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For posters, authors are expected to be present at their posters at the time indicated.

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First author: Milanese, Chiara (poster)

Poster 57 - Mon 12/07, 16:45 - Hall I
Session 109 - Synaptogenesis II
Abstract A109.21, published in *FENS Forum Abstracts, vol. 2, 2004*.
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Title Cloning of an F3/Contactin-related molecule in the mollusc *Helix pomatia* nervous system.

Text Cell adhesion molecules belonging to the immunoglobulin superfamily play a pivotal role in different stages of neuronal development and also participate in the regulation of many aspects of synaptic stabilization. The mouse axonal glycoprotein F3/Contactin is an adhesion molecule that is involved in axonal outgrowth and guidance and mediates interactions between neural cells. In previous studies, by applying antibodies against the mouse F3/contactin protein, we have found that an F3/Contactin related molecule (HFRM) is expressed in the nervous system of the snail *Helix pomatia*. This molecule appears to be important for cell adhesion and neurite outgrowth of *Helix* neurons in culture and it is involved in the target-dependent regulation of neurotransmitter release from presynaptic terminals. In these experiments, by screening with anti F3/Contactin antiserum a c-DNA expression library prepared from *Helix* nervous system, we isolated the 9.1 lambda clone, which gave the strongest signal on the immunoscreening procedure. We obtained a full length c-DNA (3522 bp) by both 5' and 3'RACE-PCR approaches using oligonucleotides derived from the cloned sequence. Translation of this c-DNA revealed an open reading frame encoding a 718 aminoacid sequence including a signal peptide, 5 fibronectin type III repeats and 9 potential N-glycosylation sites indicating that the molecule could correspond to a secreted protein. Finally, Blast analysis showed more than 30% of homology with the mouse F3/contactin molecule in the fibronectin type III regions, demonstrating a structural correlation between the newly found protein of *Helix pomatia* and known cell adhesion molecules involved in the nervous system development.

Theme Development
Synaptogenesis and activity-dependent development / Development of synaptic specificity

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