Concealed homeopathy: a natural test of peer-review quality

A.Y. Panchin  E.V. Dueva  V.V. Vlassov
Release-active (RA) drugs

- Made in Russia
- Based on antibodies
- Taken orally
- After antibodies were diluted... a lot
Release-active drugs

“contains 0.003g of affinity purified antibodies to human interferon gamma”

Fine print: “added to lactose monohydrate in the form of a water–alcohol solution with the concentration of the active form of the active substance not higher than $10^{-16}$ ng/g”
Release-active drugs
Release-active (RA) drugs

A mix of antibodies to the β-subunit of the insulin receptor (IR) and antibodies to endothelial nitric oxide synthase diluted $1:10^{24}$, $1:10^{60}$ and $1:10^{10}$.
METHOD OF TREATING A PATHOLOGICAL SYNDROME AND A PHARMACEUTICAL AGENT

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Related U.S. Application Data
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Foreign Application Priority Data
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U.S. Cl. ................................. 424/158.1; 424/172.1

ABSTRACT
A method of treating a pathological syndrome includes administration of an activated form of ultra-low doses of antibodies to an antigen, wherein said activated form is obtained by repeated consecutive dilution combined with external impact, and the antigen is a substance or a pharmaceutical agent exerting influence upon the mechanisms of formation of this particular pathological syndrome.

Pharmaceutical agent for treating a pathological syndrome contains activated form of ultra-low doses of monoclonal, polyclonal or natural antibodies to an antigen, wherein said activated form is prepared by means of repeated consecutive dilution and external treatment, predominantly based on homeopathic technology, and said antigen is a substance or a drug acting as a direct cause of the pathological syndrome or involved in regulation of mechanisms of its formation. At that, activated forms of ultra-low doses of antibodies are raised against antigens of exogenous or endogenous origin, against autologous antigens, fetal antigens; anti-idiotypic antibodies are used too.
### Examples of research flaws

<table>
<thead>
<tr>
<th>Journal/Reference</th>
<th>Additional notes on COI statements</th>
<th>Other specific problems identified</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Journal of Medical Virology</em>⁴</td>
<td>The designated section states: ‘The authors declare that they have no conflict of interests’. Epstein’s affiliation to MMH is not disclosed</td>
<td>Lacks proper randomisation and blinding. Paper contains questionable statements that are not backed by statistical analysis and multiple potential sources of bias⁴⁶</td>
</tr>
<tr>
<td><em>Journal of Diabetes Research</em>¹</td>
<td>There is no mention that Epstein is CEO and founder of MMH</td>
<td>Incorrect statistical analysis. We have redone this analysis and shown that contrary to the authors’ conclusions, the null hypothesis is actually supported by the data (online supplementary letter 1)</td>
</tr>
<tr>
<td><em>Nutrition &amp; Diabetes</em>²</td>
<td>There is no mention that Epstein is CEO and founder of MMH</td>
<td>The authors failed to provide images of acquired blots, making it impossible to check the validity of their analysis (online supplementary letter 2)</td>
</tr>
<tr>
<td><em>International Journal of Endocrinology</em>³</td>
<td>The designated section states: ‘The authors declare that they have no conflict of interests’</td>
<td>Lacks blinding and has multiple potential sources of bias (online supplementary letter 3)</td>
</tr>
<tr>
<td><em>PLoS One</em>⁵</td>
<td>The designated section contains a false statement: ‘There are no patents, products in development or marketed products to declare’</td>
<td>Does not account for positioning effects on ELISA blots and fails to use spatial randomisation or at least to benefit from the intermittent of sample and control plates (online supplementary letter 4)</td>
</tr>
<tr>
<td><em>Drug Discovery Today</em>¹⁶</td>
<td>COI section was omitted. Epstein’s affiliation to MMH is not disclosed</td>
<td>Review cites flawed articles (online supplementary letter 5)</td>
</tr>
</tbody>
</table>

COI, conflict of interest; MMH, Materia Medica Holding.
48 papers by O.I. Epstein, who is editor of Issue 90 papers by O.I. Epstein in total
Examples of strange claims by release-active drugs inventor

«The genetic code of any organism is not merely the primary sequence of nucleotides, but also their unique integral (holographic) spatial structure with an intrinsic set of fine supramolecular oscillatory parameters».

«Being transferred over generations, DNA retains the common species-specific spatial parameters within its oscillatory structure and thereby ensures ‘attachment’ of the future organisms to the common species-specific matrix formed by evolution at the supramolecular level».

Epstein OI. The phenomenon of release activity and the hypothesis of "spatial" homeostasis [In Russian]. Usp Fiziol Nauk 2013;44:54–76
Journal hoaxed by gibberish

Academic gloats over mumbo jumbo

By Mitchell Landsberg

Associated Press
Notice of concern (to be published)
LETTER TO THE EDITOR

Homeopathy in disguise. Comment on Don et al.: Dose-dependent antiviral activity of released-active form of antibodies to interferon-gamma against influenza A/California/07/09(H1N1) in murine model

Evgenia V. Dueva, Alexander Y. Panchin
Structure and dynamics of the insulin receptor: implications for receptor activation and drug discovery

Libin Ye 1, Suvrajit Maji 1, Narinder Sanghera 2, Piraveen Gopalasingam 2, Evgeniy Gorbunov 3, Sergey Tarasov 2, Oleg Epstein 4, Judith Klein-Seetharaman 1, 2, 4, 5
Structure and dynamics of the insulin receptor: implications for receptor activation and drug discovery

Libin Ye 1, Suvarjit Maji 1, Narinder Sanghera 2, Piraveen Gopalasingam 2, Evgeniy Gorbunov 3, Sergey Tarasov 3, Oleg Epstein 4, Judith Klein-Seetharaman 1, 2, 4, 5
Drug discovery today: no molecules required

Alexander Y Panchin¹, Nikita N Khromov-Borisov², Evgenia V Dueva³

Author affiliations +

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Recent development in Russia

- 2017 «release-activity» is labeled «pseudoscience» along with homeopathy by Commission on Pseudoscience of Russian academy of Sciences
- 2017 Ministry of Health promises commission to evaluate homeopathy
  - Commission is never created
- 2018 Ministry of Science names manufacturers of RA drugs «the most damaging pseudoscientific project»
- 2018 Newspaper «Troitskiy Variant Nauka» publishes criticism of «release active drugs»
- 2018 Materia Medica sues «Troitskiy Variant Nauka» and three scientists
- 2019 Court ends with «Peace treaty»
Reasons for my trip to Hong Kong

• We want to inform the community of the issue

• We need help and advice

• The case of RA drugs might reveal how other false-positive results get published in biomedical journals
Why Psychologists Must Change the Way They Analyze Their Data: The Case of Psi: Comment on Bem (2011)

Eric-Jan Wagenmakers, Ruud Wetzels, Denny Borsboom, and Han L. J. van der Maas
University of Amsterdam
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Evgenia Dueva
Nikita Khromov-Borisov

Interaction with other journals after BMJ EBM paper:

Vasiliy Vlassov

For stepping in for research integrity:

Editors of PLoS ONE,
Antiviral Research,
BMJ EBM,
Medical Virology,
Matt Hodgkinson, Head of Research Integrity (Hindawi)
(hope this list will be continued)

For informing the community:

Steven Novella
Steven Salzberg
Derek Lowe
James Coyne
Michael Gelfand
Retraction Watch
Alison McCook
Adam Marcus
and others

Contact: alexpanchin@yahoo.com