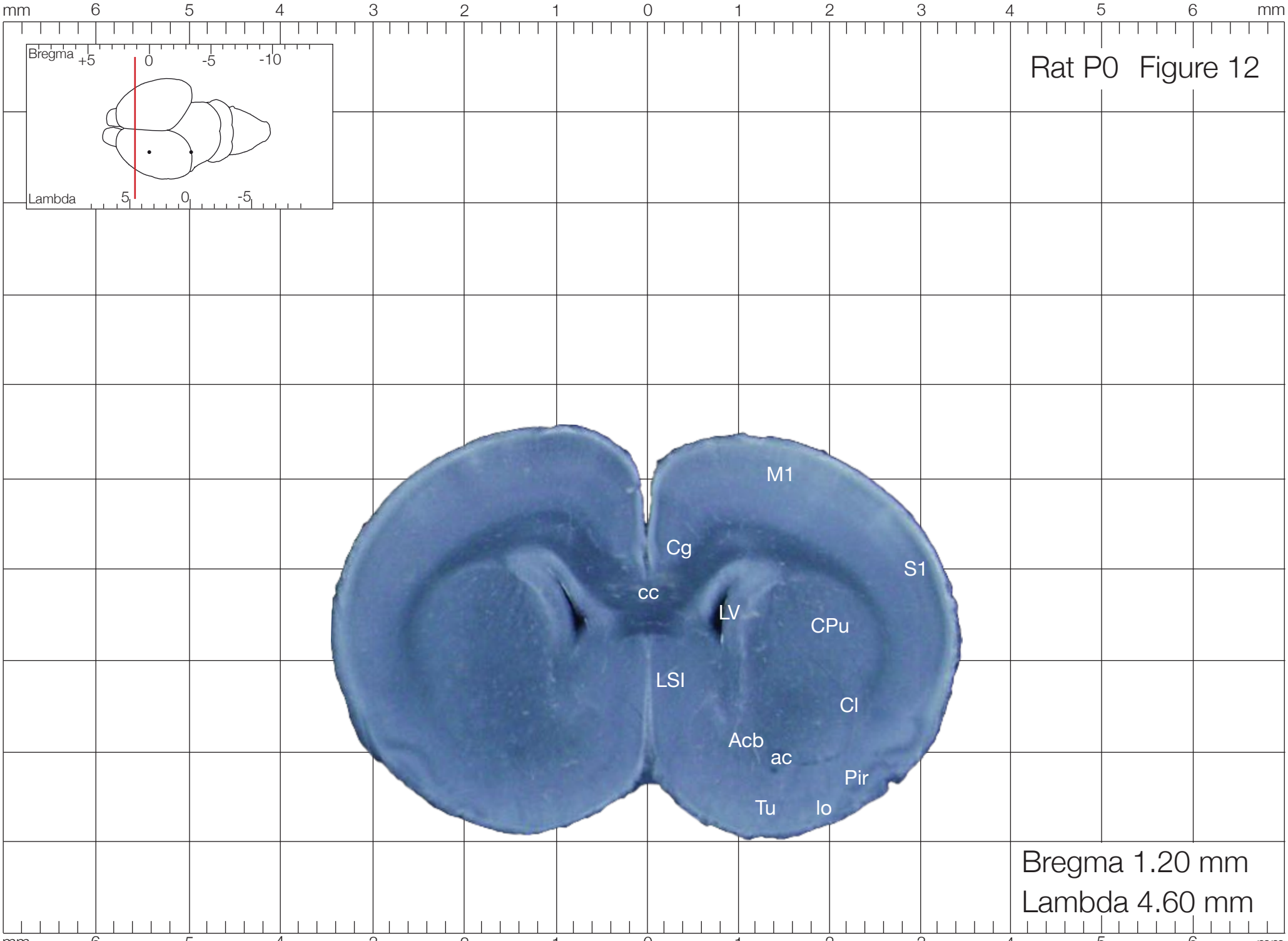
Lambda 5 0 -5
Rat P0 Figure 11
M1
Cg
S1
CPu
LSl
LV
Cl
Acb
ac
Pir
Tu
lo
Bregma 1.40 mm
Lambda 4.80 mm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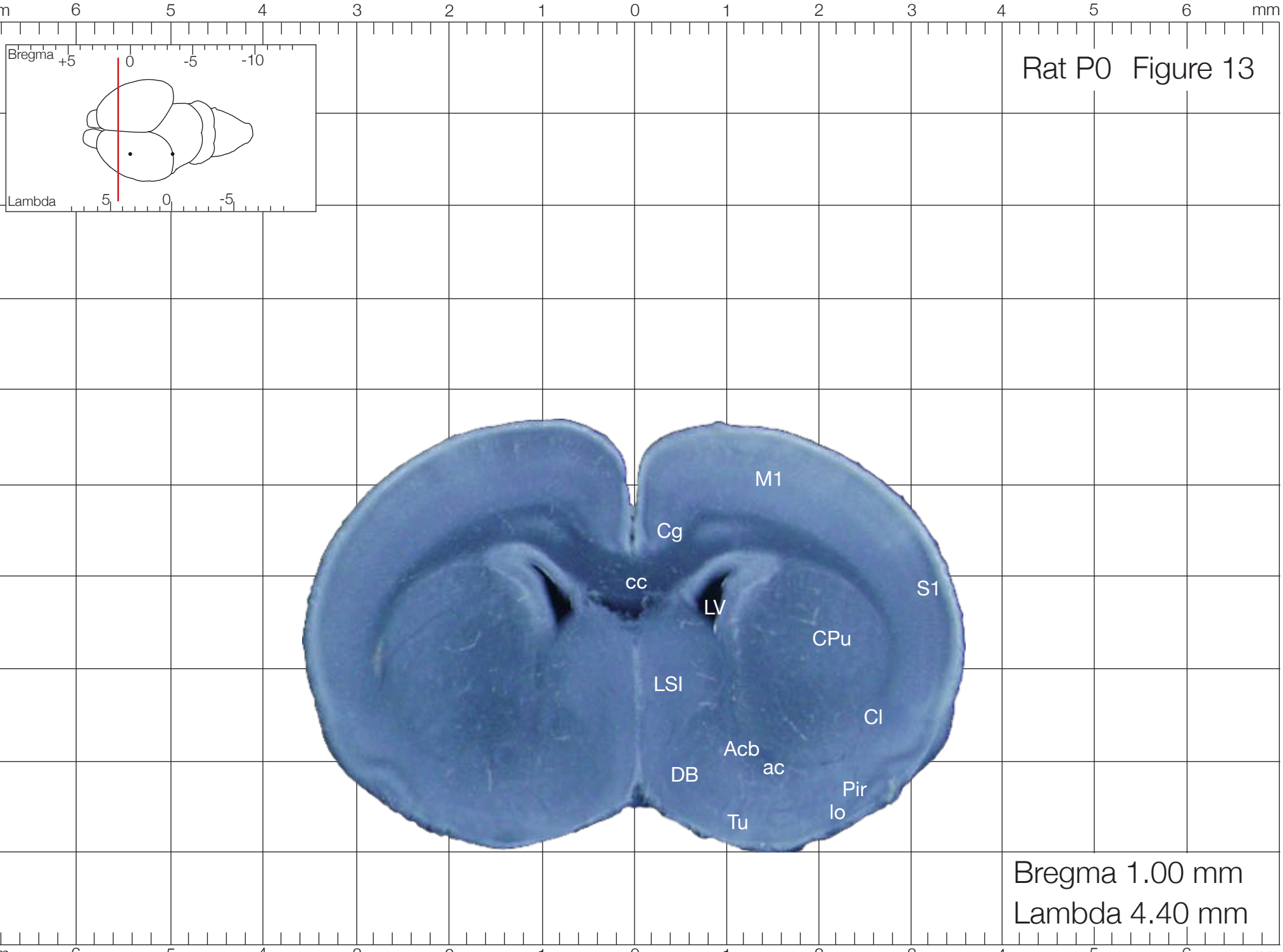
Lambda 5 0 -5
Rat P0 Figure 12
M1
Cg
S1
cc
LV
CPu
LSI
Cl
Acb
ac
Pir
Tu
Io
Bregma 1.20 mm
Lambda 4.60 mm
mm 6 5 4 3 2 1 0 1 2 3 4 5 6 mm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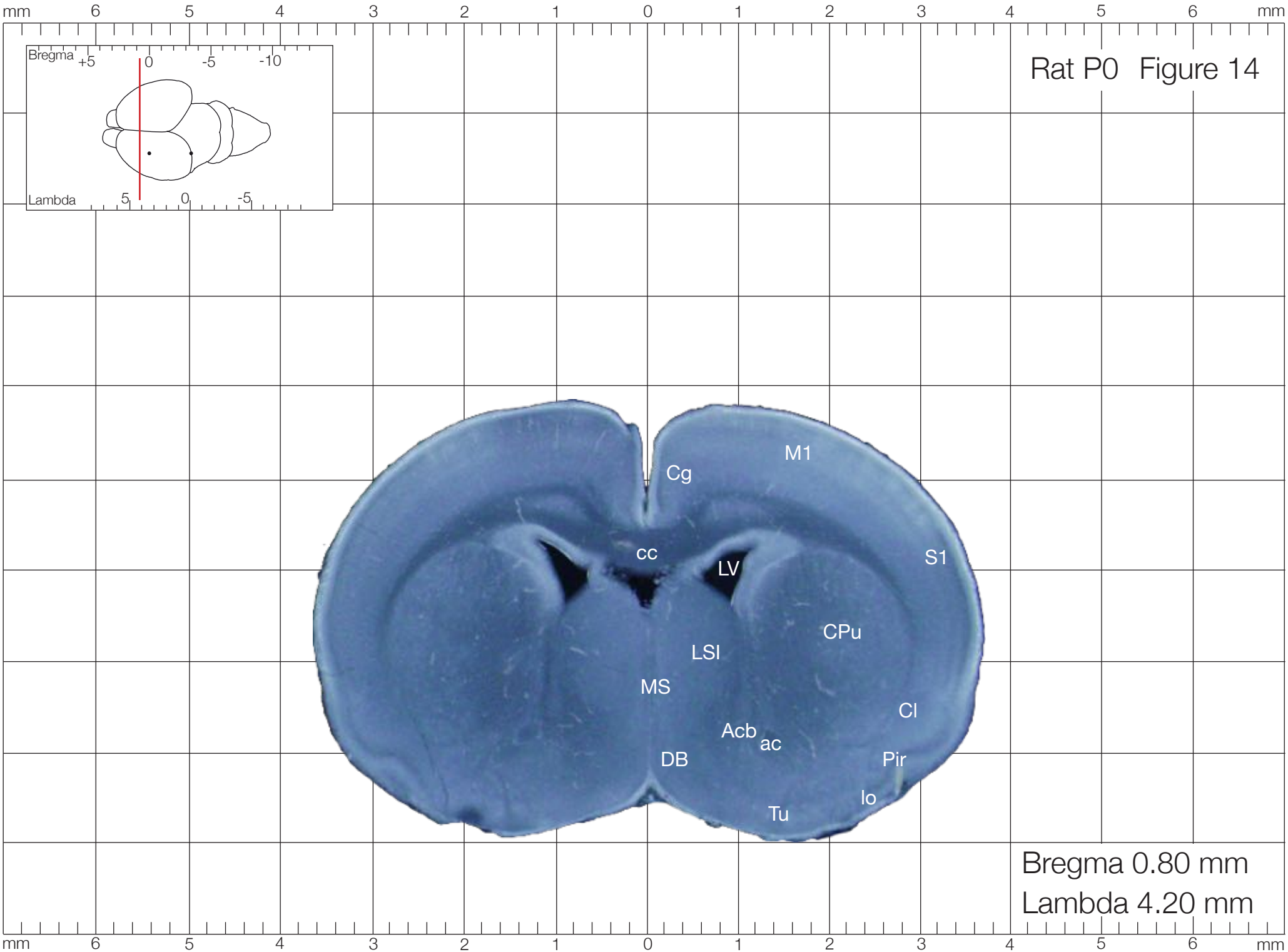
Bregma +5 0 -5 -10
Lambda 5 0 -5
Rat P0 Figure 13
M1
Cg
cc
LV
S1
CPu
LSI
Cl
Acb
ac
DB
Pir
lo
Tu
Bregma 1.00 mm
Lambda 4.40 mm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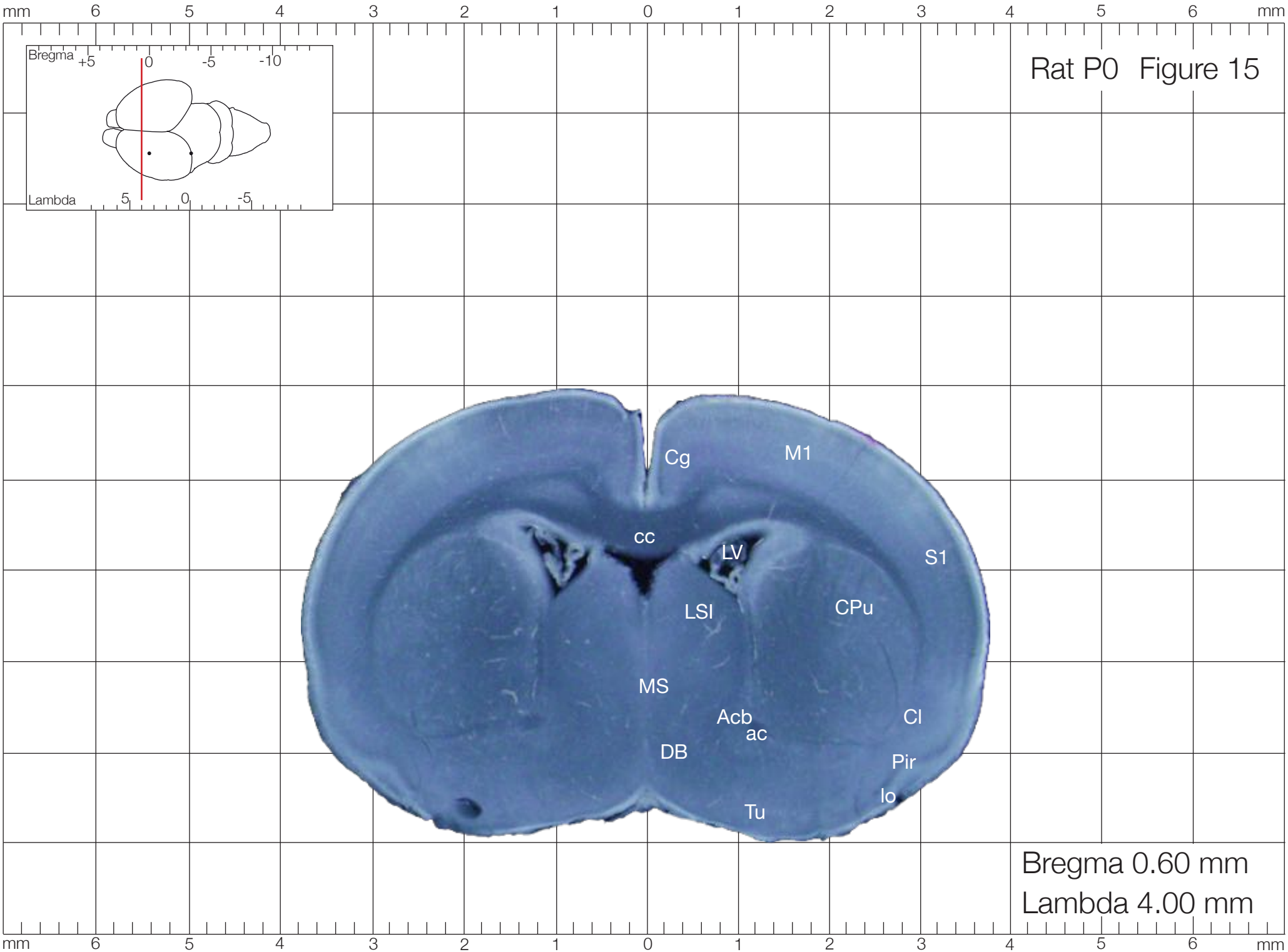
Lambda 5 0 -5
Rat P0 Figure 14
M1
Cg
cc
LV
S1
CPu
LSI
MS
Cl
Acb
ac
DB
Pir
lo
Tu
Bregma 0.80 mm
Lambda 4.20 mm
mm 6 5 4 3 2 1 0 1 2 3 4 5 6 mm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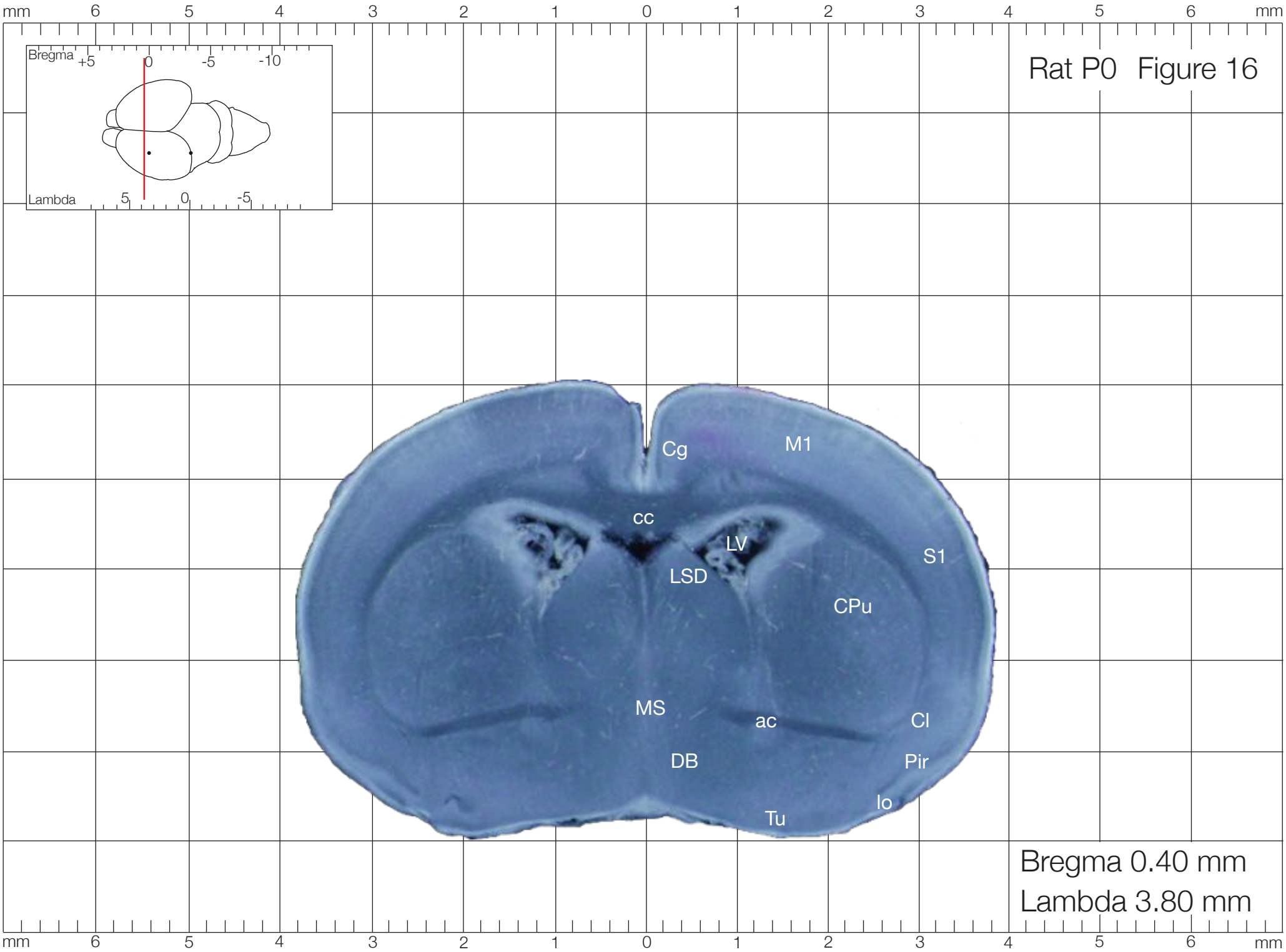
Lambda 5 0 -5
Rat P0 Figure 15
