

## LETTER TO THE EDITOR

### Dr Samokhotskiy's method of healing inflammation, sepsis and other diseases – part I

Sir,

The Director-General of the World Health Organization, Dr Margaret Chan, has reported that the development of resistance to the action of antibiotics, which is a natural process, has now reached a critical level.<sup>1</sup> One way to overcome the antibiotic resistance is by developing drugs with an alternative mechanism of action.

In the mid-twenieth century, Alexander Samokhotskiy studied the effect of astringents on healing gangrenous, traumatic and postoperative inflammations, as well as sepsis and other diseases, and discovered an efficient and complex solution for healing such diseases.

**Q4** After experimental and clinical research, Samokhotskiy found that a solution containing trivalent chromium ions ( $\text{Cr}^{3+}$  as chromium sulphate) and alum as astringents, resorcinol for antiseptic and keratoplastic action, sodium salicylate for anti-inflammatory effect, lactate buffer for maintaining pH and the buffered stability of the mixture, and colloidal sulphur, known for its ability to restore the stratum corneum and reduce the oncotic pressure, could diminish inflammatory oedema. Thioglycolic acid and glutathione were used as redox potential stimulators.

Samokhotskiy used his composition as an external agent for bandaging wounds in cases of recent or superficial inflammatory injuries. The composition of the therapeutic solution number 549, which was described in his dissertation<sup>2</sup> and was used in many cases, is shown in Table 1.

Thousands of patients, many of whom had fatal afflictions for which other methods were not effective, were healed and their lives saved by Samokhotskiy and his method over the period 1923–46, when he defended his dissertation. There were no published research results of clinical use until then.

In the conclusion of his article,<sup>3</sup> Samokhotskiy mentioned that his method of healing did not replace dietetics, mechanotherapy, endocrinology, immunology, surgery or hygiene. Dr Samokhotskiy reported that the action of his therapeutic solutions was directed at consolidation of connective tissue, the influence of redox processes and diminishing osmotic pressure at the inflammation locus. Overall, this led to normalization of life processes and primary healing.

**Q7**

Selected parts of Dr Samokhotskiy's dissertation, examples of treatments and patient histories from Dr Samokhotskiy's medical practice, as described in his dissertation and translated from Russian to English by Dr Bacherikov, are available from author on request.

**Q8, Q9**

**TABLE 1** Dr Samokhotskiy's therapeutic solution number 549

**Q5**

Component	Volume (ml)
Chromium sulphate, standard solution <sup>a</sup>	30
Alum, 5% solution	20
Lactic acid/lactate ion buffer solution, pH 6.22	60
Sulphur, colloidal suspension <sup>b</sup>	50
Thioglycolic acid	0.5
H <sub>2</sub> O	≤ 1000

**Q6**

<sup>a</sup>A standard solution of trivalent chromium  $\text{Cr}^{3+}$  was prepared based on the usual method in the tanning industry: 70.0g of potassium dichromate was dissolved in 120ml distilled water, then 90.0g of sulphuric acid (66° Baumé) was slowly added to this solution with caution. After this had been added, 64.0g of glucose in 50ml of water was added dropwise to a cold mixture of dichromate and  $\text{H}_2\text{SO}_4$ . The obtained solution of chromium sulphate was diluted with water to a volume of 525ml and a 0.453M solution of  $\text{Cr}_2(\text{SO}_4)_3$  or  $\text{K}_2\text{SO}_4$  should be obtained.<sup>2</sup>

<sup>b</sup>Colloidal sulphur was prepared as per the following method: 30mg of sodium thiosulphate was dissolved in 50ml of distilled water and then 0.1ml of concentrated sulphuric acid was added. After several minutes, the solution became opalescent with a slight tinge of blue and gradually became milky. When this change of colour occurred, the resulting colloidal sulphur was poured to the solution of chromium salt.<sup>2</sup>

## References

- 1 Chan M. *Antimicrobial resistance: no action today, no cure tomorrow. WHO Remarks at a high-level panel on World Health Day 2011*. 2011. URL: [www.who.int/dg/speeches/2011/WHD\\_20110407/en/](http://www.who.int/dg/speeches/2011/WHD_20110407/en/) (accessed 7 September 2013).
- 2 Samokhotskiy AS. *Experience in the determination of therapeutic relationships* [dissertation]. Odessa, Ukraine: Odessa National Medical University; 1946.
- 3 Samokhotskiy AS. About the nervism and related therapeutic problem. *Chem Life* 1989; 11:79–5.

Q10

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