

SHORT REPORT

ALSUntangled No. 14: Mototab

THE ALSUNTANGLED GROUP

Mototab is an oral supplement advertised by Oslo Health Solutions "for guaranteed treatment of motor neuron disease" (1). According to its website http:// mototab.com, "very obvious results can be obtained within 40 days of use. A complete course of treatment lasts three months" (1). Further, the website states that mototab "is clinically proven" and "there are absolutely no side-effects" (1). It costs \$79.99 for a one-month supply.

What is it and why might it work in ALS?

Mototab reportedly consists of "magnesium murakab, zinc murakab, berberis aristate ext, egg shell calcium, sulphur and substituted olive oil. The exact proportion of each ingredient has been deliberately kept secret to avoid imitations of our confidential formula" (1). ALSUntangled had a difficult time deciphering some of these ingredients. For example, "substituted olive oil" does not appear to be a specific type of olive oil, which begs the question "substituted for what?" (2). Berberis aristate ext may refer to berberine, an isoquinolone alkaloid extract from the plant berberis aristata (2,3). Berberine is said to have immunomodulatory and anti-inflammatory properties (3); these properties could, at least theoretically, be useful in ALS (4,5). It is not clear to us why magnesium, zinc, calcium, or sulphur compounds might be useful.

Is there any evidence that mototab is efficacious or safe in patients with ALS?

In terms of actual data, the mototab website lists a downloadable "clinical study". Attempts to download this are met with the message "clinical study to be posted here"; given the website lists copyright dates of 2003-2007, it seems to us that there should have been plenty of time to get the study posted. ALSUntangled performed searches on www.pubmed. com and www.clinicaltrials.gov and found no publications or trials with the term 'mototab' in them. We

are unaware of any presentations on mototab at major ALS meetings over the past decade. We do not know of any of our own patients who have taken mototab.

We take further issue with the claim of no sideeffects. Adverse reactions to berberine (3) and sulphur-containing (6) products are well described; those to sulfa can be life-threatening (6). ALSUntangled attempted to contact Oslo Health Solutions via the 'Contact Us' tab on the mototab website to further discuss the above points; as of this publication we have received no response.

Other information about mototab and its sponsor

The website http://motorneuron-options.com (7), sponsored by the "Society for the Promotion of Alternative Health (SPAH)", compares mototab to two other alternative therapies advertised for motor neuron disease: neuratax (from Botanical Sources) and ronitin (from Berlin Homeo Products). Categories compared include "effectiveness", "convenience", "service", and "affordability". It is not clear how these were measured. Mototab has the most check-marks for effectiveness and is the only one of the products said to be "clinically proven"; oddly, in spite of this, it is ranked second overall. No email address or phone number for SPAH is provided.

Oslo Health Solutions advertises a large number of similar or identical products, each ending in 'tab' for widely different conditions (e.g. peritab for peripheral neuropathy, syrotab for syringomyelia, amylotab for amyloidosis, osteotab for osteomyelitis and MD-tab for muscular dystrophy are all composed of the exact same ingredients) via remarkably similar product-specific websites (Figure 1). These sites include the same dead-end "clinical study to be posted here". SPAH also has a large number of very similar disease-specific websites (Figure 2) conducting vague comparisons between an Oslo Health Solutions product ending in 'tab' to other products





Figure 1. Remarkably similar websites of Oslo Health Solutions products for different diseases.

ending in 'tax' (from Botanical Sources) and 'tin' (from Berlin Homeo Products). One website (2) suggests that Oslo Health Solutions, SPAH, Botanical Sources and Berlin Homeo Products may all be run by the same company, MAK International out of Pakistan.

Finally, as far as the guarantee behind these various products goes, there are multiple reports on the web of people who ordered and never received them,

and also of people who requested a refund but never received it (8-10).

Conclusion

In conclusion, given the lack of demonstrated effectiveness, and the above-documented concerns about product safety and supplier identity and reliability, ALSUntangled does not support the use ights LINKO

