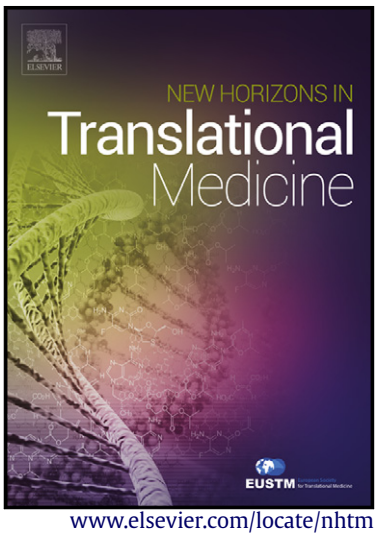

www.elsevier.com/locate/nhtm

TRANSLATIONAL RESEARCH IN HEPATIC ENCEPHALOPATHY: NEW DIAGNOSTIC POSSIBILITIES AND NEW THERAPEUTIC APPROACHES

Marta Llansola, Carmina Montoliu, Ana Agusti, Vicente Hernandez-Rabaza, Andrea Cabrera-Pastor, Michele Malaguarnera, Belen Gomez-Gimenez, Alma Orts, Raquel Garcia-Garcia, Tiziano Balzano, Lucas Taoro, Vicente Felipo

PII: S2307-5023(14)00074-5
DOI: http://dx.doi.org/10.1016/j.nhtm.2014.11.057
Reference: NHTM9

To appear in: *New Horizons in Translational Medicine*

Cite this article as: Marta Llansola, Carmina Montoliu, Ana Agusti, Vicente Hernandez-Rabaza, Andrea Cabrera-Pastor, Michele Malaguarnera, Belen Gomez-Gimenez, Alma Orts, Raquel Garcia-Garcia, Tiziano Balzano, Lucas Taoro, Vicente Felipo, TRANSLATIONAL RESEARCH IN HEPATIC ENCEPHALOPATHY: NEW DIAGNOSTIC POSSIBILITIES AND NEW THERAPEUTIC APPROACHES, *New Horizons in Translational Medicine,* http://dx.doi.org/10.1016/j.nhtm.2014.11.057

TRANSLATIONAL RESEARCH IN HEPATIC ENCEPHALOPATHY: NEW DIAGNOSTIC POSSIBILITIES AND NEW THERAPEUTIC APPROACHES

Marta Llansola, Carmina Montoliu, Ana Agusti, Vicente Hernandez-Rabaza, Andrea Cabrera-Pastor, Michele Malaguarnera, Belen Gomez-Gimenez, Alma Orts, Raquel Garcia-Garcia, Tiziano Balzano, Lucas Taoro and Vicente Felipo

Laboratory of Neurobiology. Centro de Investigación Príncipe Felipe. Valencia. Spain
vfelipo@cipf.es

Focal points:

- **Benchside**

  The mechanisms underlying cognitive and motor alterations in minimal hepatic encephalopathy (MHE) are beginning to be clarified in animal models. A number of therapeutic targets have been identified to improve cognitive and motor function in MHE. Also, serum level of 3-nitrotyrosine is the first peripheral biomarker identified for diagnosis of MHE in cirrhotic patients, with high diagnostic accuracy, high sensitivity and specificity.

- **Bedside:**

  In the European Union more than 2 million patients with liver cirrhosis show MHE with mild cognitive impairment. MHE is an important, until now underestimated, health, social and economic problem. Early diagnosis and treatment of MHE will significantly improve quality of life and life span of the patients and reduce costs of hospitalization and treatment

- **Industry**

  There are no specific treatments for the neurological alterations in MHE. A number of therapeutic targets have been identified in animal models to improve cognitive and motor function in MHE. This is a new market waiting for development of appropriate therapeutic treatments which would improve quality of life and survival of patients. Development of a kit for diagnosis of MHE in clinical practice is pending.

- **Governments - Regulatory Agencies**

  Early diagnosis and treatment of MHE will significantly improve quality of life and life span of the patients and reduce costs of hospitalization and treatment. Screening of the presence of MHE in patients with liver diseases will reduce costs.