

# Response to the ASA Draft Recommendation

This response is to the letters of 18 May and 22 June and the Draft Recommendation of 22 June. Quotations from documents other than the Draft Recommendation are referenced.

## General points

### 1. Relevance of the arguments for and against the evidence for homeopathy

You make reference to the CAP Advice Online and existing adjudications, and you also note that these are “not binding on the ASA Council”.

- 1.1. The recent edition of the CAP Advice was formulated without consultation with representatives of homeopathic organisations, despite the fact that two of those organisations had endeavoured for two years to engage the ASA in dialogue about the evidence, and despite the fact that homeopathy is part of legal medical practice and included in the NHS.
- 1.2. Because access to the most appropriate forum for discussing these issues has been denied to representatives of homeopathy, the validity of the CAP Advice itself is a point of legitimate dispute in this complaints case.
- 1.3. The fact that the advice and existing rulings are not binding on the ASA Council implies that material may be submitted which calls into question both the advice and precedents, so it is already recognised by the ASA that is entirely legitimate for us to challenge the Advice and rulings.
- 1.4. The fact that the ruling in this case may then form a precedent for subsequent cases makes it imperative that the issues are represented fully and accurately in order that the ASA Council has a reliable basis for a decision.
- 1.5. The fact that ASA decisions are susceptible to legal challenge as a final resort makes it imperative that the issues are represented fully and accurately in order that the ASA Council has a reliable basis for a decision.
- 1.6. In consequence the investigation team cannot legitimately argue that “the Draft Recommendation is not the appropriate place for repeating arguments for and against the evidence for homeopathy” (Letter, 18 May), since it is both appropriate and necessary under the existing circumstances.
- 1.7. *We, therefore, insist that our arguments concerning the basis of the investigation team’s position on homeopathy be included in the Draft Recommendation, including the issues surrounding the House of Commons Science and Technology Committee ‘Evidence Check 2: Homeopathy’.*

### 2. The issue of whether homeopathy works

The investigation team has clearly indicated that its starting point is that homeopathic treatment is not efficacious, and that practitioners or other bodies must prove that it is. Both the premise and the demand are illegitimate.

#### 2.1. Political position

Homeopathy is a legally recognised medical practice (both in the UK and the EU) which was included in the NHS by Parliament, when the NHS was founded some 60 years ago. This position was endorsed by the government in 2010, and the use of homeopathy has been endorsed by the Cabinet Member for Health in the Scottish Parliament. Therefore, it is officially recognised that homeopathy is effective and efficacious. We have no obligation to prove this point, and the investigation team has to provide good reason to demand such proof.

- 2.1.1. We accept that the investigation team might argue that a political body, such as Parliament, does not have the right to rule on scientific matters. However, the team has cited the conclusions of the House of Commons Science and Technology Committee (CS&TC) in defence of its position that homeopathy is not proven efficacious.
  - 2.1.1.1. The CS&TC is a subsidiary body of Parliament; its report was rejected by a higher body, the Government; and Parliament itself has not altered its view that homeopathy is a legitimate medical practice with a place in the NHS.
  - 2.1.1.2. The report was voted for by only 3 MPs, but 70 MPs signed an Early Day Motion (no. 908, 23 February 2010) expressing “concern at the conclusions of the Science and Technology Committee’s Report” and criticising it. [Attached as “EDM 908”]
  - 2.1.1.3. Only one MP both attended the committee’s hearings and voted for the report (Dr Evan Harris), and within three months he had lost his seat in Parliament, even though his party was sufficiently successful in general to become a partner in government.
  - 2.1.1.4. The committee also had unhealthily close connections to Sense About Science through both a key Advisor (Chris Tyler, see 11.3.4.7) and a leading figure during the process of producing the *Evidence Check 2: Homeopathy* (Dr Evan Harris), and this organisation has been actively campaigning against homeopathy for at least five years (see 11 and subsections).
  - 2.1.1.5. The report has also been subject to detailed criticism (already cited in earlier submissions, see “Baldwin Critique”, HMC21 Critique” and “BHA Critique 0” to “BHA Critique 6”) which indicate that it is neither “independent” (Letter, 18 May) nor “a comprehensive review of evidence for the efficacy of homeopathy” (Draft Recommendation, 22 June).
  - 2.1.1.6. Despite our request, the investigation team has failed to provide any supporting evidence to justify its exceptional view of the report.
- 2.1.2. The investigation team accepts the validity of political bodies per se, but is choosing to place the view of a particular subsidiary body over that of higher bodies, the opinion of a small number of MPs over that of a much larger number, the opinion of one MP over that of his electorate, and its own opinion as to the independence of this report over the opinions of others who have relevant expertise.
- 2.1.3. *This is unacceptable, and we insist that all references to the conclusions of this committee be removed on the grounds that they are misleading.*

## **2.2. The issue of “consensus”**

The investigation team is arguing that homeopathy is controversial because there is a lack of “consensus” that “the theory referred to in these texts can be used to demonstrate that homeopathy can be used to treat disease and medical conditions” (Letter 18, May).