Cg
M1
cc
LV
S1
LSI
CPu
MS
Acb
ac
Cl
DB
Pir
lo
Tu
Bregma 0.60 mm
Lambda 4.00 mm
mm 6 5 4 3 2 1 0 1 2 3 4 5 6 mm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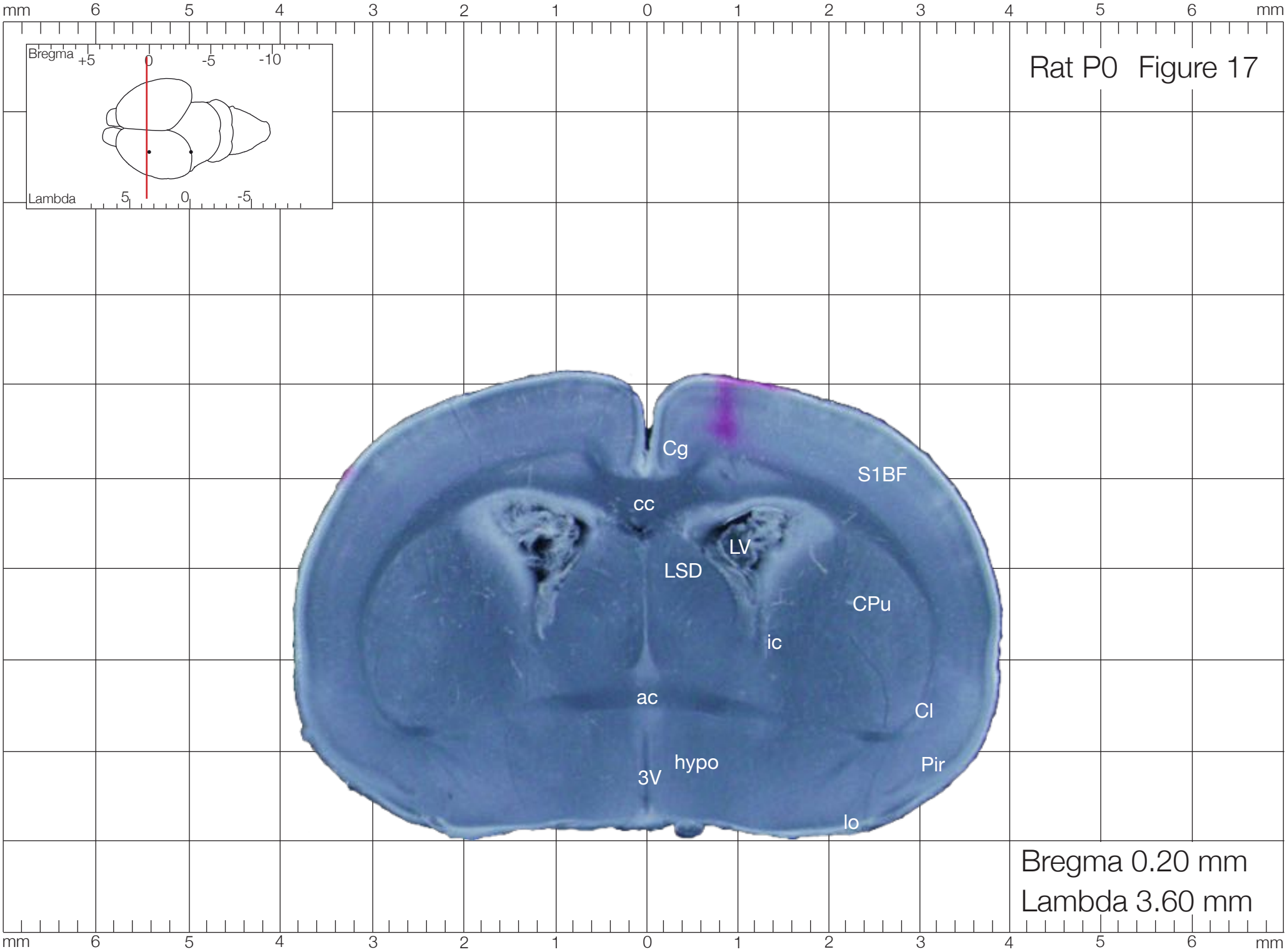
Lambda 5 0 -5
Rat P0 Figure 16
Cg
M1
cc
LV
S1
LSD
CPu
MS
ac
Cl
DB
Pir
Tu
lo
Bregma 0.40 mm
Lambda 3.80 mm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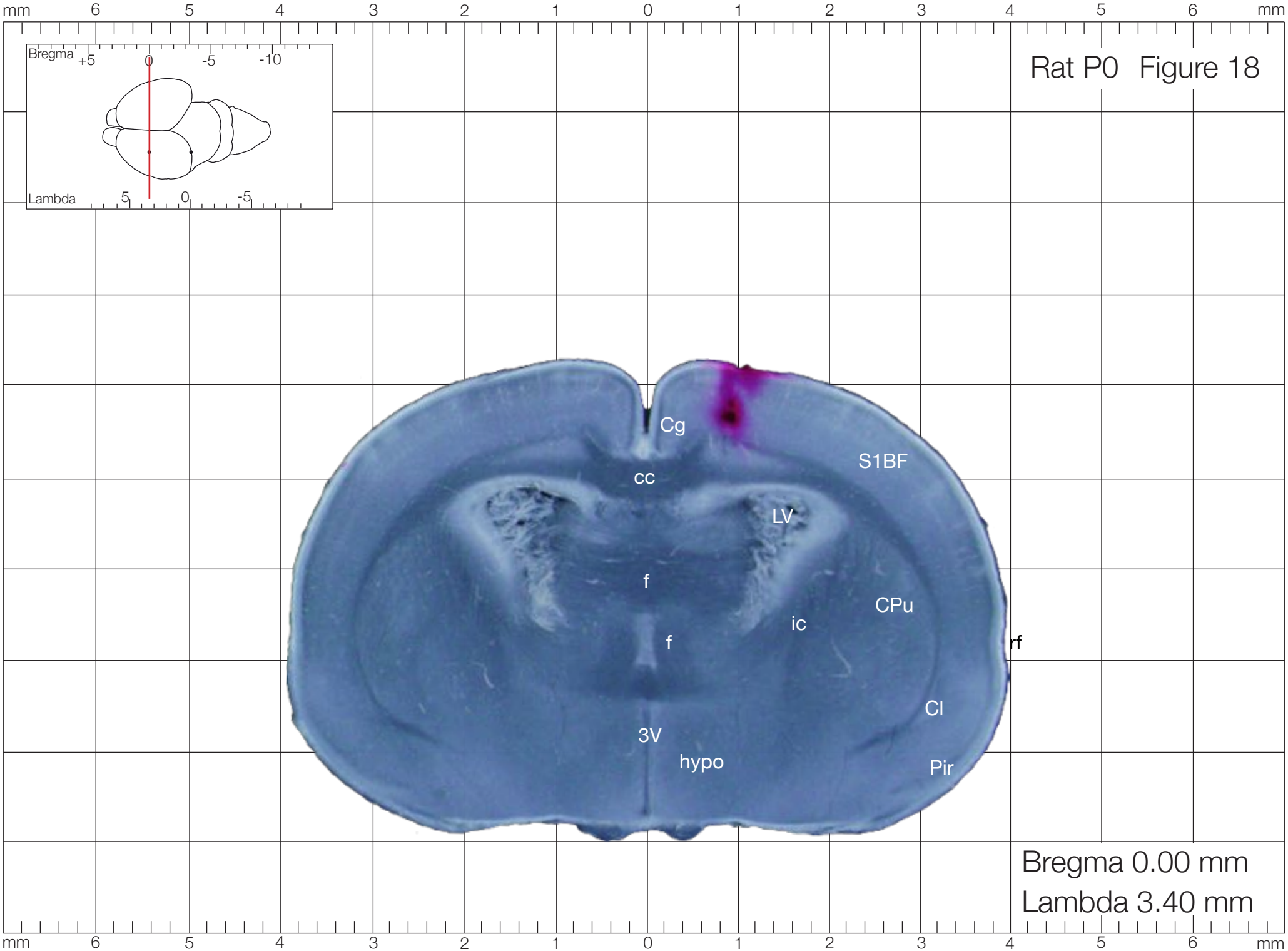
Bregma +5 0 -5 -10
Lambda 5 0 -5
Rat P0 Figure 17
Cg
S1BF
cc
LV
LSD
CPu
ic
ac
Cl
hypo
3V
Pir
lo
Bregma 0.20 mm
Lambda 3.60 mm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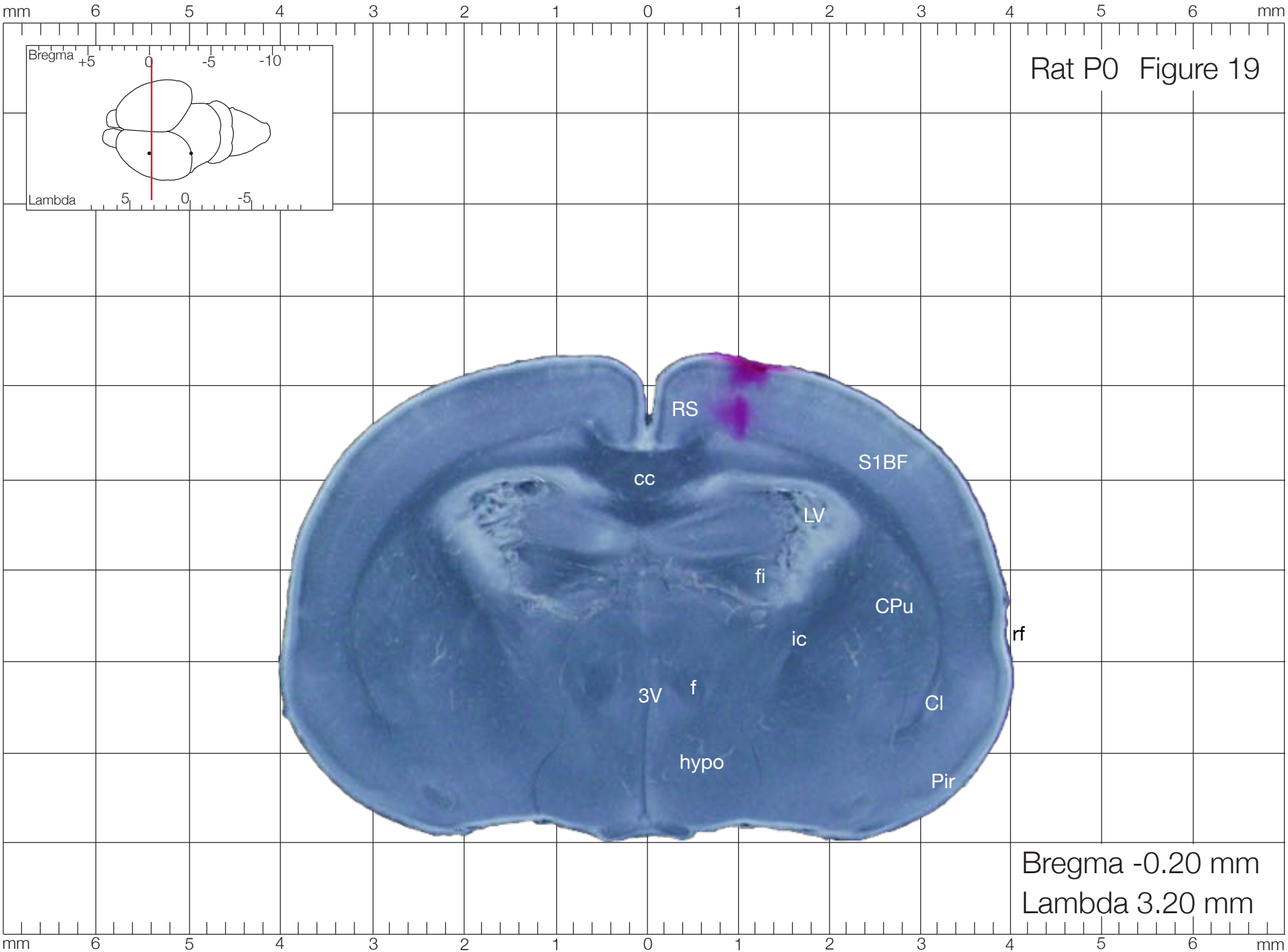
Lambda 5 0 -5
Rat P0 Figure 18
Cg
S1BF
cc
LV
f
CPu
ic
f
rf
Cl
3V
hypo
Pir
Bregma 0.00 mm
Lambda 3.40 mm
mm 6 5 4 3 2 1 0 1 2 3 4 5 6 mm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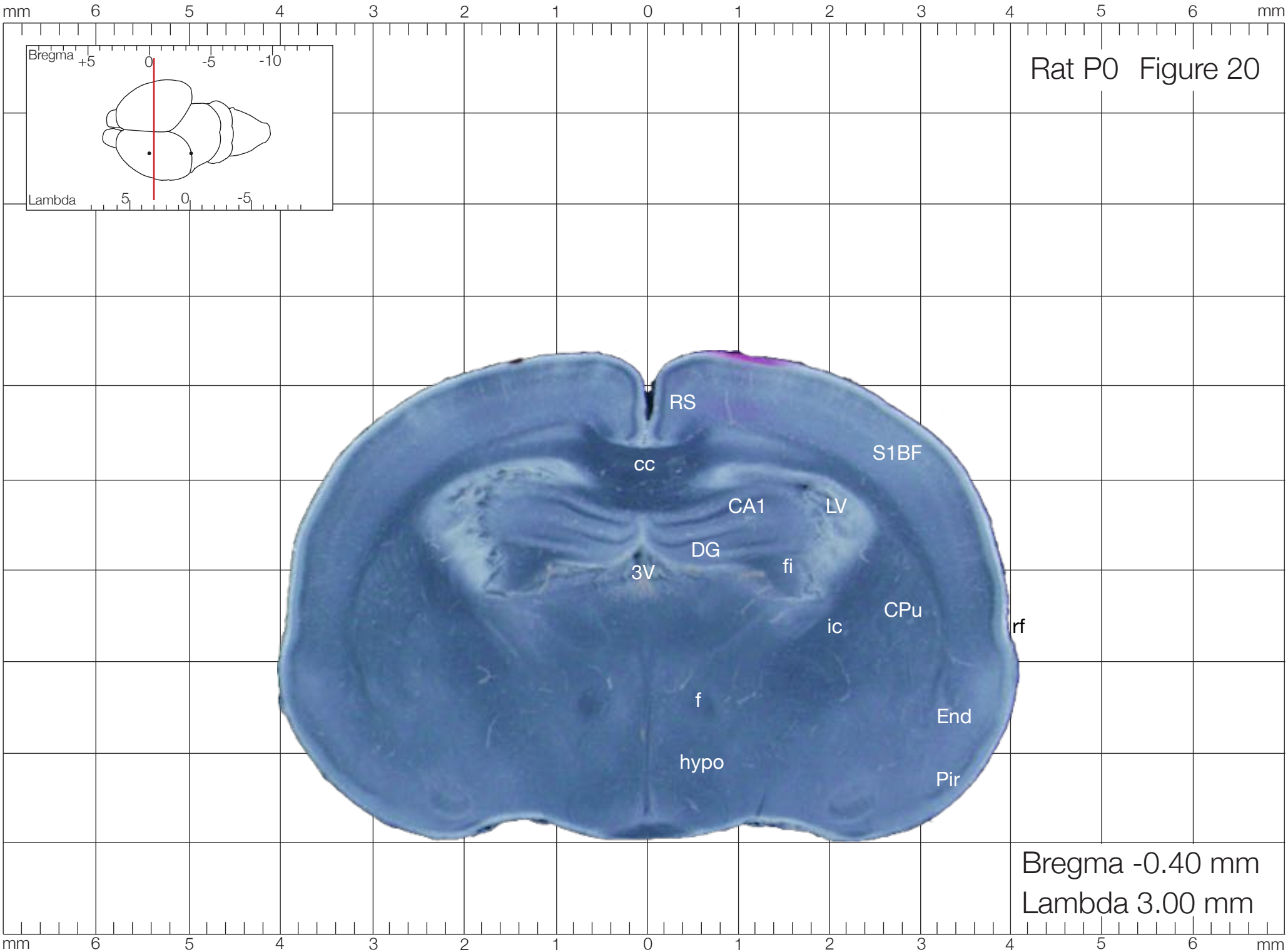
Lambda 5 0 -5
Rat P0 Figure 19
RS
S1BF
cc
LV
fi
CPu
rf
ic
3V
f
Cl
hypo
Pir
Bregma -0.20 mm
