

# **SURVEY OF SIMULTANEOUS EFFECTS OF TWO SUBSTANCES, BUTYRIC ACID AND GLUTAMINE PEPTIDE ON HAIR LOSS IN MEN *IN VIVO***

**Naser-aldin Lashgari<sup>1</sup>, Hamid Reza Ahmadi Ashtiani<sup>1</sup> and  
Ali Salavati<sup>2</sup>**

<sup>1</sup>Islamic Azad University, Tehran-Iran (IAUPS)

<sup>2</sup>University of Tehran, Iran

**H**air loss is one of the common problems between women and men that affect mental conditions, which will result in more healthcare costs, and also affects more than half of the world's population. In hair loss, proteins that connect hair to scalp may be defective or reduced. Transglutaminases are a group of enzymes present in the scalp, whose activity is effective in naturally occurring structural proteins in the scalp and reducing hair loss. Butyric acid is a substance naturally separated from parsnip and the glutamine peptide is also a type of peptide rich in L-glutamine amino acid. In this study, the effect of butyric acid and glutamine peptide simultaneously on male hair loss was studied. A total of 30 men aged 18-60 years with no history of taking finasteride and minoxidil, as well as nicotine, were studied. The subjects were randomly divided into two groups of 15, and the first group received daily solution containing butyric acid and 3% glutamine peptide for 3 months, and under the same conditions, the second group received the placebo as control group. One week after the last use of the solution, the number of scalp hair that was in the telogen phase was measured by digital epiluminescence microscopy machine. The results show that the number of hair in the telogen phase in the first group decreased by 30% compared to the second group. Hair that is not in the telogenous phase has stronger binding proteins and therefore more firmness. *Butyric acid* and *glutamine peptides* may have an antagonistic effect on the transglutaminase enzymes and thus, increase the strength of the hair in the scalp.

[narimanlashgari1374@gmail.com](mailto:narimanlashgari1374@gmail.com)