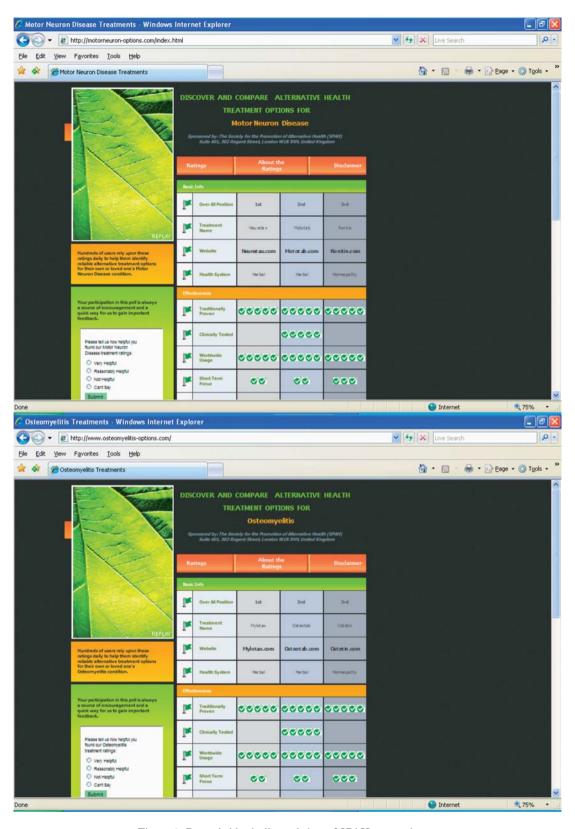


Figure 2. Remarkably similar websites of SPAH comparisons.

for amyotrophic lateral sclerosis or any other motor neuron disease. If Oslo Health Solutions ever contacts us with additional useful information on this product we will gladly publish an addendum to this investigation.

Declaration of interest: ALSUntangled is sponsored by the Packard Center, the Virginia Gentlemen Foundation and the Motor Neurone Disease Association.

References

- 1. http://mototab.com.
- 2. http://onesickmother.typepad.com/my_weblog/2009/05/ oslo-health-solutions-preying-on-the-sick-part GHTSLINK

- 3. Imanshahidi M, Hosseinzadeh H. Pharmacological and therapeutic effects of berberis vulgaris and its active constituent berberine. Phytotherapy Research. 2008;22: 999-1012
- 4. Papadimitriou D, LaVerche V, Jacquier A, Ikiz B, Przedborski S, Re DB. Inflammation in ALS and SMA: sorting out the good from the evil. Neurobiol Dise. 2010;37:493-502.
- 5. Appel SH, Zhao W, Beers DR, Henkel JS. The microglial motoneuron dialogue in ALS. Acta Myol. 2011;30:4-8.
- 6. Dibbern D, Montanaro A. Allergies to sulfonamide antibiotics and sulfur-containing drugs. Ann Allergy Asthma Immunol, 2008;100:91-100.
- 7. http://motorneuron-options.com.
- http://www.ripoffreport.com/directory/olso-health-solutions.
- http://www.complaintsboard.com/complaints/oslo-healthsolutionsridmotab-c234373.html.
- 10. http://complaintsboard.com/complaints/oslo-healthsolutions-queensland-c109396.html.

The ALSUntangled Group currently consists of the following members: Richard Bedlack, Paula Rice, Orla Hardiman, Tulio Bertorini, Tahseen Mozaffar, Peter Andersen, Jeff Dietz, Josep Gamez, Mazen Dimachkie, Yunxia Wang, Paul Wicks, James Heywood, Steven Novella, L. P. Rowland, Eric Pioro, Lisa Kinsley, Kathy Mitchell, Jonathan Glass, Sith

Sathornsumetee, Hubert Kwiecinski, Jon Baker, Nazem Atassi, Dallas Forshew, John Ravits, Robin Conwit, Carlayne Jackson, Alex Sherman, Kate Dalton, Katherine Tindall, Ginna Gonzalez, Janice Robertson, Larry Phillips, Michael Benatar, Eric Sorenson, Christen Shoesmith, Steven Nash, Nicholas Marigakis, Dan Moore, James Caress, Kevin Boylan, Carmel Armon, Megan Grosso, Bonnie Gerecke, Jim Wymer, Bjorn Oskarsson, Robert Bowser, Vivian Drory, Jeremy Shefner, Terry Heiman-Patterson, Noah Lechtzin, Melanie Leitner, Robert Miller, Hiroshi Mitsumoto, Todd Levine, James Russell, Khema Sharma, David Saperstein, Leo McClusky, Daniel MacGowan, Jonathan Licht, Ashok Verma, Michael Strong, Catherine Lomen-Hoerth, Rup Tandan, Michael Rivner, Steve Kolb, Meraida Polak, Stacy Rudnicki, Pamela Kittrell, Muddasir Quereshi, George Sachs, Gary Pattee, Michael Weiss, John Kissel, Jonathan Goldstein, Jeffrey Rothstein, Dan Pastula.

Note: This paper represents a consensus of those weighing in. The opinions expressed in this paper are not necessarily shared by every investigator in this group.