Lambda 3.20 mm
mm 6 5 4 3 2 1 0 1 2 3 4 5 6 mm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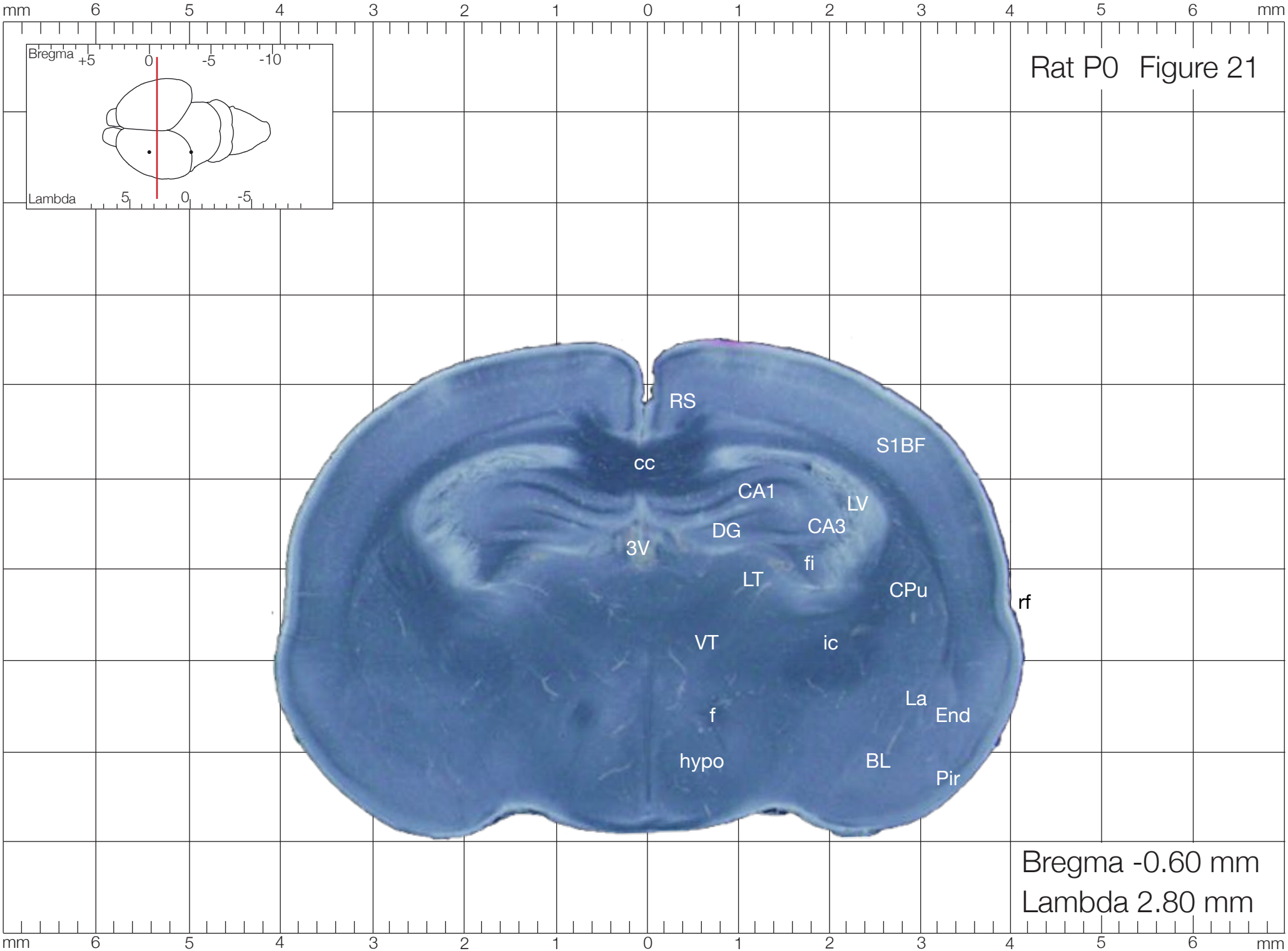
Lambda 5 0 -5
Rat P0 Figure 20
RS
cc
S1BF
CA1
LV
DG
fi
3V
CPu
ic
rf
f
End
hypo
Pir
Bregma -0.40 mm
Lambda 3.00 mm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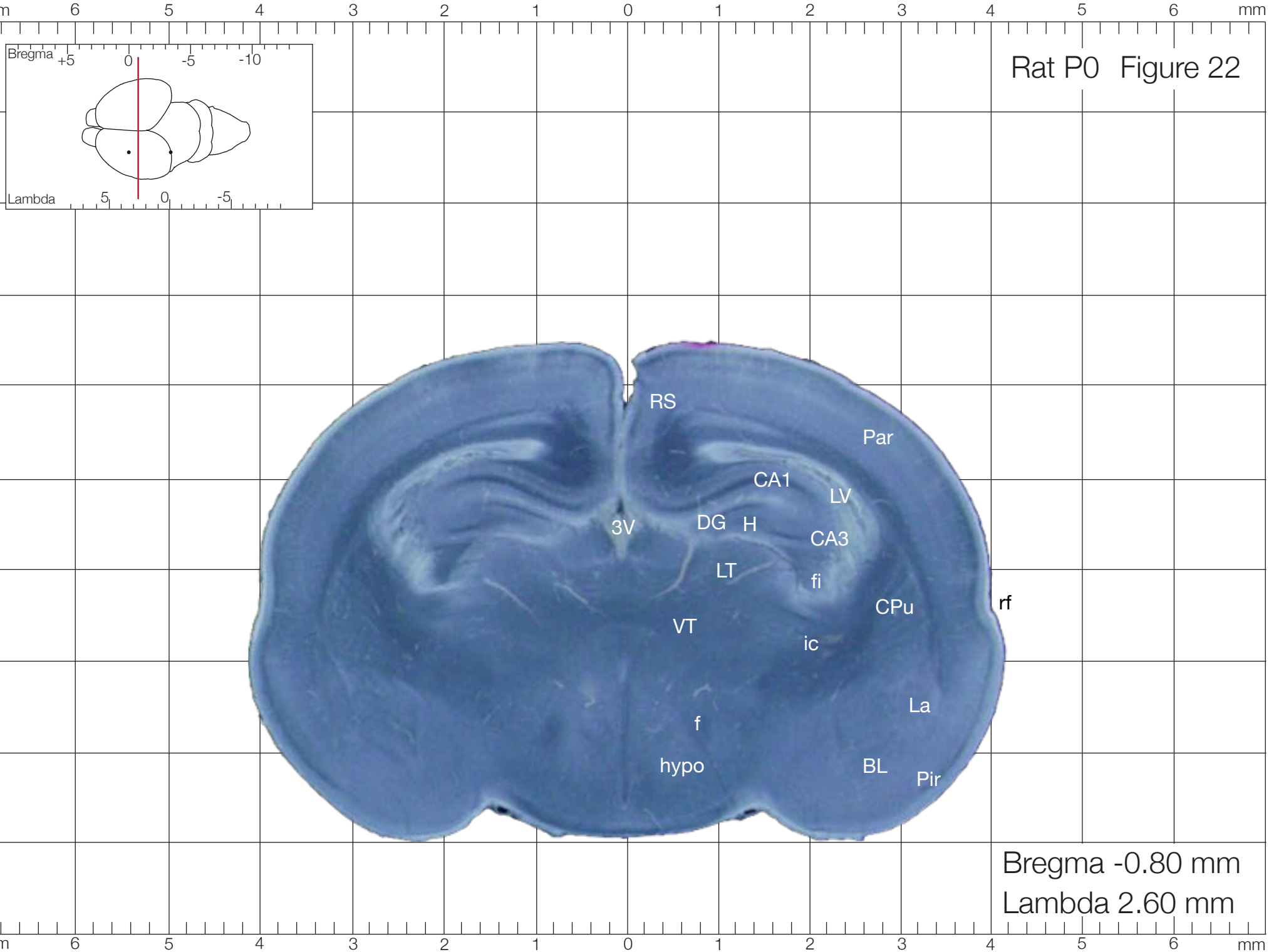
Lambda 5 0 -5
Rat P0 Figure 21
RS
S1BF
cc
CA1
LV
CA3
DG
3V
fi
LT
CPu
rf
VT
ic
La
End
f
hypo
BL
Pir
Bregma -0.60 mm
Lambda 2.80 mm
mm 6 5 4 3 2 1 0 1 2 3 4 5 6 mm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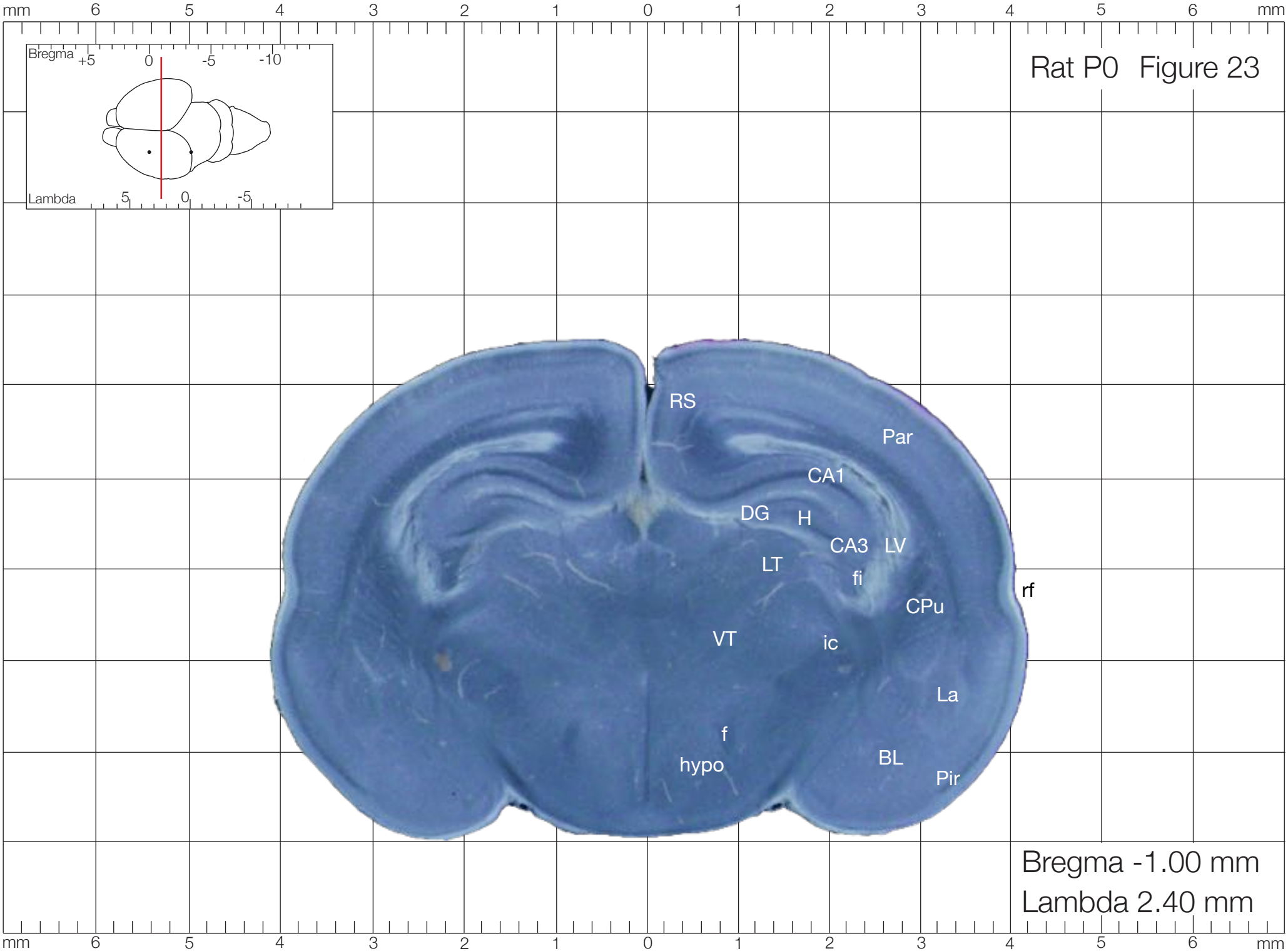
Bregma +5 0 -5 -10
Lambda 5 0 -5
Rat P0 Figure 22
RS
Par
CA1
LV
3V
DG
H
CA3
LT
fi
rf
CPu
VT
ic
La
f
hypo
BL
Pir
Bregma -0.80 mm
Lambda 2.60 mm
mm 6 5 4 3 2 1 0 1 2 3 4 5 6 mm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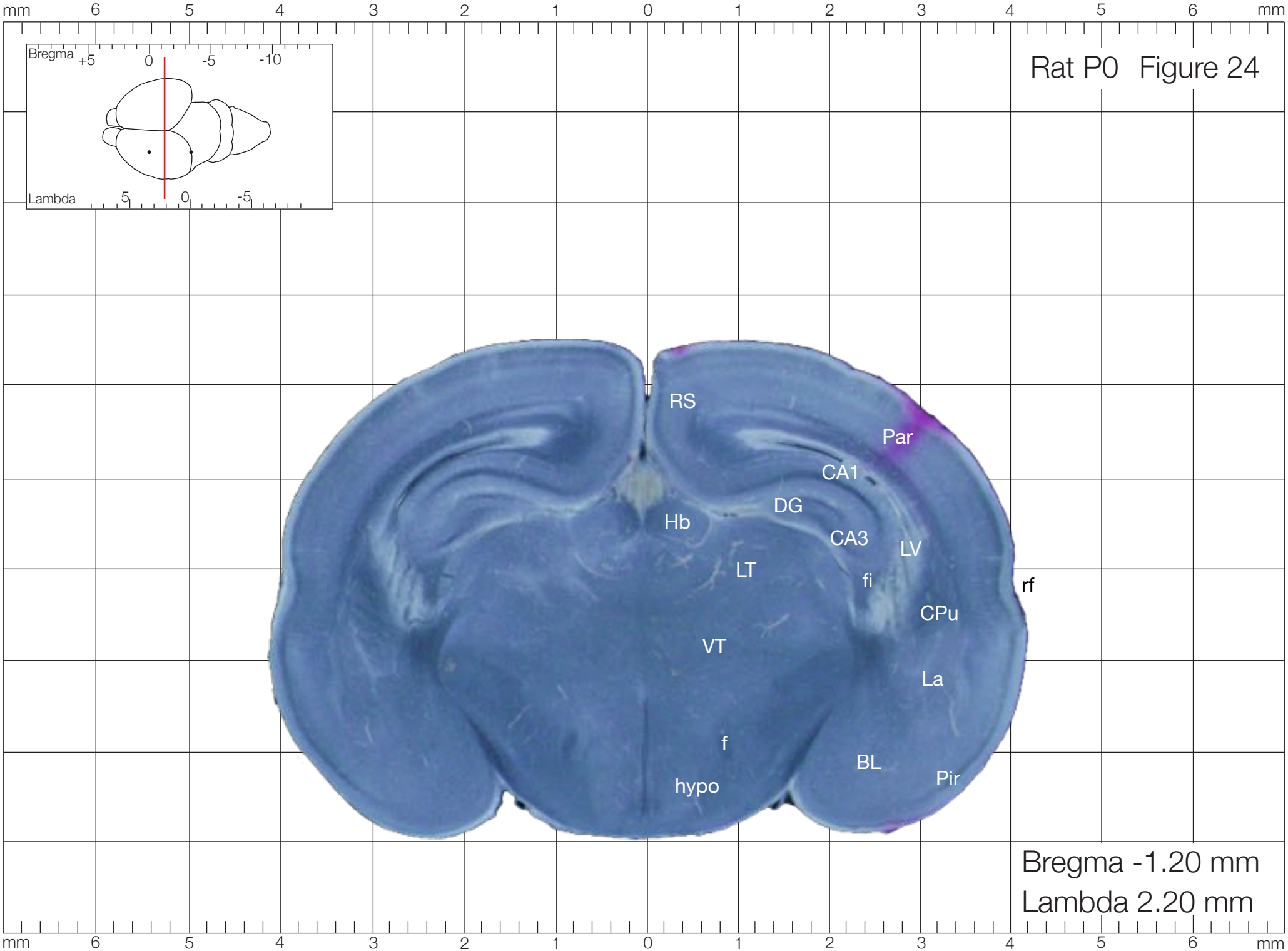
Lambda 5 0 -5
Rat P0 Figure 23
RS
Par
CA1
DG
H
CA3
LV
LT
fi
rf
CPu
VT
ic
La
f
