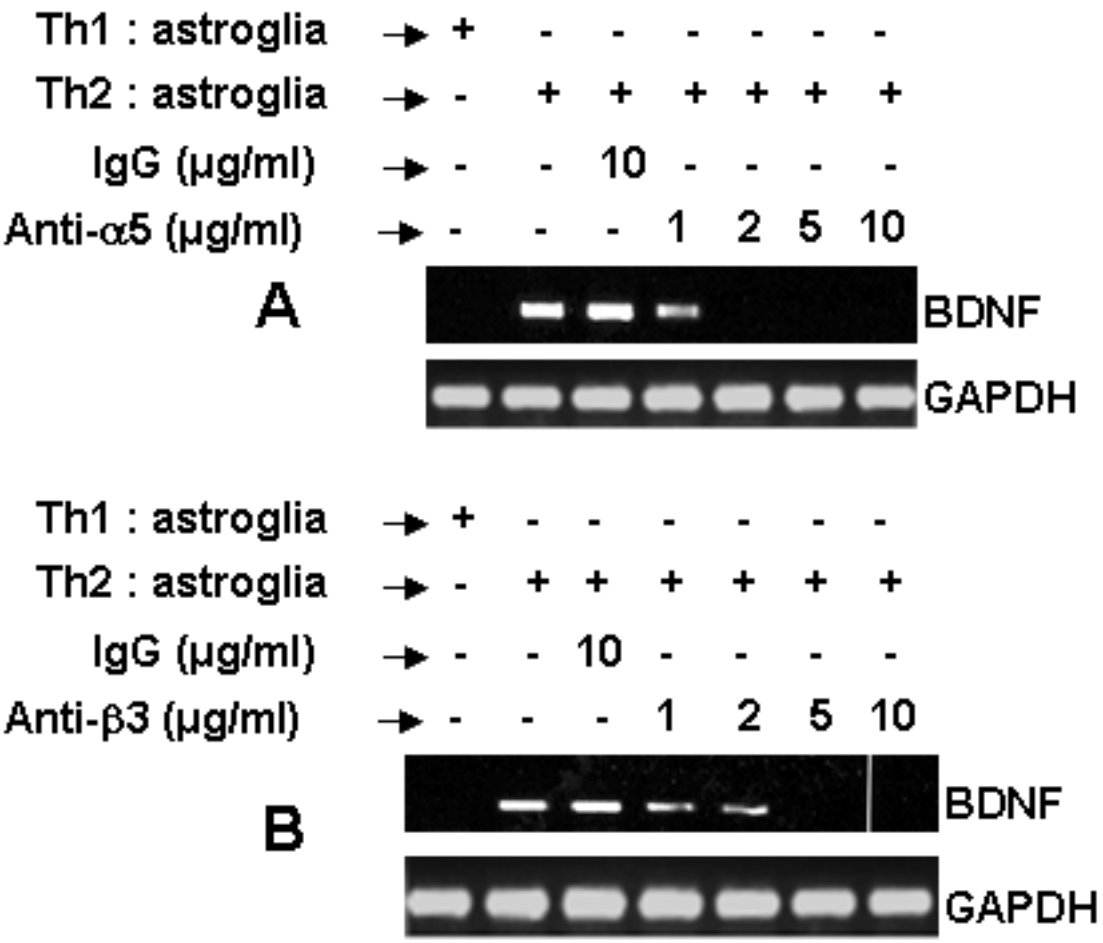
MYELIN BASIC PROTEIN-PRIMED T CELLS INDUCE NEUROTROPHINS IN GLIAL CELLS VIA αVβ3 INTEGRIN

Avik Roy[1], Xiaojuan Liu[2] and Kalipada Pahan[1,2]
[1]Department of Neurological Sciences, Rush University Medical Center, Chicago, IL 60612;
[2]Section of Neuroscience, Department of Oral Biology, University of Nebraska Medical Center College of Dentistry, Lincoln, Nebraska 68583