- 2.2.1. The investigation team should be aware that it confuses “consensus within the medical community” and “scientific consensus” in reference to this issue (Letter, 18 May), despite the fact that these are very different points (see also 2.5.1).
- 2.2.2. We note that some of “these texts” submitted by us were conventional medical texts, so the investigation team is implying that there is a lack of consensus within conventional medicine about its own field.
- 2.2.3. We note that CAP Code 12.2 states that “Health professionals will be deemed suitably qualified only if they can provide suitable credentials; for example, evidence of: relevant professional expertise or qualifications ...”

2.2.4. Any claim that the alleged “consensus” exists should be supported by evidence:

2.2.4.1. that the consensus referred to actually exists;

2.2.4.2. that it is a consensus of health professionals;

2.2.4.3. and that those health professionals have relevant professional expertise or qualifications, which must include professional expertise or qualifications in the field of homeopathy.

2.2.5. In respect of point 2.2.4.2, we note that 25% of representatives at the British Medical Association annual representatives meeting in 2010 voted against the withdrawal of homeopathy from the NHS, even though no spokesperson was allowed to speak from the Faculty of Homeopathy (the representative body for conventionally trained doctors who have also trained as homeopaths).

2.2.6. Also in respect of point 2.2.4.2, we note that Professor Edzard Ernst has recently stated that “Around 40 per cent of British doctors refer their patients to a homeopath” (Edzard Ernst, ‘Complementary therapy: What’s the Point?’, *Mail Online*, [no date] at <<http://www.dailymail.co.uk/health/article-387390/Complementary-therapy-Whats-point.html>>, accessed 20 June 2011) [Attached as “Ernst Mail”]

2.2.7. *In the absence of concrete evidence of a valid “consensus” we insist that the investigation team treat such a claim as propagandist and unsupported by evidence.*

### **2.3. The issue of commercial interests**

2.3.1. Homeopathy as a medical approach has always been in commercial conflict with the pharmaceutical approach which underlies much of conventional medicine.

2.3.1.1. “Throughout its over 200-year history, homeopathy has been proven effective in treating diseases for which conventional medicine has little to offer. However, given its low cost, homeopathy has always represented a serious challenge and a constant threat to the profits of drug companies. Moreover, since drug companies represent the most relevant source of funding for biomedical research worldwide, they are in a privileged position to finance detractive campaigns against homeopathy by manipulating the media as well as academic institutions and the medical establishment.” (Domenico Mastrangelo and Cosimo Loré, ‘The growth of a lie and the end of “conventional” medicine’, *Medical Science Monitor*, 11(2005), 27-31, p. 27.) [Attached as “Mastrangelo”]

2.3.2. Because homeopathy is inherently less able to generate profits, a huge financial disparity has developed between the two approaches.

2.3.3. This disparity is reflected in the differences of spending on advertising by the pharmaceutical industry and homeopathic organisations.

2.3.4. It is recognised that the pharmaceutical industry uses its considerable financial power to protect its interests and to influence decisions and opinions about the drugs it markets.

2.3.4.1. “Journals have devolved into information laundering operations for the pharmaceutical industry”, wrote Richard Horton, editor of the *Lancet*, in March 2004. In the same year, Marcia Angell, former editor of the *New England Journal of Medicine*, lambasted the industry for becoming “primarily a marketing machine” and co-opting “every institution that might stand in its way”. Medical journals were conspicuously absent from her list of co-opted institutions, but she and Horton are not the only editors who have become increasingly queasy about the power and influence of the industry. Jerry Kassirer, another former editor of the *New England Journal of Medicine*, argues that the industry has deflected the

moral compasses of many physicians, and the editors of PLoS Medicine have declared that they will not become “part of the cycle of dependency...between journals and the pharmaceutical industry”. (Richard Smith, ‘Medical Journals Are an Extension of the Marketing Arm of Pharmaceutical Companies’, *PloS Medicine*, 2 (2005), e138 at <<http://www.plosmedicine.org/article/info:doi/10.1371/journal.pmed.0020138#pmed-0020138-b1>>) [Attached as “PloS”]

2.3.4.2. “Over the past 2 decades, the pharmaceutical industry has gained unprecedented control over the evaluation of its own products. Drug companies now finance most clinical research on prescription drugs, and there is mounting evidence that they often skew the research they sponsor to make their drugs look better and safer.” (Marcia Angell MD, ‘Industry-Sponsored Clinical Research: A Broken System’, *Journal of the American Medical Association*, 300 (2008),1069-1071 at <doi: 10.1001/jama.300.9.1069>) [Attached as “Angell”]

2.3.5. In this context, it is essential that the ASA should distinguish between arguments which reflect commercial interests and arguments based on developing scientific understanding.

2.3.6. The ASA is required to base its decisions on “available science”.

2.3.7. The ASA was not established to rule in commercial disputes between conflicting interests.

2.3.8. The investigation team has stated that it has accepted the report of the Commons Science and Technology Committee as “independent” and scientifically valid, but it has failed to produce clear evidence that the preparation of this report was not open to influence by commercial interests, and it appears not to have taken into account the serious questions about the report’s scientific validity.