hypo
BL
Pir
Bregma -1.00 mm
Lambda 2.40 mm
mm 6 5 4 3 2 1 0 1 2 3 4 5 6 mm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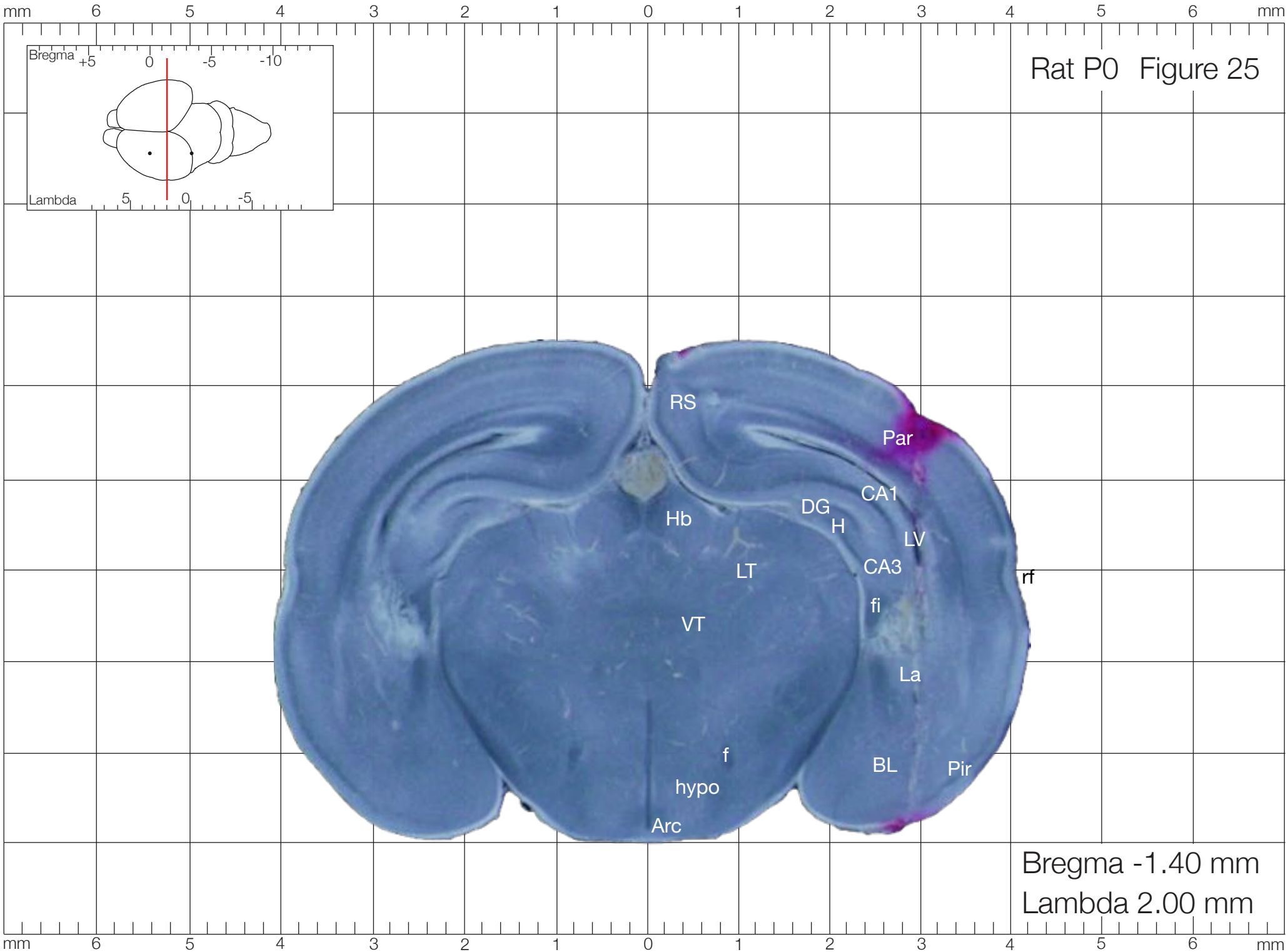
Bregma +5 0 -5 -10
Lambda 5 0 -5
Rat P0 Figure 24
RS
Par
CA1
DG
Hb
CA3
LV
LT
fi
rf
CPu
VT
La
f
BL
Pir
hypo
Bregma -1.20 mm
Lambda 2.20 mm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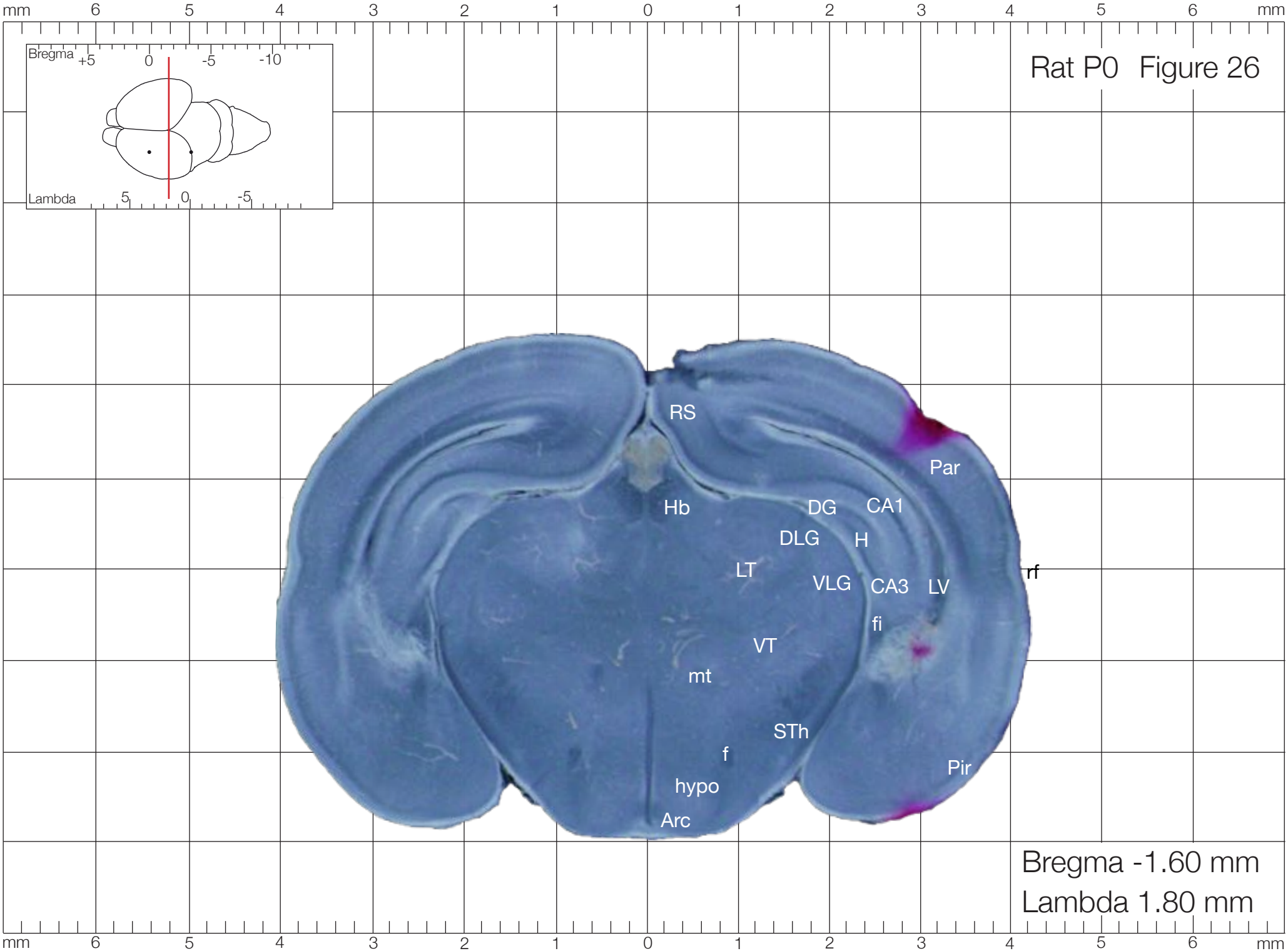
Bregma +5 0 -5 -10
Lambda 5 0 -5
Rat P0 Figure 25
RS
Par
CA1
DG
H
Hb
LV
CA3
LT
rf
fi
VT
La
f
BL
Pir
hypo
Arc
Bregma -1.40 mm
Lambda 2.00 mm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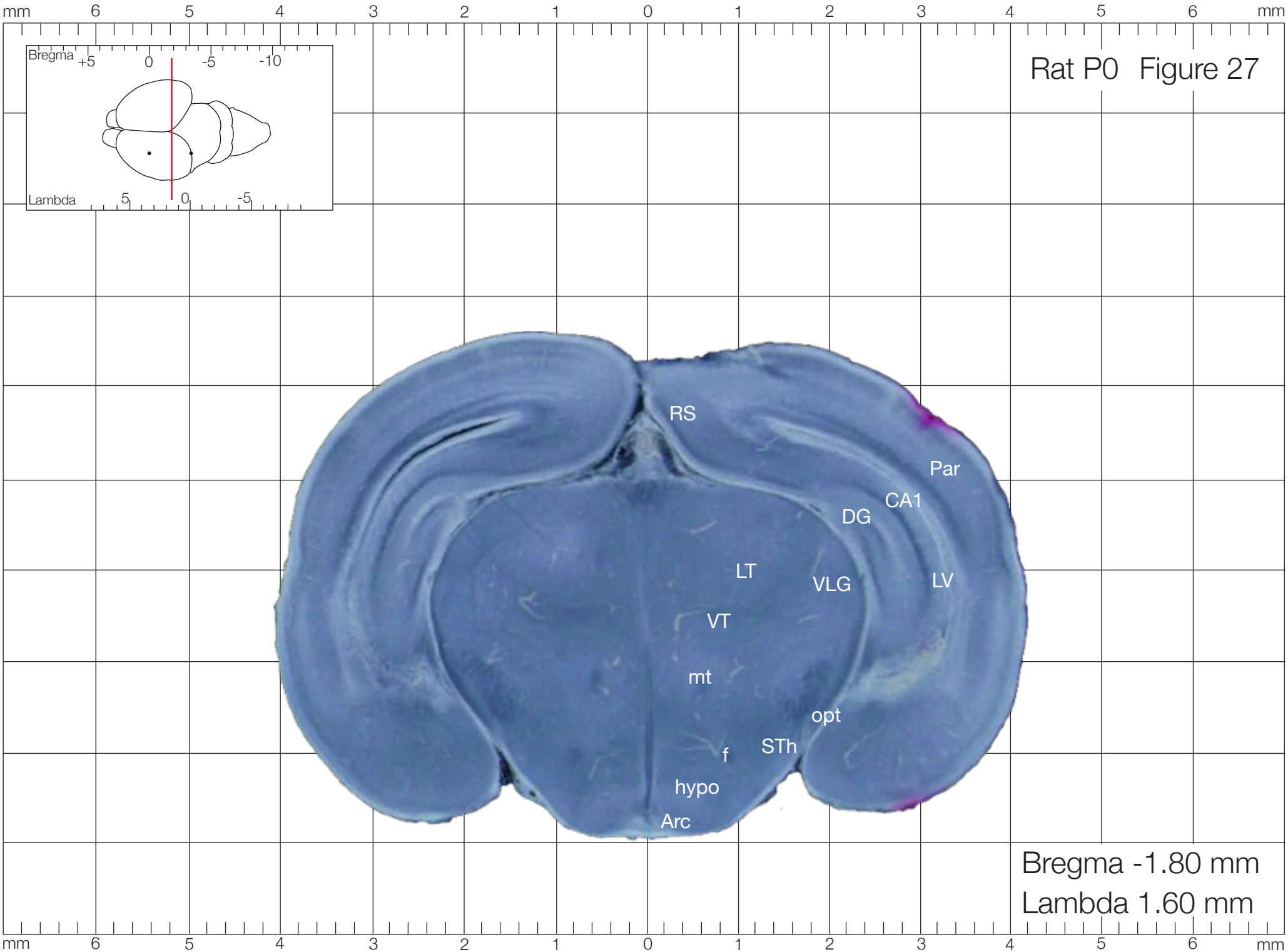
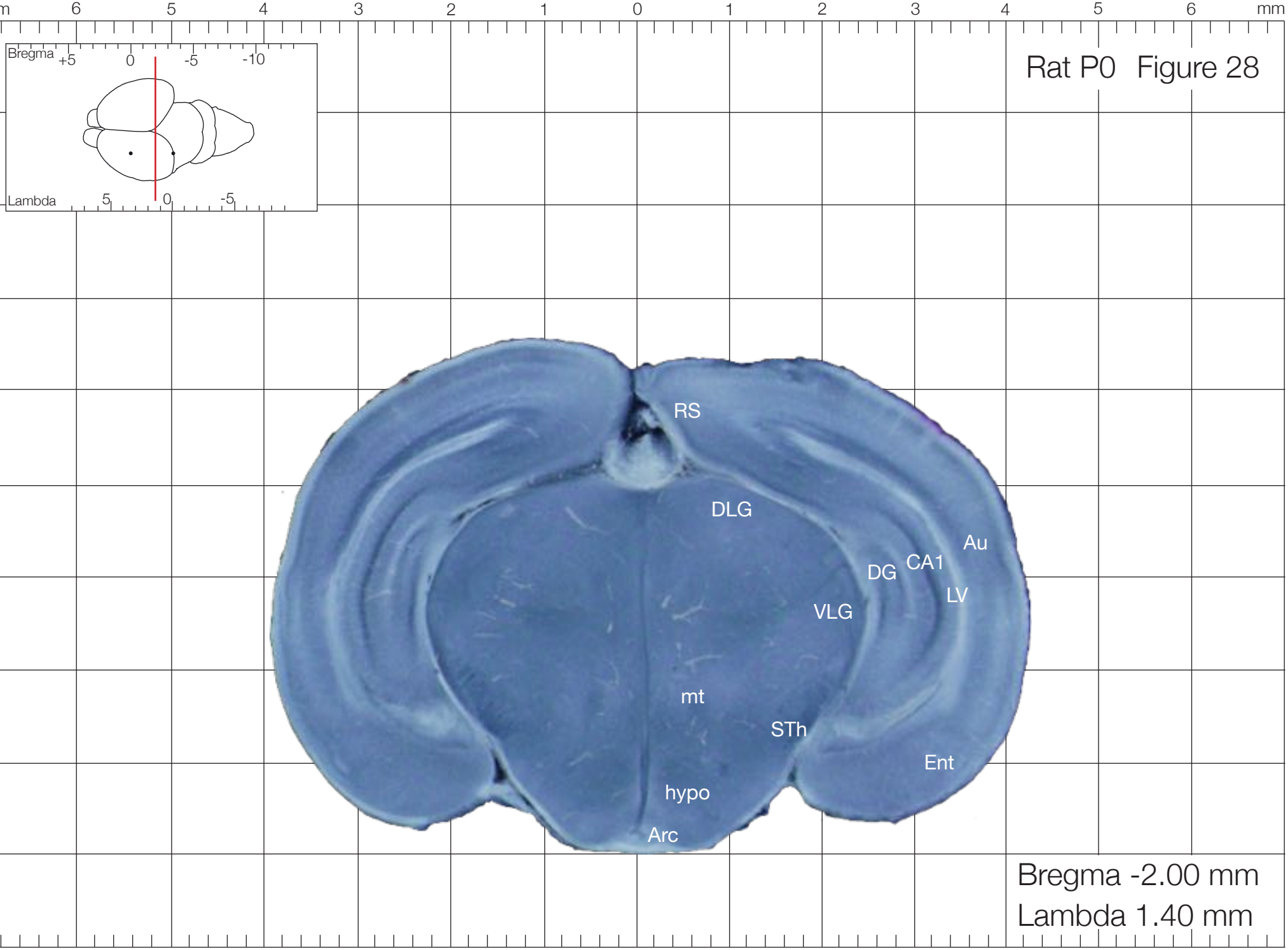
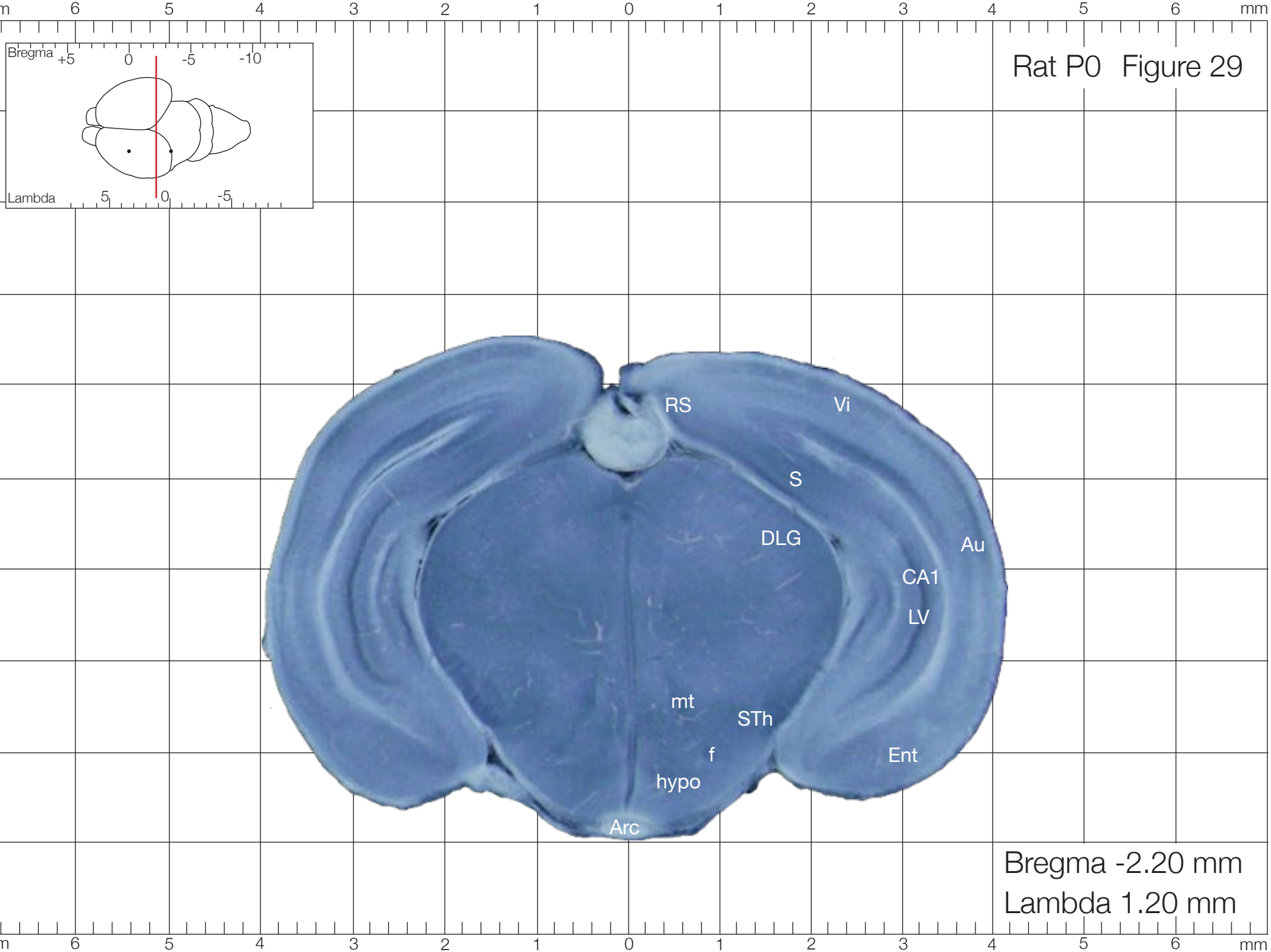
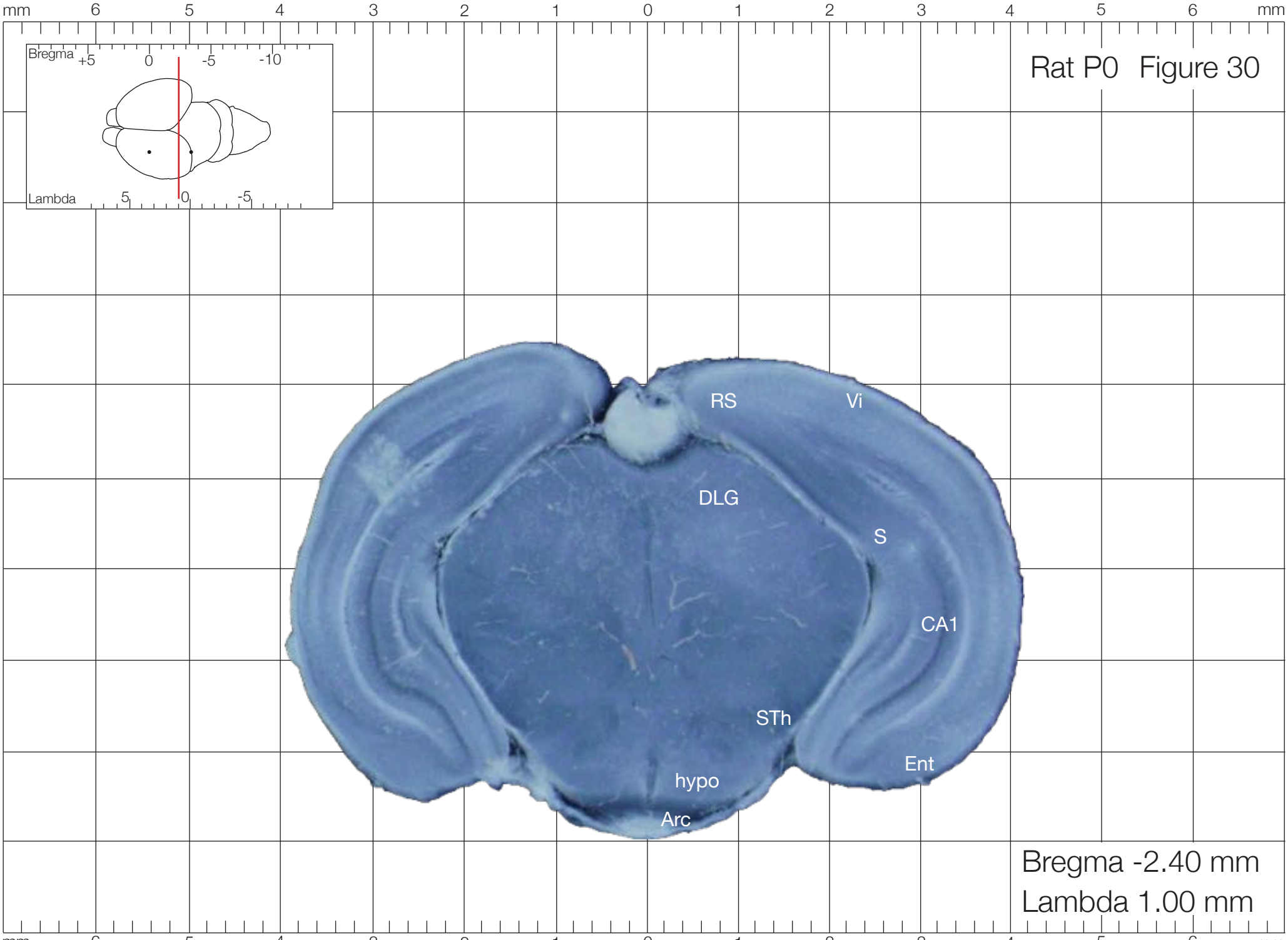
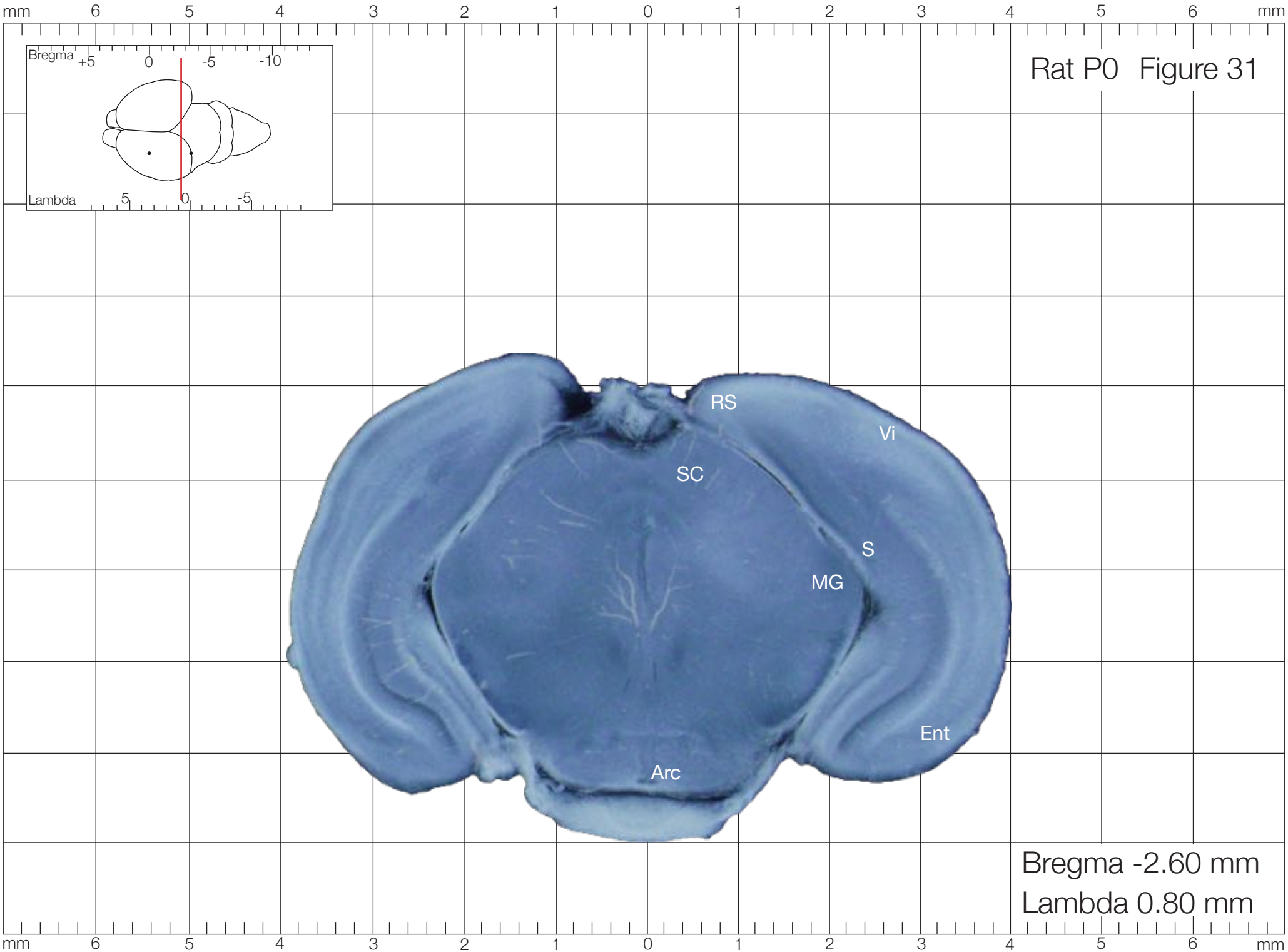
Bregma +5 0 -5 -10
Lambda 5 0 -5
Rat P0 Figure 26
RS
Par
Hb
DG
CA1
DLG
H
LT
VLG
CA3
LV
rf
fi
VT
mt
STh
f
Pir
hypo
Arc
Bregma -1.60 mm
Lambda 1.80 mm

