Role of cholinergic neurons in the nucleus accumbens and their involvement in schizophrenic pathology

(continued from page 1)

significantly with cognitive impairments. These data suggest that intra-accumbens lesions of the cholinergic neurons trigger not only a local hyper-responsiveness to dopamine but also widespread functional impairments in prefrontal cortical dopamine functions similarly as proposed in the pathology of schizophrenia. Studies to describe mechanistic consequences of cholinergic lesions on dopamine neurotransmission are in progress. Additionally, as ChAT spends time on the membrane, it can be used to target cholinergic neurons.

References

Targeting Teaser Winners

The solution to the puzzle was: Jumbles: ROBUSTLY QUIZ DEMENTIA COGNITIVE INSULT

What motivated the scientist to push forward in his research.

Answer: A... BURNING QUESTION!

Congratulations to the puzzle solvers from last quarter. Each winner has received $100 credit towards research product purchases from Advanced Targeting Systems.

Solve this quarter’s Teaser online at: www.ATSbio.com/news/13q1_teaser.html

Targeting Topics: Recent Scientific References

(continued from page 4)

human transferrin receptor 1 (TfR1) and kill malignant B cells by blocking the use of iron. Combination of this construct with a mono-biotinylated saporin custom conjugate produces an iron-independent toxicity to TfR1-expressing cells, even those that are resistant to ch128.1Av alone. The saporin-containing conjugate induces a transcriptional response consistent with oxidative stress and DNA damage. The data also show that the saporin conjugate is not toxic to human hematopoietic stem cells.

Identification and characterization of a sleep-active cell group in the rostral medullary brainstem.
Anaclet C, Lin JS, Vetrivelan R, Krenzer M, Vong L, Fuller PM, Lu J.

The authors attempt to locate and identify specific neuronal populations that promote sleep. One method utilized was 130-330 pg injections of orexin-SAP* into the parafacial zone. These results establish the parafacial zone as a delimited node of sleep-active neurons.

Metabolic effects of chronic sleep restriction in rats.
Vetrivelan R, Fuller PM, Yokota S, Lu J, Saper CB.

In order to investigate whether there is a correlation between sleep and weight the authors administered 200 nl of a 0.1% solution of orexin-SAP* to the ventrolateral preoptic area of rats. Although the lesioned animals slept less than the controls, weight gain was slower than controls.

*Note: A new version of Orexin-SAP is in production. Contact ATS if you are interested in testing it.