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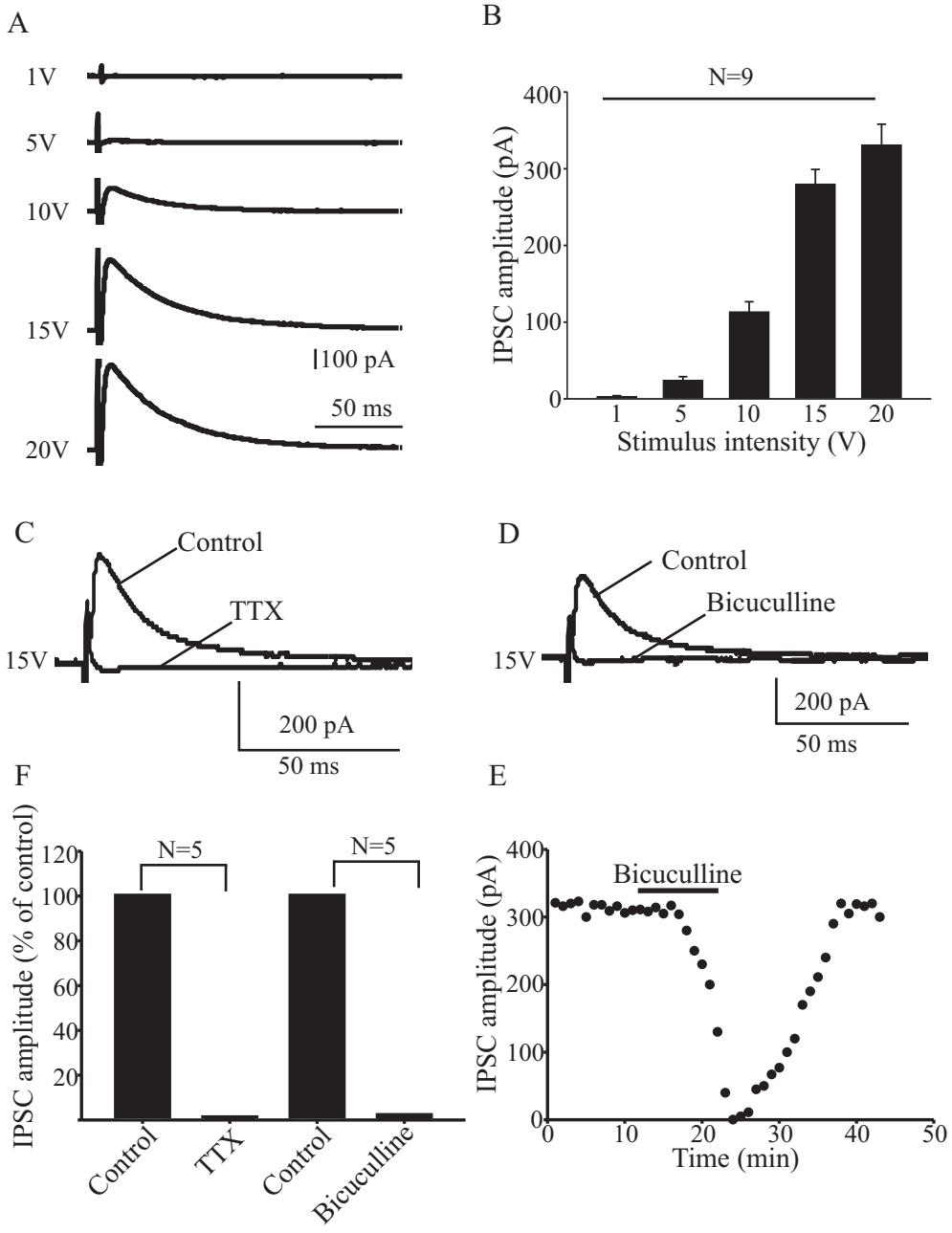
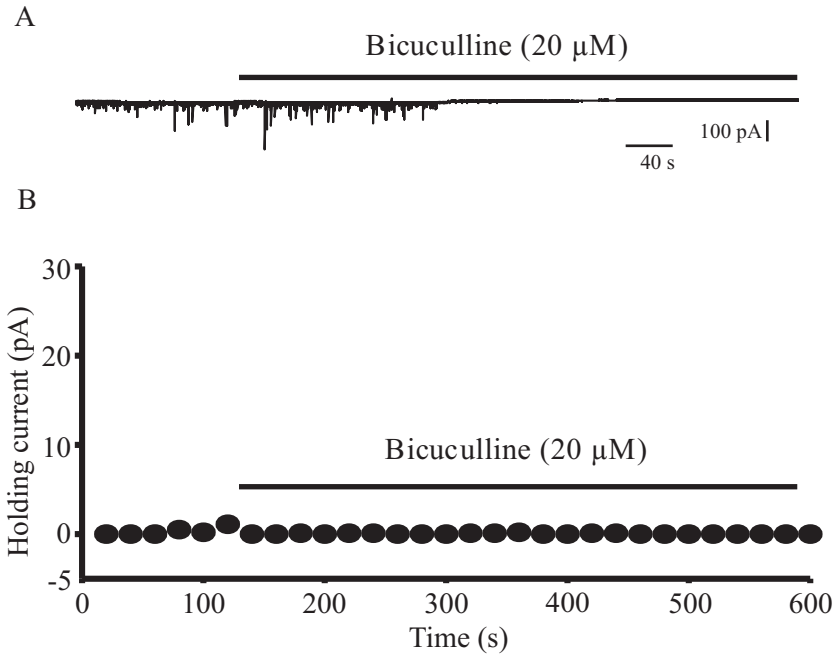
## SUPPLEMENTARY FIGURE LEGENDS

**Suppl. Fig. 1**: Striatal stimulus intensity dependent IPSCs in GP neurons. *A*: An example of eIPSCs recorded in a GP neuron under different intensities (1 V - 20 V) of striatal stimulation. *B*: The amplitude of eIPSCs averaged from 9 GP neurons recorded under different stimulus intensities. *C*: Application of TTX (1 μM) blocks eIPSCs recorded in GP neurons after strong striatal stimulation (15 V). *D*: Application of bicuculline (20 μM) blocks IPSCs evoked by strong striatal stimulation (15V). *E*: The same neuron presented in (D) shows the time course of eIPSCs amplitude in response to bicuculline application. *F*: Bar graph summarizing the effect of TTX and bicuculline on eIPSCs amplitude expressed as percent of control.

**Suppl. Fig. 2**: (A) Sample trace illustrates that application of bicuculline (20 μM) does not have any significant effect on the baseline holding current of GP neurons. Note that sIPSCs are completely abolished by bicuculline confirming that thye are mediated by GABA-A receptors. (B) Graph showing the time course of the effects of bicuculline on the baseline holding current in the neuron shown in panel A.


A
1V
5V
10V
15V
20V
100 pA
50 ms
B
N=9
IPSC amplitude (pA)
400
300
200
100
0
1
5
10
15
20
Stimulus intensity (V)
C
Control
TTX
15V
200 pA
50 ms
D
Control
Bicuculline
15V
200 pA
50 ms
F
IPSC amplitude (% of control)
120
100
80
60
40
20
N=5
N=5
Control
TTX
Control
Bicuculline
E
IPSC amplitude (pA)
400
300
200
100
0
Bicuculline
0
10
20
30
40
50
Time (min)


A
Bicuculline (20 μM)
100 pA
40 s
B
Holding current (pA)
30
20
10
0
-5
Bicuculline (20 μM)
0
100
200
300
400
500
600
Time (s)