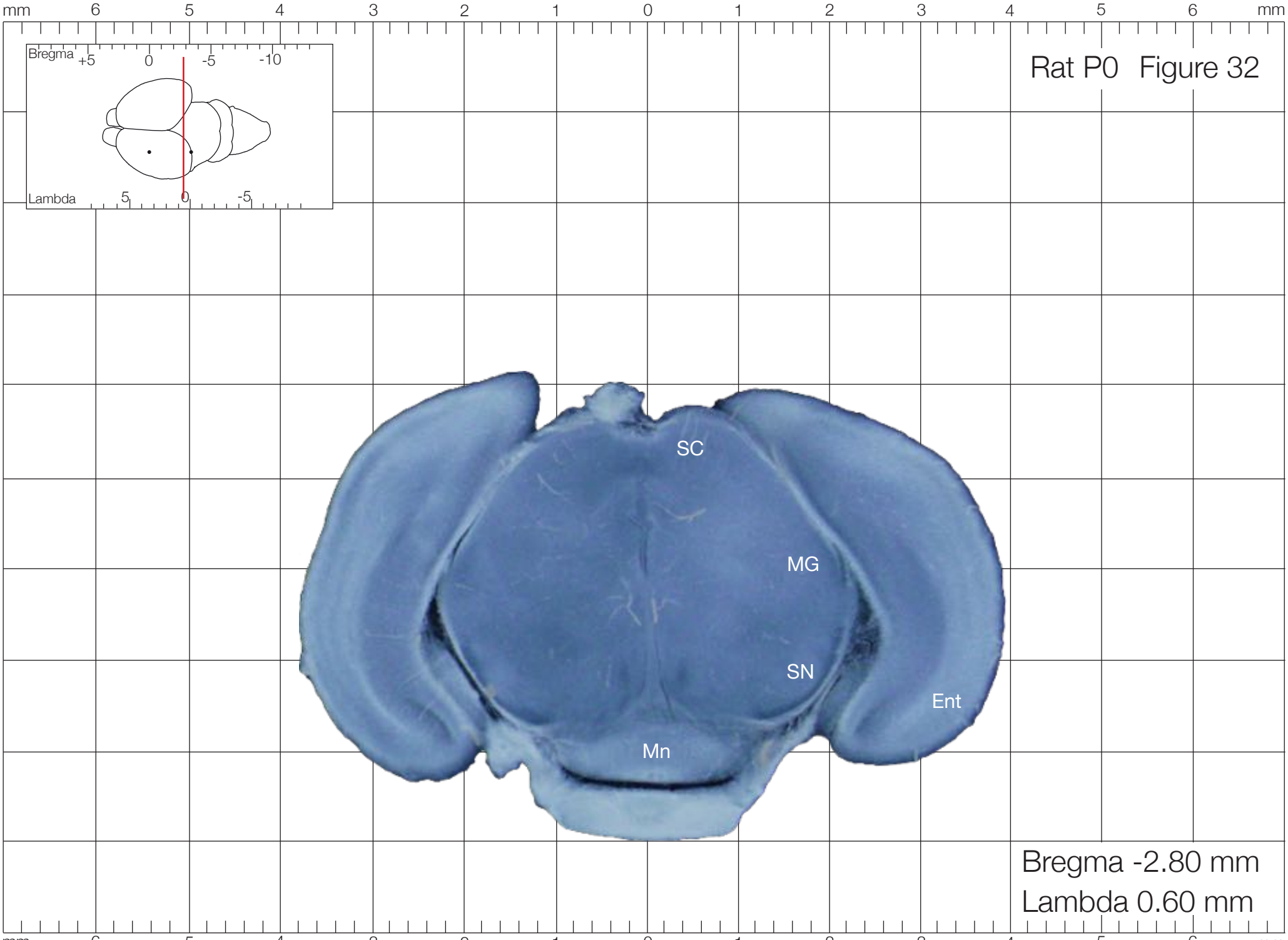

mm 6 5 4 3 2 1 0 1 2 3 4 5 6 mm
Bregma +5 0 -5 -10
Lambda 5 0 -5
Rat P0 Figure 27
RS
Par
CA1
DG
LT
VLG
LV
VT
mt
opt
STh
f
hypo
Arc
Bregma -1.80 mm
Lambda 1.60 mm

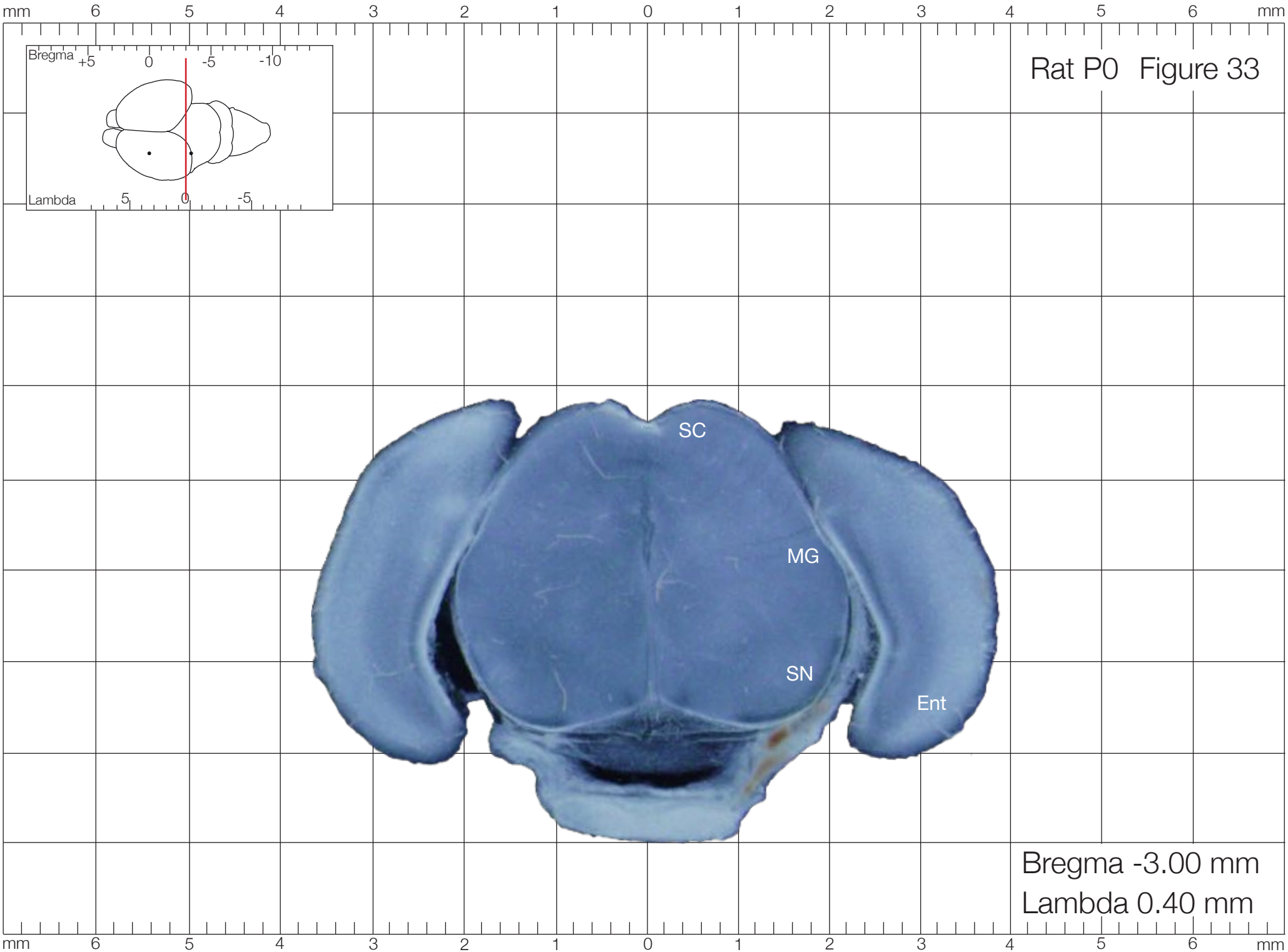

mm 6 5 4 3 2 1 0 1 2 3 4 5 6 mm
Bregma +5 0 -5 -10
Lambda 5 0 -5
Rat P0 Figure 28
RS
DLG
Au
CA1
DG
LV
VLG
mt
STh
Ent
hypo
Arc
Bregma -2.00 mm
Lambda 1.40 mm

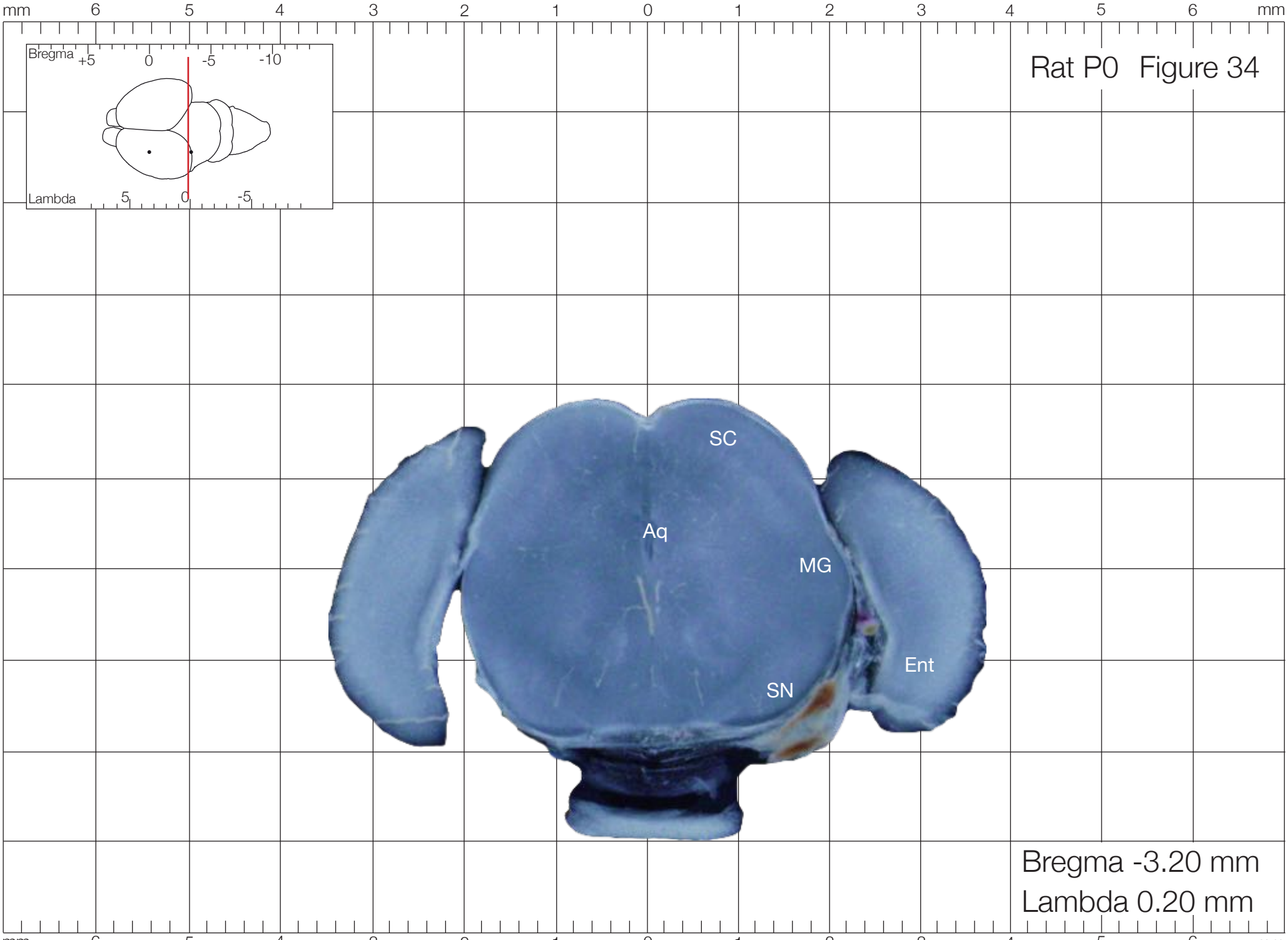

mm 6 5 4 3 2 1 0 1 2 3 4 5 6 mm
Bregma +5 0 -5 -10
Lambda 5 0 -5
Rat P0 Figure 29
RS
Vi
S
DLG
Au
CA1
LV
mt
STh
f
Ent
hypo
Arc
Bregma -2.20 mm
Lambda 1.20 mm

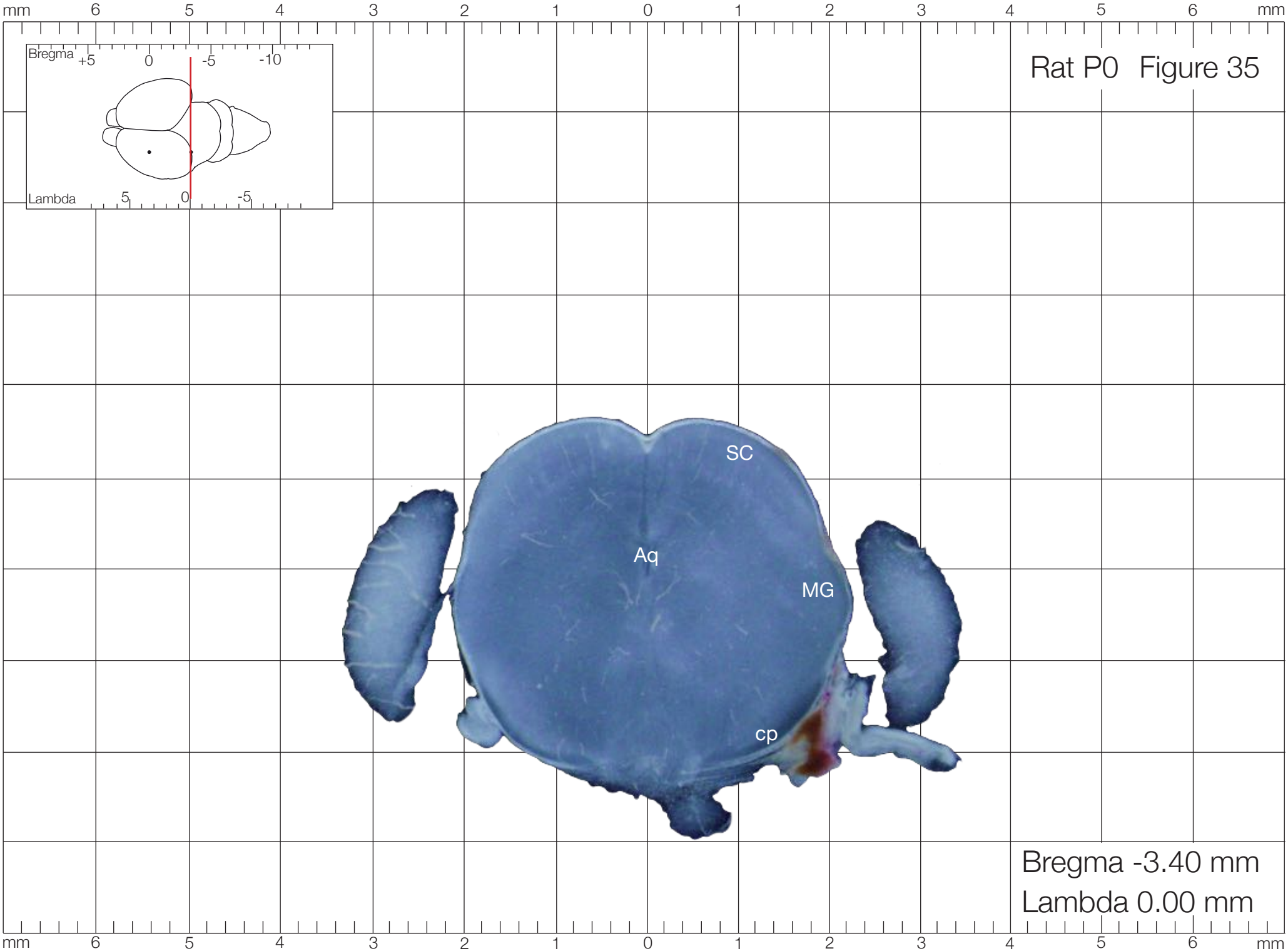

mm 6 5 4 3 2 1 0 1 2 3 4 5 6 mm
Bregma +5 0 -5 -10
Lambda 5 0 -5
Rat P0 Figure 30
RS
Vi
DLG
S
CA1
STh
Ent
hypo
Arc
Bregma -2.40 mm
Lambda 1.00 mm

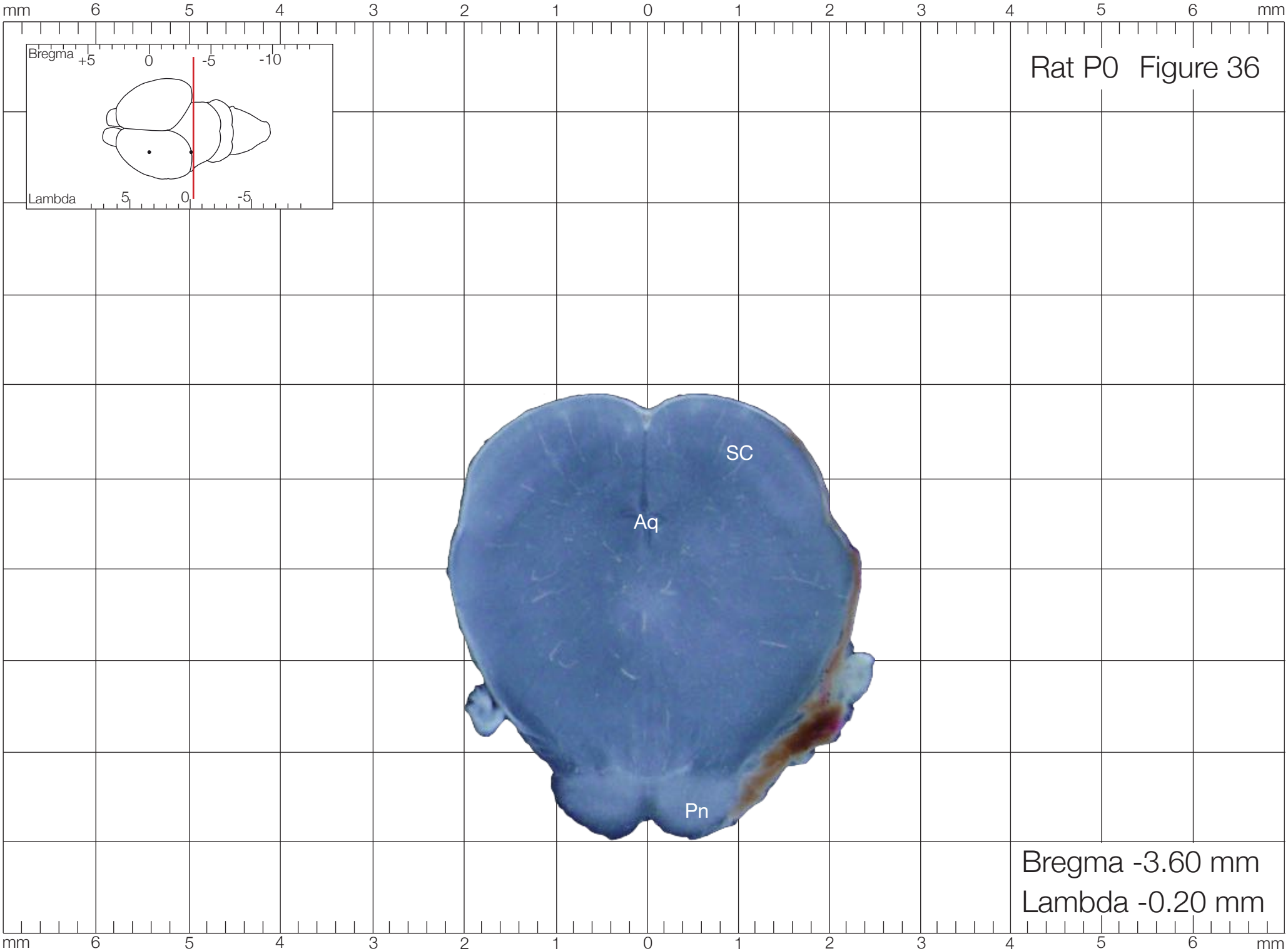

mm 6 5 4 3 2 1 0 1 2 3 4 5 6 mm
Bregma +5 0 -5 -10
Lambda 5 0 -5
Rat P0 Figure 31
RS
Vi
SC
S
MG
Ent
Arc
Bregma -2.60 mm
Lambda 0.80 mm