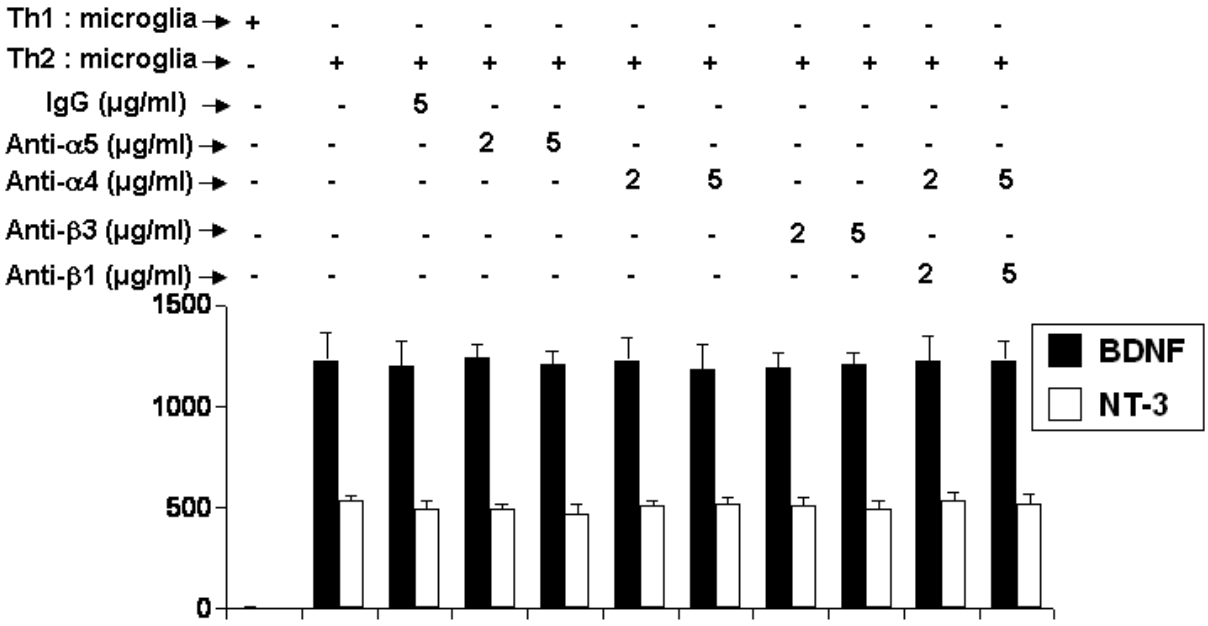
Supplementary Fig. 1. **Role of αV and β3 integrins in MBP-primed Th2 cell-induced expression of BDNF in mouse primary astroglia.** (A) Th2 cells were treated with control IgG or different concentrations of antibodies against αV (A) or β3 (B) as described above followed by addition to primary astroglia at a ratio of 0.5:1 T cell:glia. After 1 h of stimulation, T cells were removed followed by incubation of adherent astroglia in serum-free media. After 5 h of incubation (total), the expression of BDNF was analyzed by RT-PCR. Results represent three independent experiments.

Supplementary Fig. 2. **Effect of neutralizing antibodies against αV, α4, β3, and β1 integrins on microglia.** Primary microglia pre-incubated with control IgG and different concentrations of neutralizing antibodies against αV, α4, β3, or β1 integrins for 1h were washed three times to remove unbound antibodies. Then microglia were stimulated by gem-treated MBP-primed Th2 cells (0.5:1 T cell:glia). After 1 h of stimulation, T cells were removed followed by incubation of adherent microglia in serum-free media. After 24 h of incubation (total), supernatants were analyzed for BDNF and NT-3 by ELISA. Results represent mean $\pm$ SD of three independent experiments.

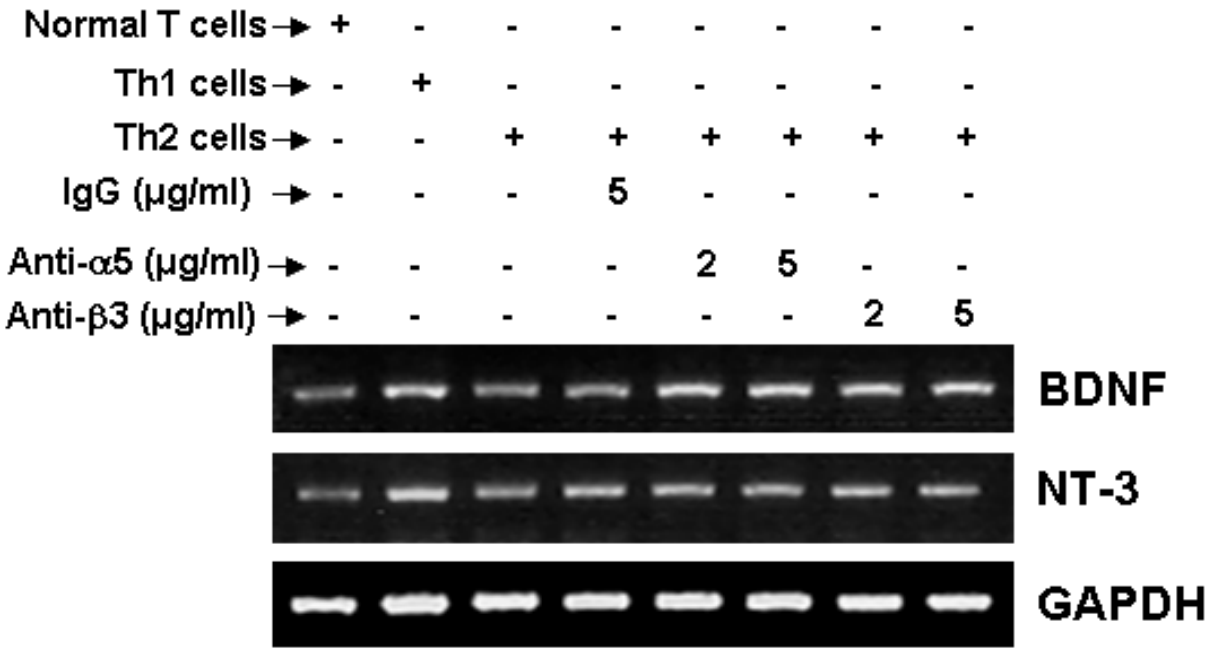
Supplementary Fig. 3. **Effect of neutralizing antibodies against αV and β3 integrins on the expression of BDNF in MBP-primed Th2 cells.** Gem-treated MBP-primed Th2 cells were incubated with control IgG and different concentrations of neutralizing antibodies against either αV or β3 for 6 h followed by analysis of BDNF mRNA by RT-PCR. Results represent three independent experiments.



Supplementary Fig. 1



Supplementary Fig. 2



Supplementary Fig. 3