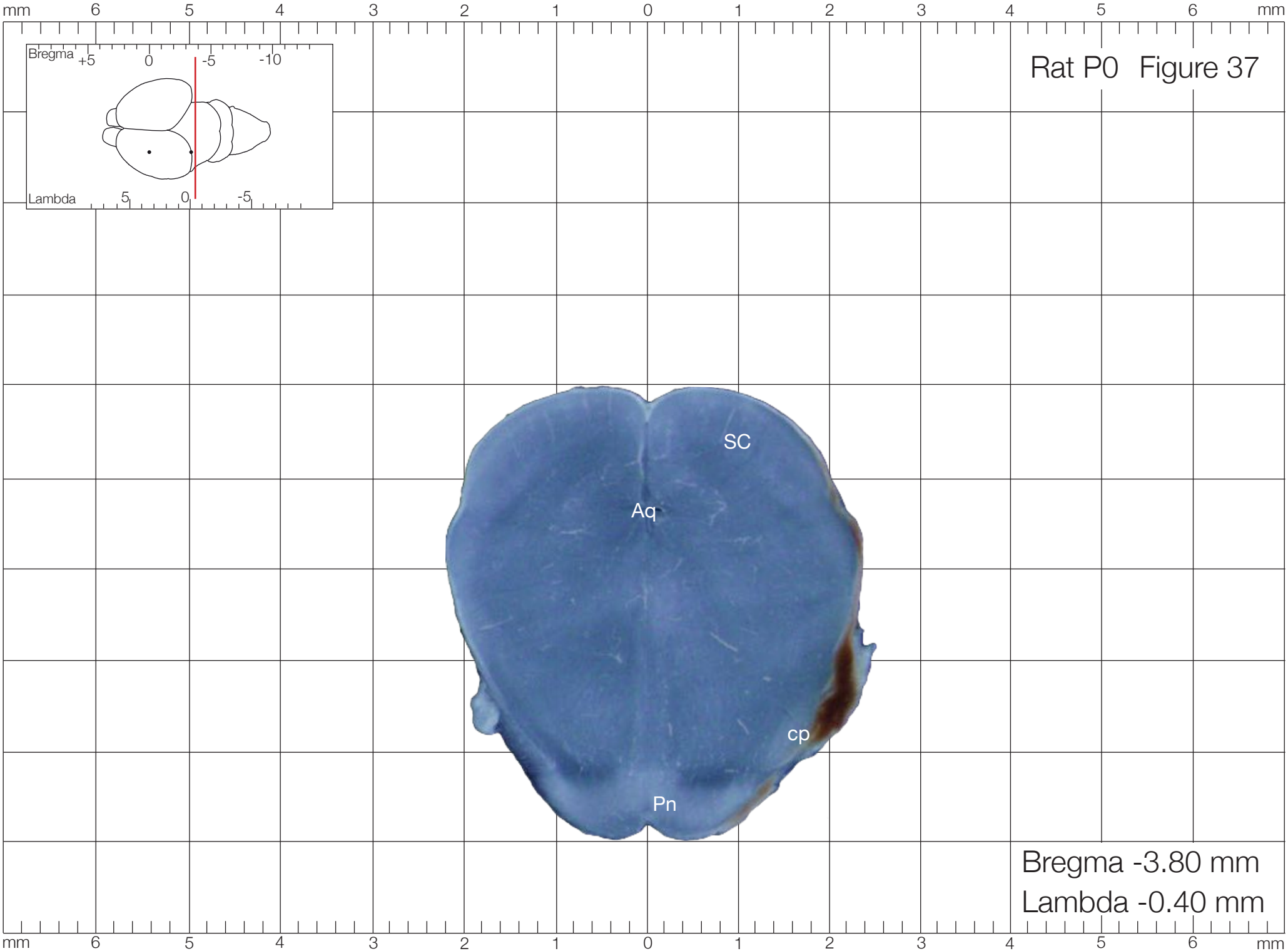

mm 6 5 4 3 2 1 0 1 2 3 4 5 6 mm
Bregma +5 0 -5 -10
Lambda 5 0 -5
Rat P0 Figure 32
SC
MG
SN
Ent
Mn
Bregma -2.80 mm
Lambda 0.60 mm

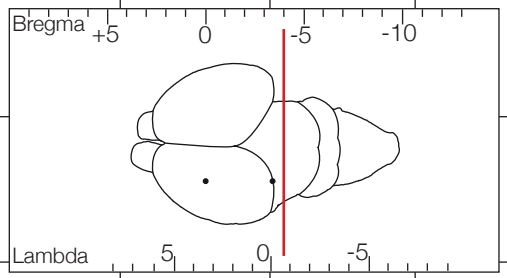

mm 6 5 4 3 2 1 0 1 2 3 4 5 6 mm
Bregma +5 0 -5 -10
Lambda 5 0 -5
Rat P0 Figure 33
SC
MG
SN
Ent
Bregma -3.00 mm
Lambda 0.40 mm


mm 6 5 4 3 2 1 0 1 2 3 4 5 6 mm
Bregma +5 0 -5 -10
Lambda 5 0 -5
Rat P0 Figure 34
SC
Aq
MG
Ent
SN
Bregma -3.20 mm
Lambda 0.20 mm

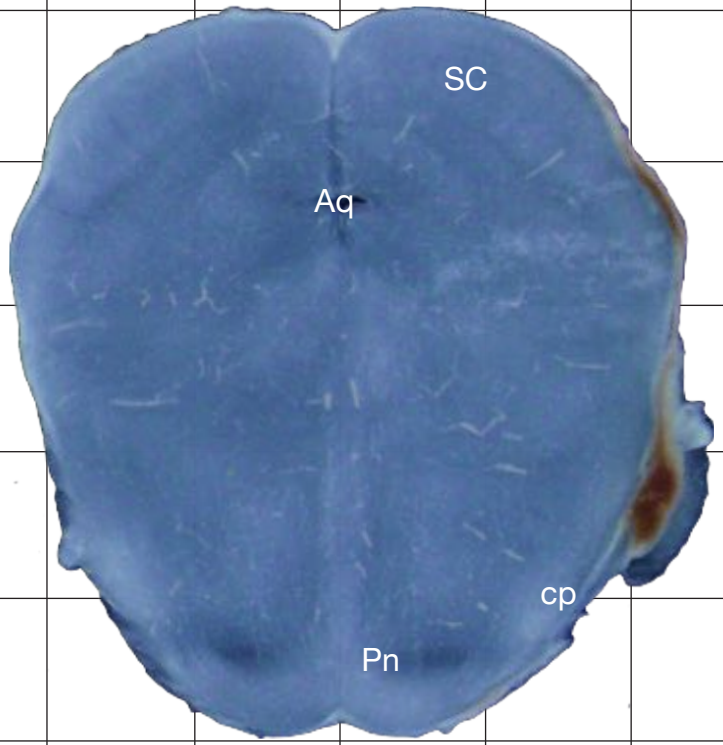

mm 6 5 4 3 2 1 0 1 2 3 4 5 6 mm
Bregma +5 0 -5 -10
Lambda 5 0 -5
Rat P0 Figure 35
SC
Aq
MG
cp
Bregma -3.40 mm
Lambda 0.00 mm
mm 6 5 4 3 2 1 0 1 2 3 4 5 6 mm


mm 6 5 4 3 2 1 0 1 2 3 4 5 6 mm
Bregma +5 0 -5 -10
Lambda 5 0 -5
Rat P0 Figure 36
SC
Aq
Pn
Bregma -3.60 mm
Lambda -0.20 mm
mm 6 5 4 3 2 1 0 1 2 3 4 5 6 mm

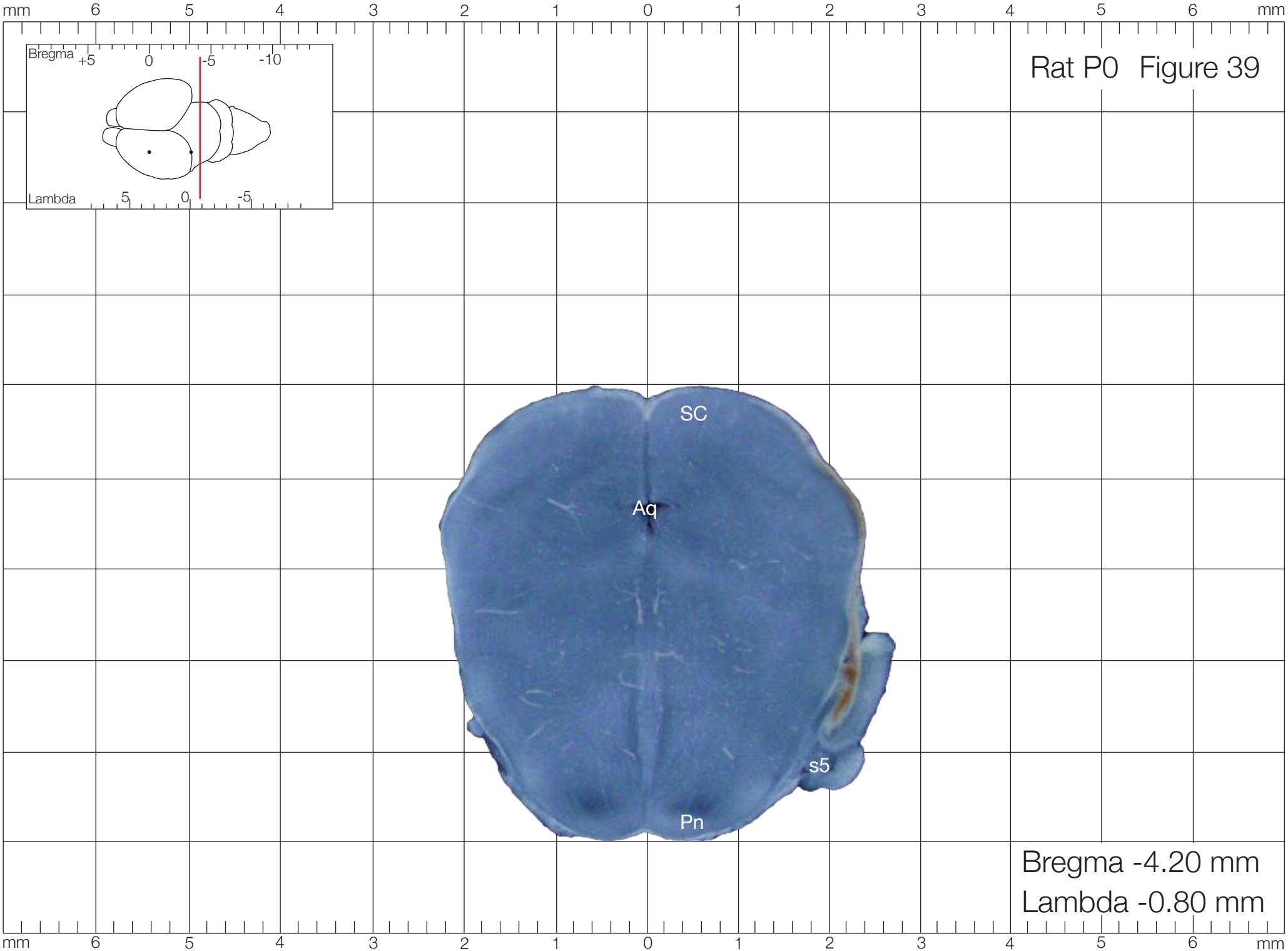

mm 6 5 4 3 2 1 0 1 2 3 4 5 6 mm
Bregma +5 0 -5 -10
Lambda 5 0 -5
Rat P0 Figure 37
SC
Aq
cp
Pn
Bregma -3.80 mm
Lambda -0.40 mm
mm 6 5 4 3 2 1 0 1 2 3 4 5 6 mm

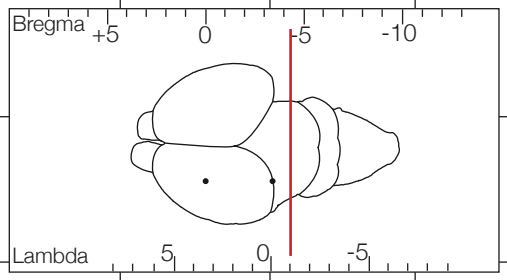


Rat P0 Figure 38

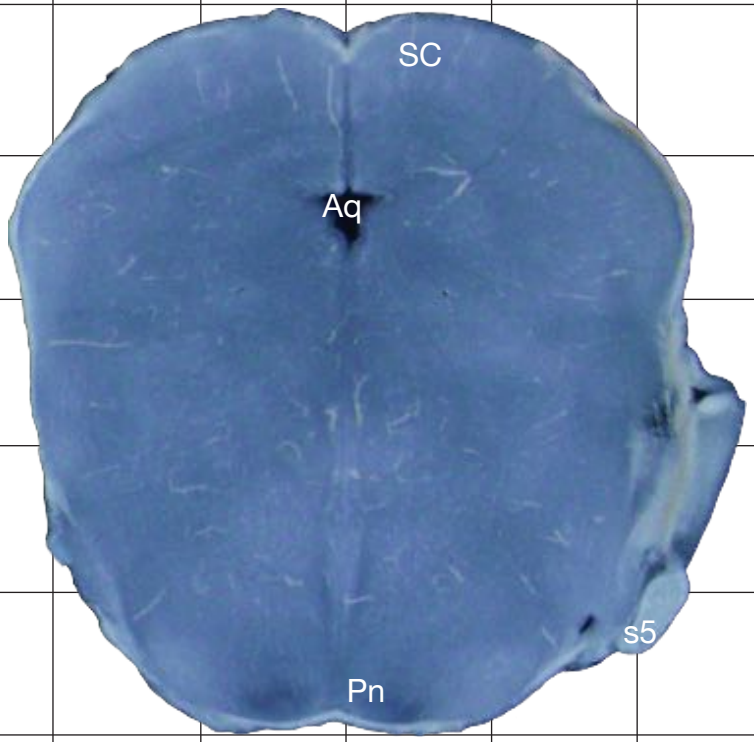


Bregma -4.00 mm
Lambda -0.60 mm

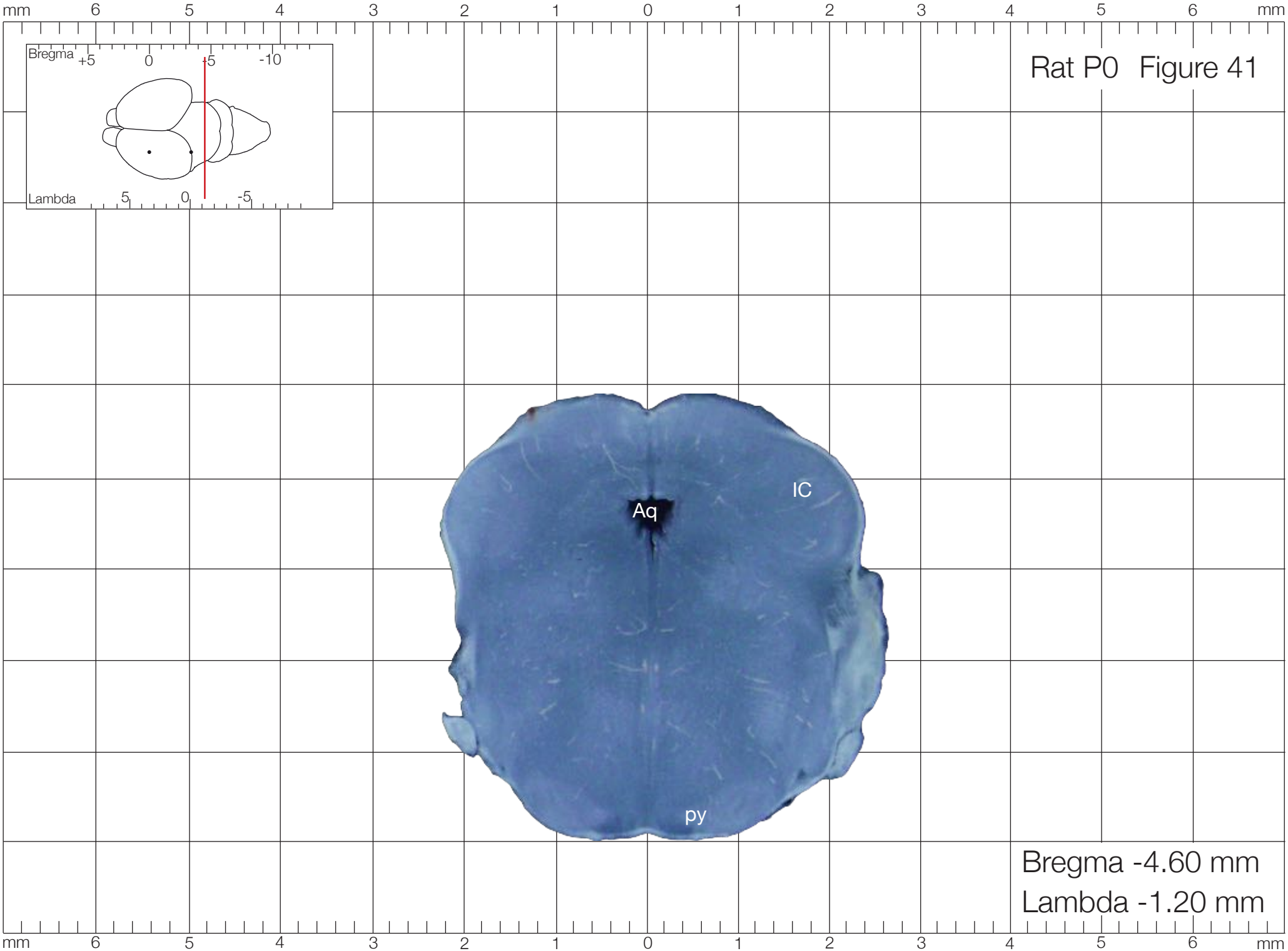

mm 6 5 4 3 2 1 0 1 2 3 4 5 6 mm
Bregma +5 0 -5 -10
Lambda 5 0 -5
Rat P0 Figure 39
SC
Aq
s5
Pn
Bregma -4.20 mm
Lambda -0.80 mm
mm 6 5 4 3 2 1 0 1 2 3 4 5 6 mm

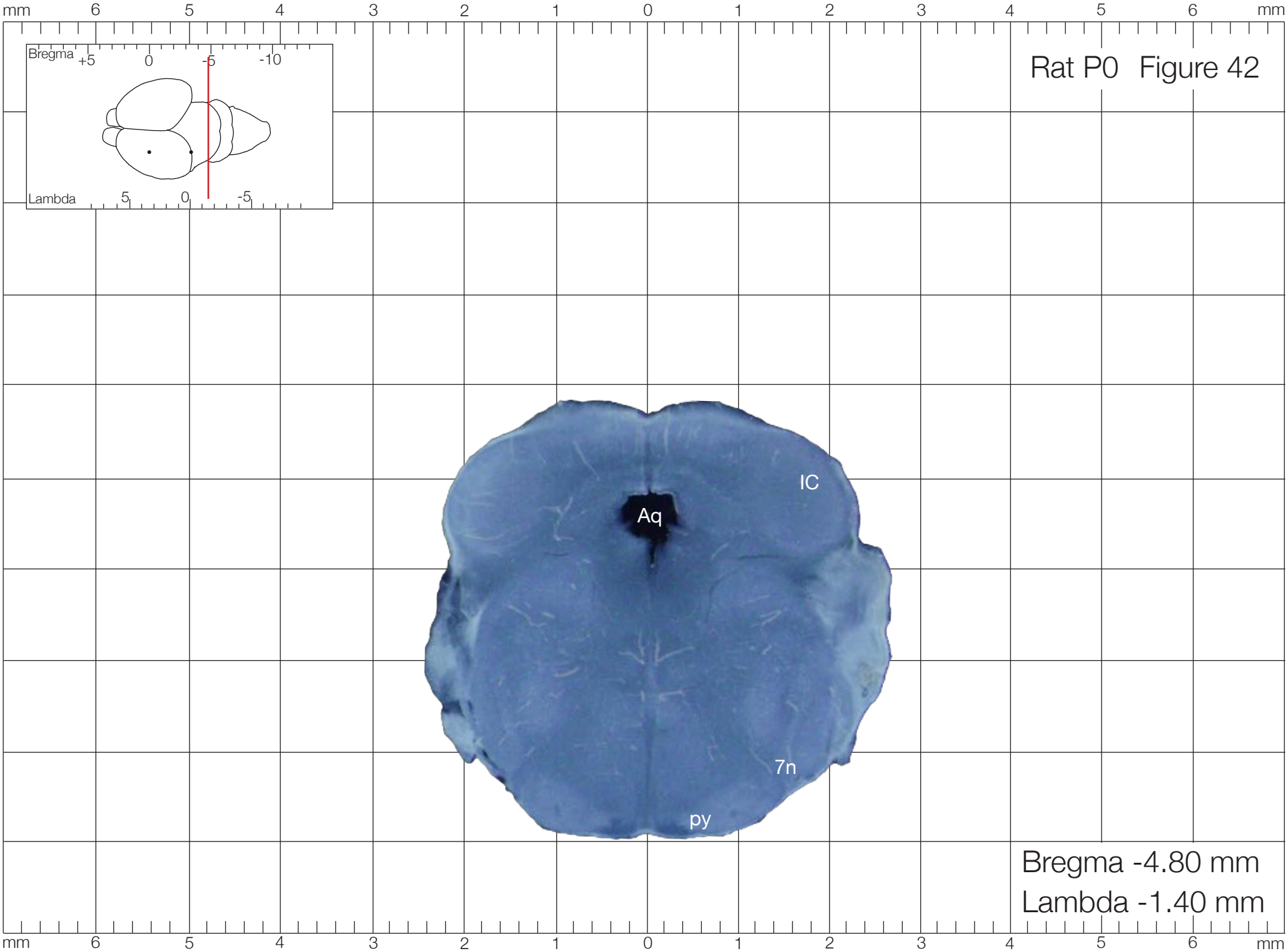


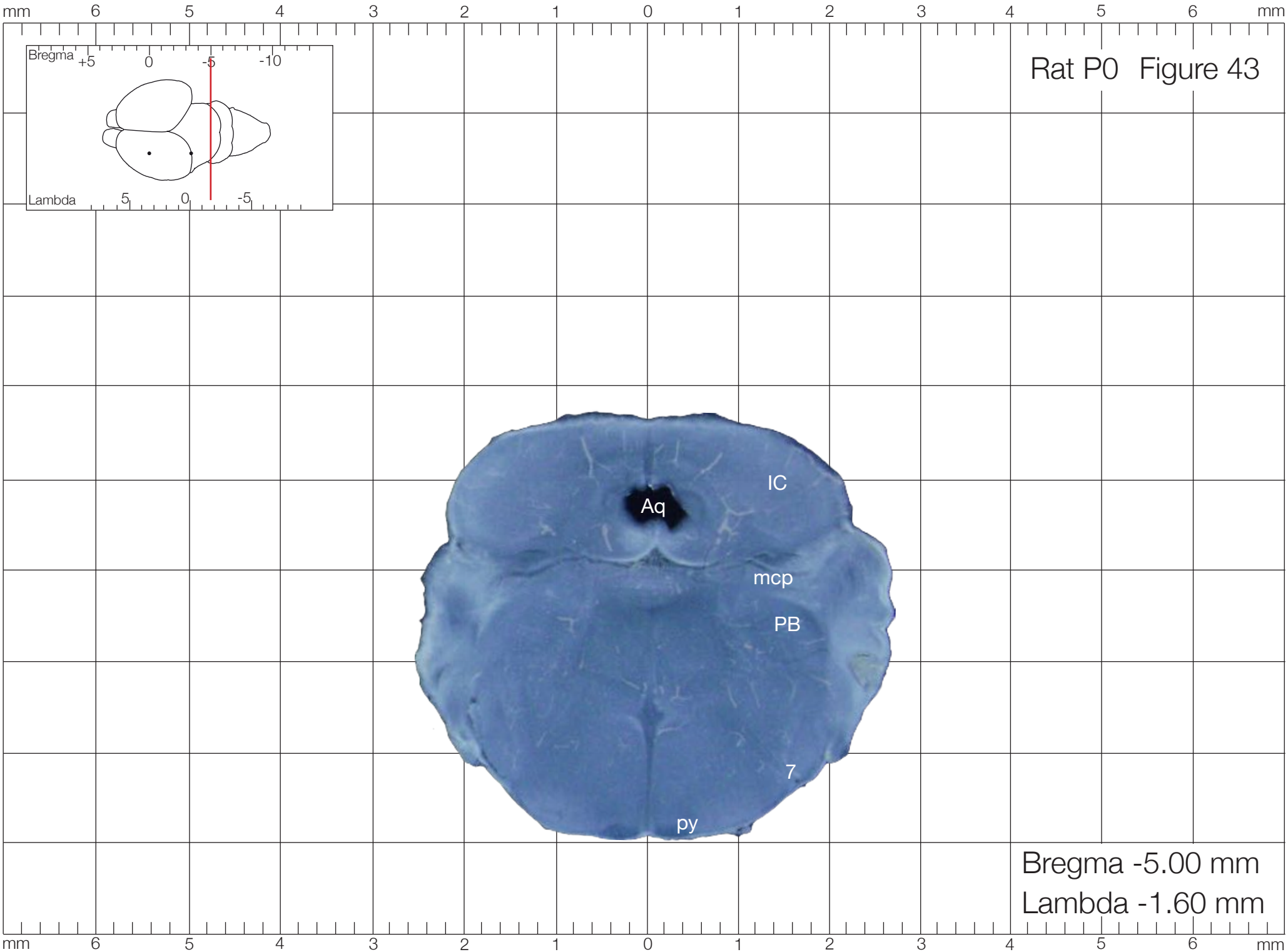
Rat P0 Figure 40

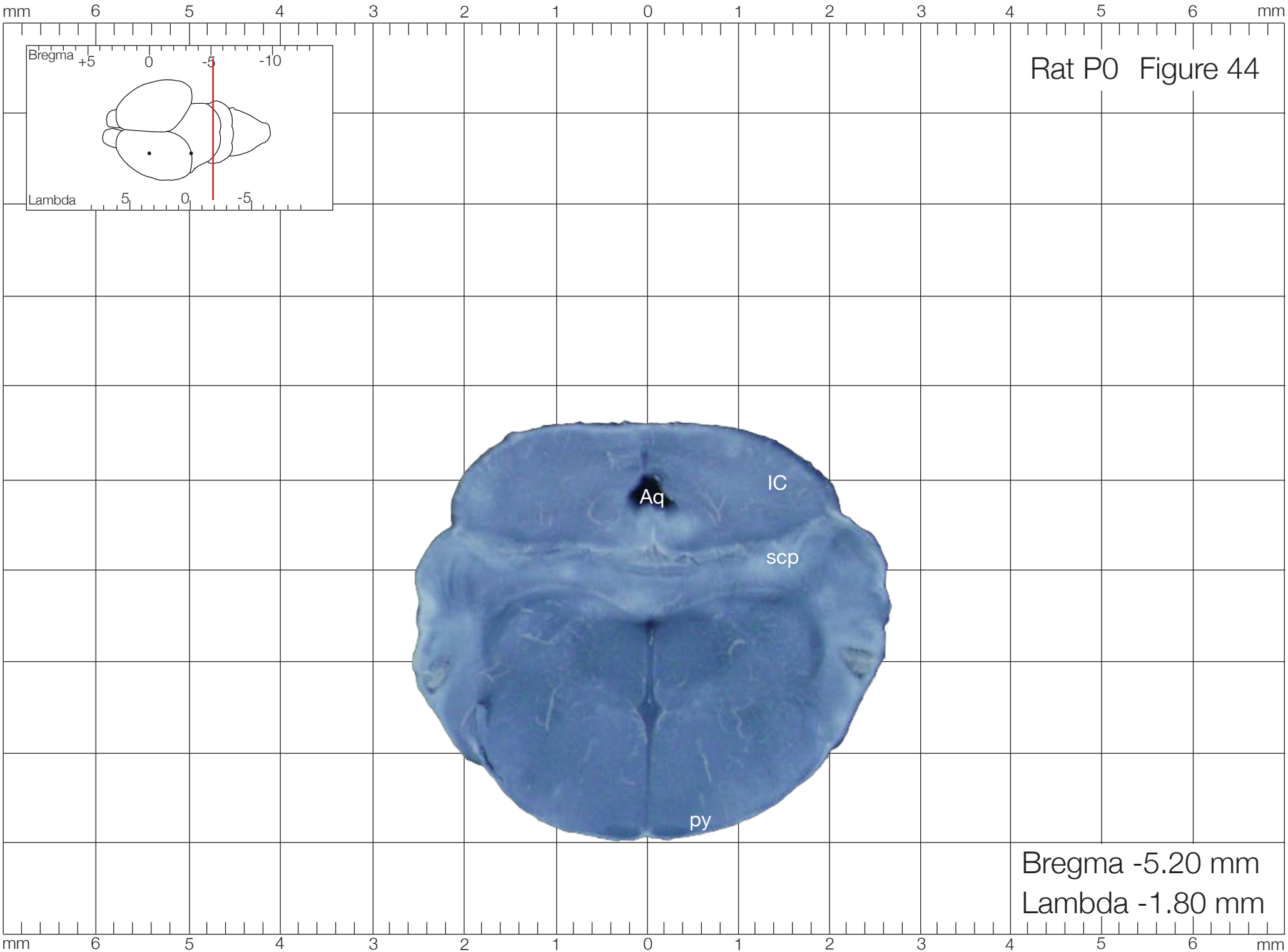


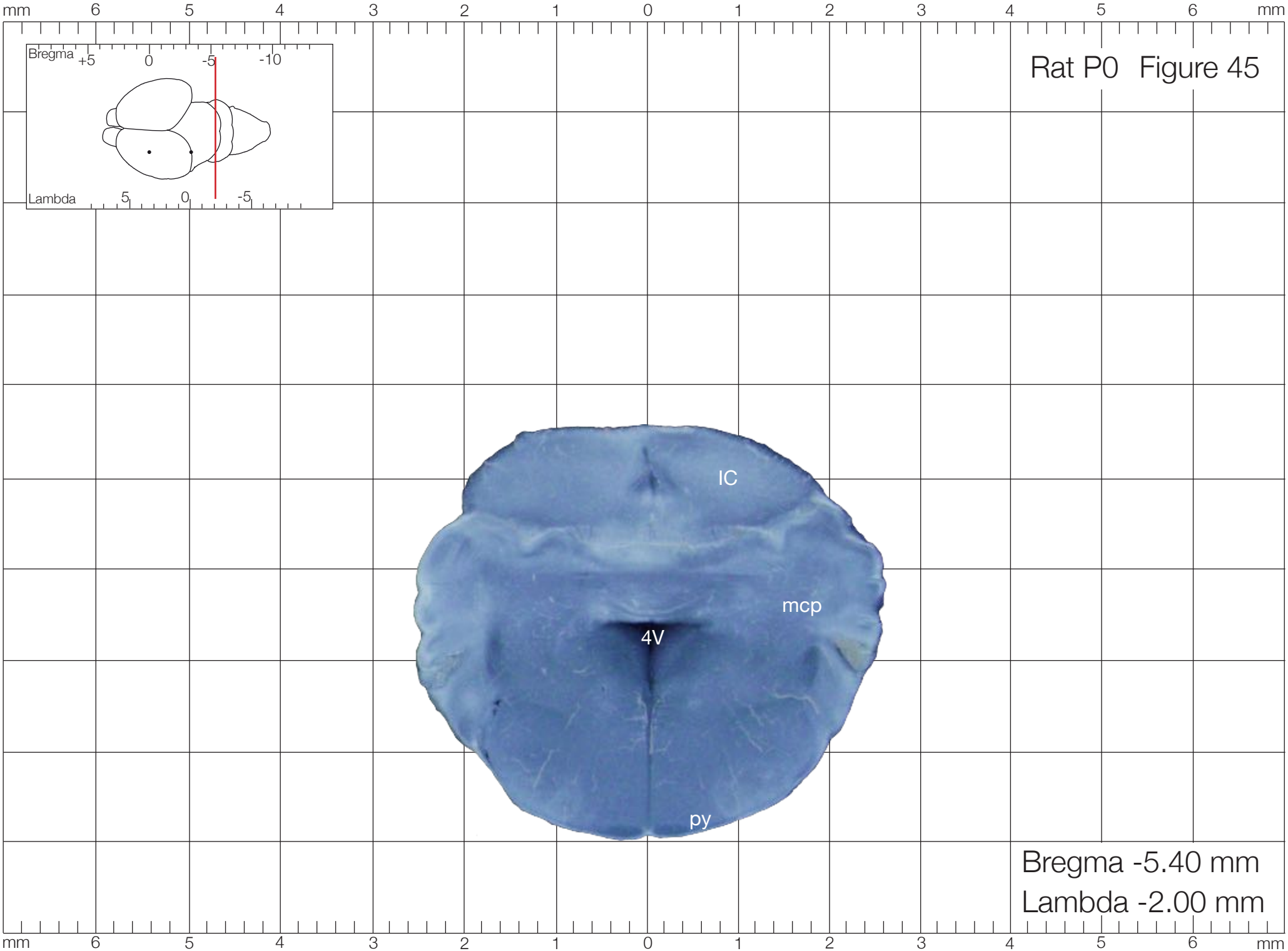
Bregma -4.40 mm
Lambda -1.00 mm

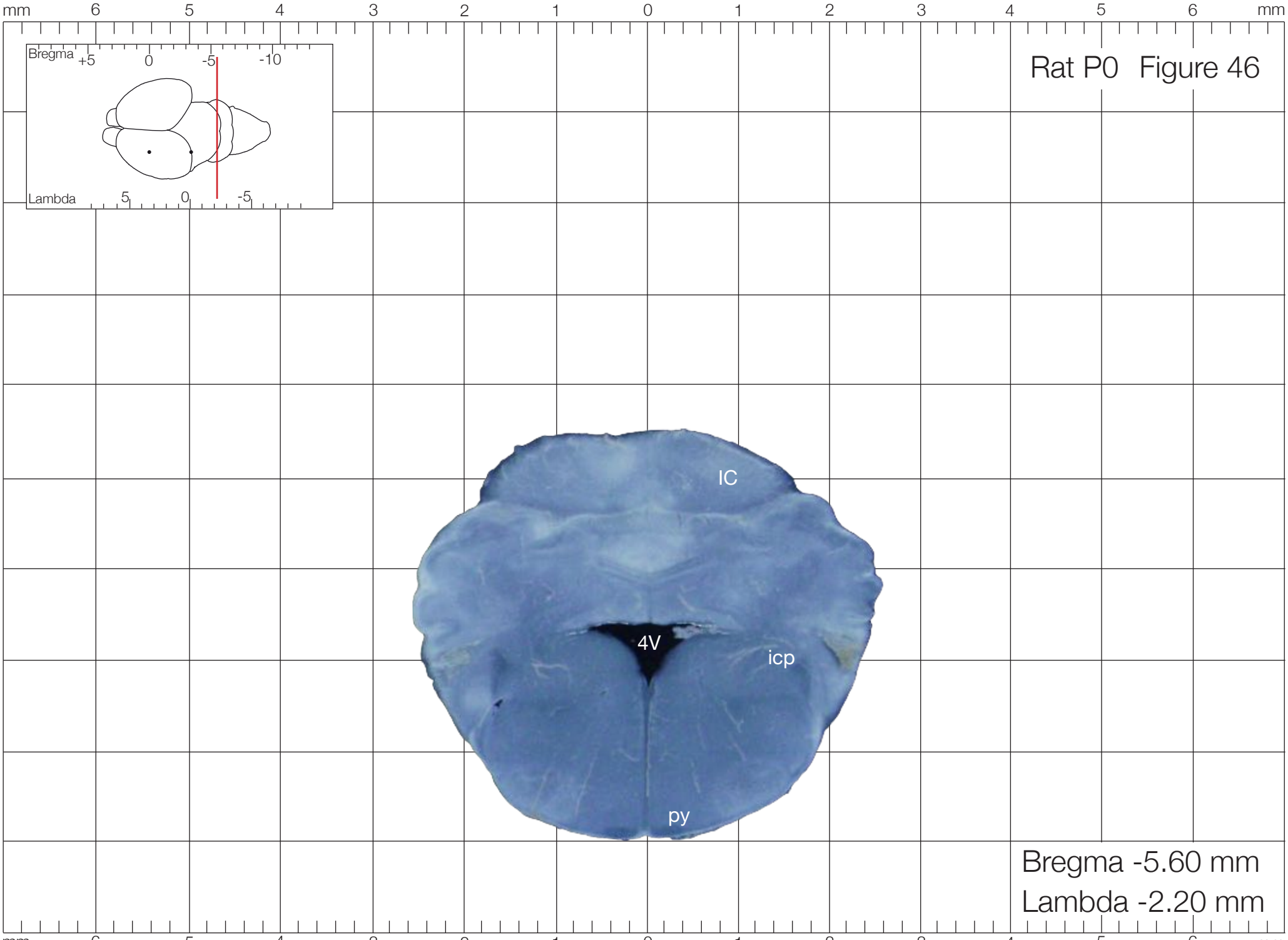

mm 6 5 4 3 2 1 0 1 2 3 4 5 6 mm
Bregma +5 0 +5 -10
Lambda 5 0 -5
Rat P0 Figure 41
IC
Aq
py
Bregma -4.60 mm
Lambda -1.20 mm
mm 6 5 4 3 2 1 0 1 2 3 4 5 6 mm

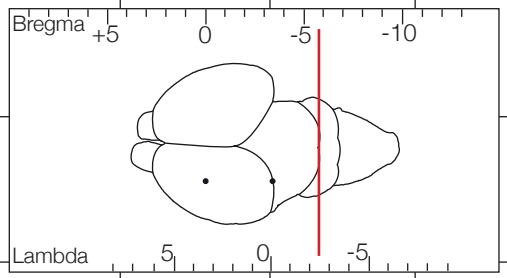

mm 6 5 4 3 2 1 0 1 2 3 4 5 6 mm
Bregma +5 0 -5 -10
Lambda 5 0 -5
Rat P0 Figure 42
IC
Aq
7n
py
Bregma -4.80 mm
Lambda -1.40 mm
mm 6 5 4 3 2 1 0 1 2 3 4 5 6 mm


mm 6 5 4 3 2 1 0 1 2 3 4 5 6 mm
Bregma +5 0 -5 -10
Lambda 5 0 -5
Rat P0 Figure 43
IC
Aq
mcp
PB
7
py
Bregma -5.00 mm
Lambda -1.60 mm

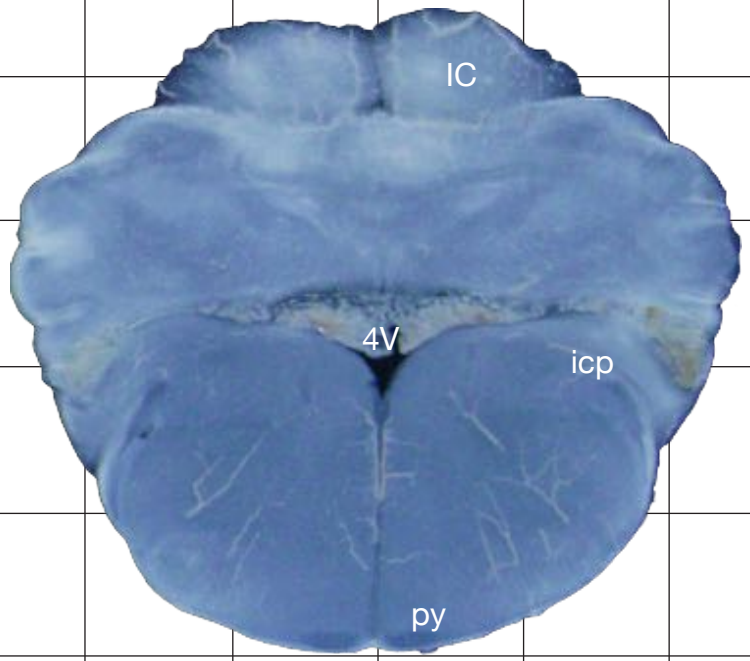

mm 6 5 4 3 2 1 0 1 2 3 4 5 6 mm
Bregma +5 0 -5 -10
Lambda 5 0 -5
Rat P0 Figure 44
Aq
IC
scp
py
Bregma -5.20 mm
Lambda -1.80 mm
mm 6 5 4 3 2 1 0 1 2 3 4 5 6 mm


mm 6 5 4 3 2 1 0 1 2 3 4 5 6 mm
Bregma +5 0 -5 -10
Lambda 5 0 -5
Rat P0 Figure 45
IC
mcp
4V
py
Bregma -5.40 mm
Lambda -2.00 mm
mm 6 5 4 3 2 1 0 1 2 3 4 5 6 mm

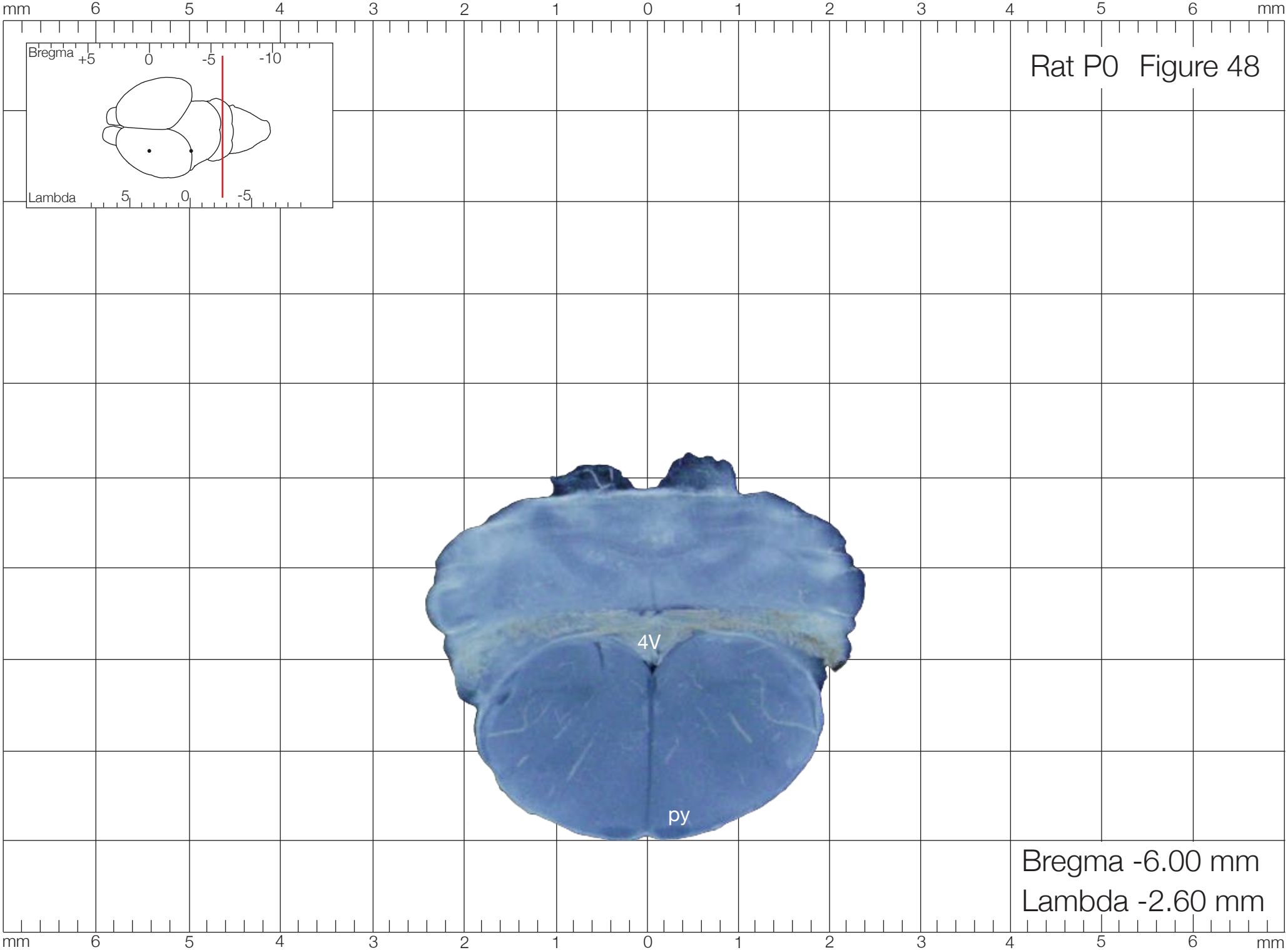

mm 6 5 4 3 2 1 0 1 2 3 4 5 6 mm
Bregma +5 0 -5 -10
Lambda 5 0 -5
Rat P0 Figure 46
IC
4V
icp
py
Bregma -5.60 mm
Lambda -2.20 mm
mm 6 5 4 3 2 1 0 1 2 3 4 5 6 mm

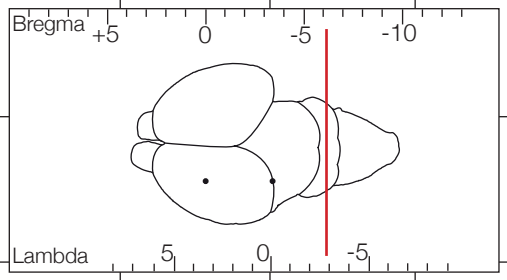


Rat P0 Figure 47

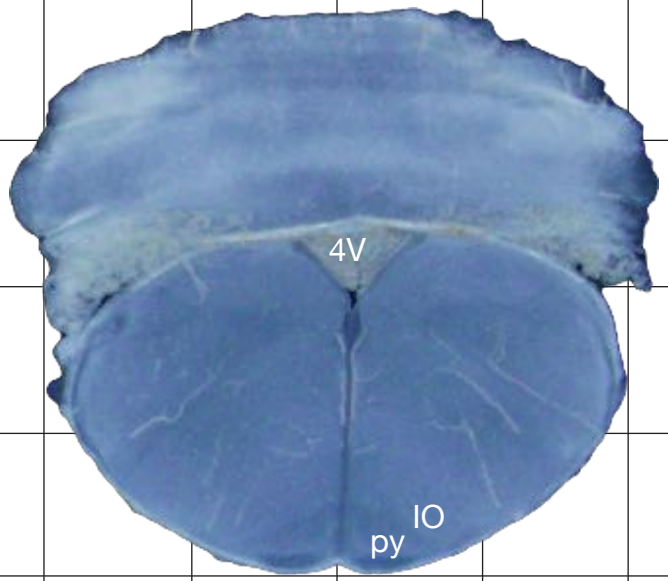


Bregma -5.80 mm
Lambda -2.40 mm

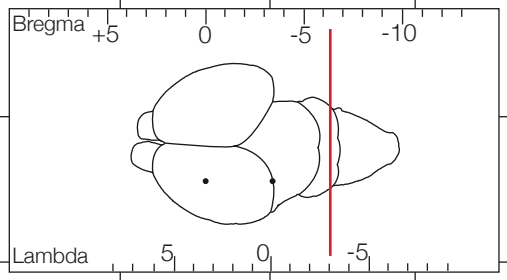

mm 6 5 4 3 2 1 0 1 2 3 4 5 6 mm
Bregma +5 0 -5 -10
Lambda 5 0 -5
Rat P0 Figure 48
4V
py
Bregma -6.00 mm
Lambda -2.60 mm
mm 6 5 4 3 2 1 0 1 2 3 4 5 6 mm



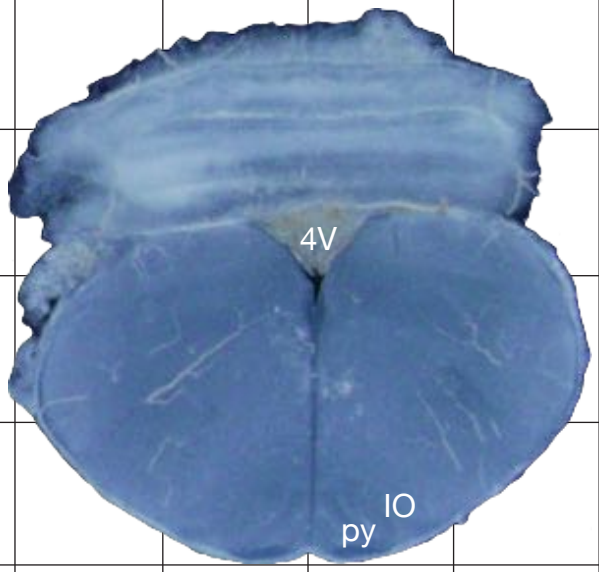
Rat P0 Figure 49



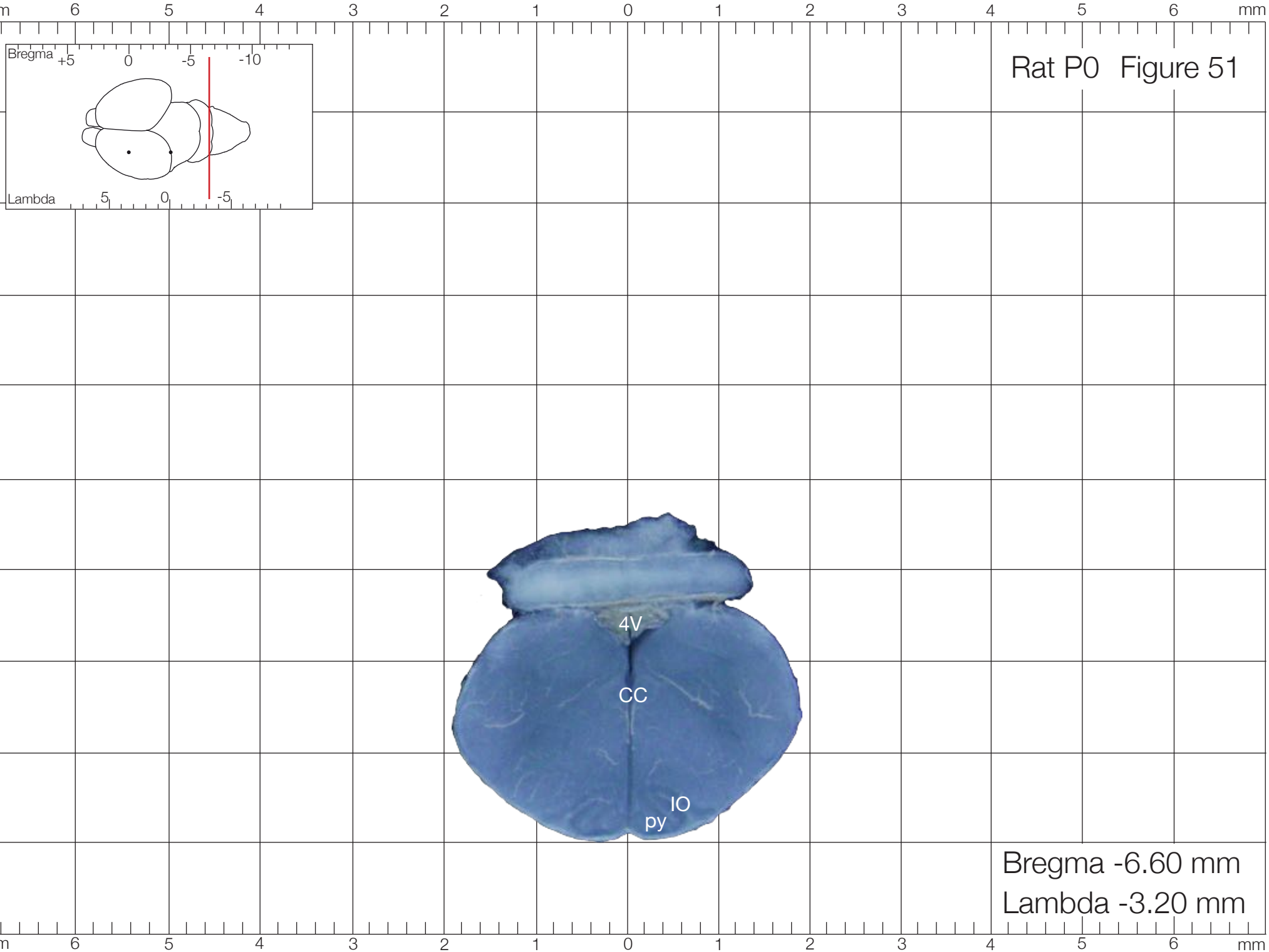
Bregma -6.20 mm
Lambda -2.80 mm

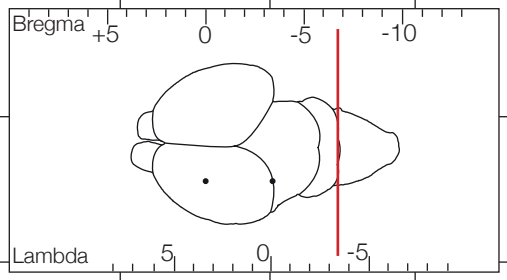


Rat P0 Figure 50

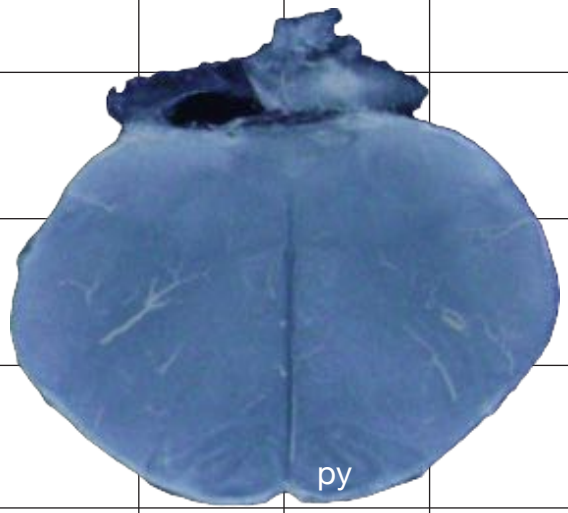


Bregma -6.40 mm
Lambda -3.00 mm

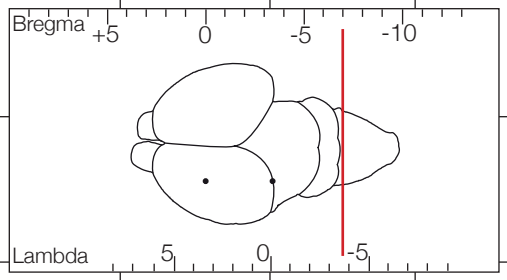

mm 6 5 4 3 2 1 0 1 2 3 4 5 6 mm
Bregma +5 0 -5 -10
Lambda 5 0 -5
Rat P0 Figure 51
4V
CC
IO
py
Bregma -6.60 mm
Lambda -3.20 mm
mm 6 5 4 3 2 1 0 1 2 3 4 5 6 mm



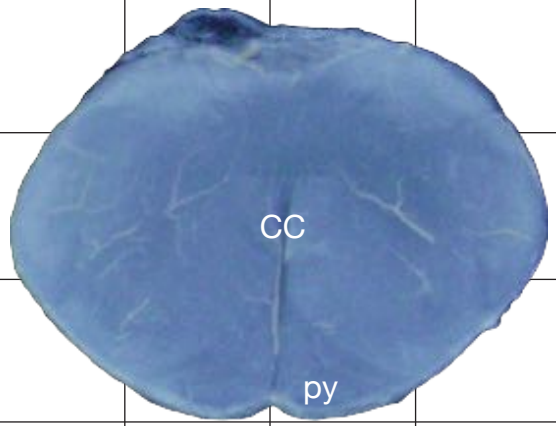
Rat P0 Figure 52



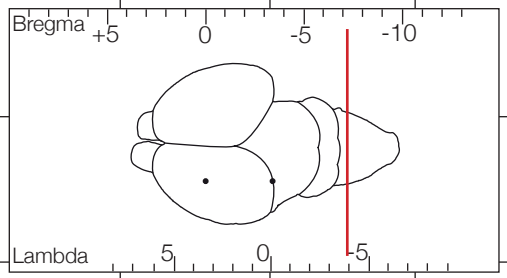
Bregma -6.80 mm
Lambda -3.40 mm



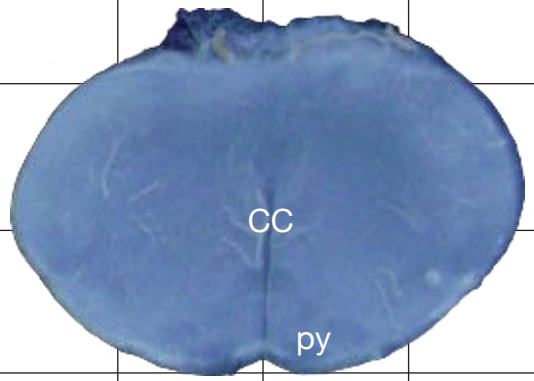
Rat P0 Figure 53



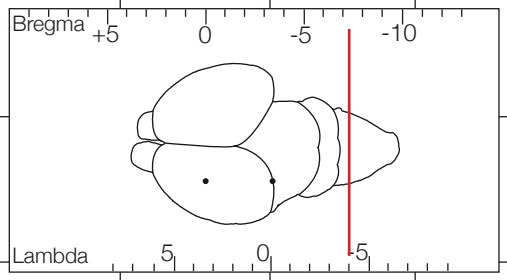
Bregma -7.00 mm
Lambda -3.60 mm



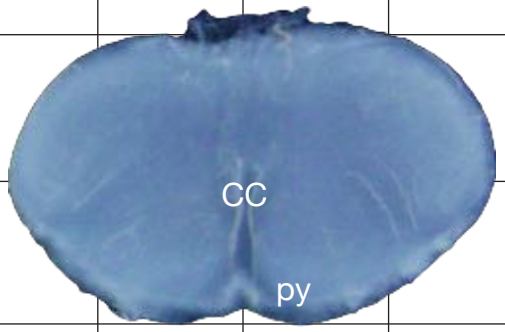
Rat P0 Figure 54



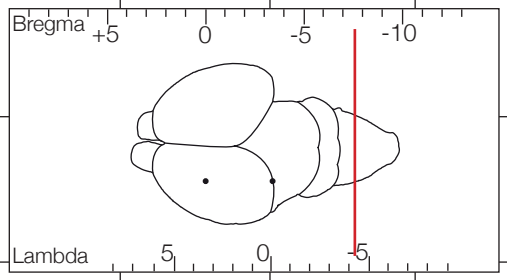
Bregma -7.20 mm
Lambda -3.80 mm



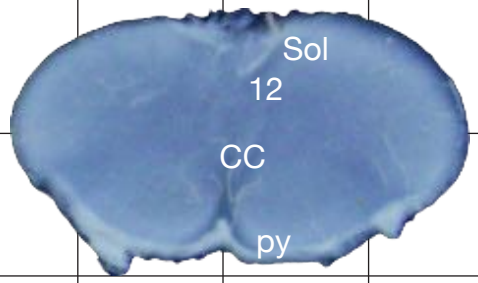
Rat P0 Figure 55



Bregma -7.40 mm
Lambda -4.00 mm



Rat P0 Figure 56



Bregma -7.60 mm

Lambda -4.20 mm