2.3.9. *In the absence of unambiguously scientific and independent evidence that homeopathy is not efficacious or effective, we insist that the ASA should recognise the legal status of homeopathy as an accepted medical system practised privately and within the NHS.*

## 2.4. The placebo effect

Implicit in the investigation team’s claim that homeopathy is inefficacious is the assumption that the observed effects are actually the ‘placebo effect’.

2.4.1. There is no evidence that the observed effects of homeopathic treatment are consistent with the placebo effect:

2.4.1.1. There is no evidence that homeopathic medicines are inert, and the placebo effect is defined as the effect occurring after an inert treatment;

2.4.1.2. There is no evidence that the effects of homeopathic treatment are dependent on the patient having specific expectations, and such expectations are a necessary factor in the placebo effect;

2.4.1.3. There is no evidence that the effects of homeopathic treatment are only minor and short-lived, and yet these are typical of the placebo effect.

2.4.2. In contrast, there is evidence that the effects of homeopathic treatment are significantly different from the placebo effect.

2.4.2.1. Laboratory research showing that potentised substances are not inert has been replicated in multi-centre studies.

2.4.2.1.1. “One example of a series of in-vitro experiments in homeopathy is the model of the allergic response to antibody using the human basophil degranulation test. The earliest study reported inhibition of degranulation with ultra-molecular dilutions of anti-IgE. These initial experiments did not prove to be reproducible. Subsequent studies using a modified method, and using ultra-molecular dilutions of histamine, have shown positive results however. These findings have been reproduced in several independent laboratories, as well as in a multi-centre series of experiments.” (‘Basic science research in homeopathy’, Faculty of Homeopathy website at <[http://www.facultyofhomeopathy.org/research/basic\\_science\\_research.html](http://www.facultyofhomeopathy.org/research/basic_science_research.html)>) [Attached as “Faculty Research”]

2.4.2.2. There is evidence that animals and plants experience effects, which cannot be related to expectation.

2.4.2.2.1. “The most robust animal model is the effect of thyroxine on the rate of metamorphosis of frogs. In substantial dose thyroxine increases the rate of metamorphosis, it has the reverse effect in ultramolecular dilution. This effect has been reproduced in multi-centre experiments and by independent workers with different species of frog.” (‘Memorandum submitted by Dr Peter Fisher (HO 21)’, House of Commons Science and Technology Committee, *Evidence Check 2: Homeopathy* (London: The Stationery Office, 2010), para. 21, p. Ev 22) [See “Evidence Check”]

2.4.2.3. Homeopathy has been found to produce effects which are substantial and long-lasting.

2.4.2.3.1. “Patients who seek homeopathic treatment are likely to improve considerably. These effects persist for as long as 8 years.” (Claudia M. Witt, Rainer Lüdtke, Nils Mengler and Stefan N. Willich, ‘How healthy are chronically ill patients after eight years of homeopathic treatment? – Results from a long term observational study’, *BMC Public Health*, 8 (2008), 413.) [See “Witt”]

2.4.3. The only remaining evidence to justify the argument that homeopathic treatment is a placebo is that from randomised controlled trials (RCTs).

2.4.4. Some high quality and replicated RCTs have shown that homeopathic treatment is significantly more efficacious or effective than placebo (see “Goldacre p52”, “Jadad Analysis” and “Rutten”), so:

2.4.4.1. Either homeopathic treatment is efficacious and effective,

2.4.4.2. Or even high quality RCTs cannot distinguish between an active treatment and a placebo.

2.4.5. *Since there is no basis for claiming that homeopathic treatment is a placebo, we insist that the investigation team treat such a claim as propagandist and unsupported by evidence.*

## 2.5. The issue of efficacy

The investigation team appears to be insisting that the only valid evidence is evidence of efficacy, and to be making a fetish of the RCT, but there is no accepted scientific or medical paradigm which justifies this position.

2.5.1. The investigation team has stated that it bases its decisions on the paradigm of evidence based medicine (EBM).

- 2.5.2. Within the EBM paradigm tests of efficacy, such as RCTs, have a role, but this role is not absolute, and the validity of any particular RCT is very tightly defined.
- 2.5.2.1. “RCTs only reveal differences between treatment and control group means - these aggregated results are uninformative of the potential benefit of a treatment for any individual in the study, and more importantly, for the individual who was not in the study but whose treatment decisions will nevertheless be made on the basis of the study. What clinicians really want to know is whether or not the person sitting before them is likely to benefit. The averaged results derived from RCTs offer insufficient or even incorrect guidance on how to approach a specific case.” (Bonnie J. Kaplan, Gerald Giesbrecht, Scott Shannon and Kevin McLeod, ‘Evaluating treatments in health care: The instability of a one-legged stool’, *BMC Medical Research Methodology*, 11 (2011), 65 at <<http://www.biomedcentral.com/1471-2288/11/65>>) [Attached as “Kaplan”]
- 2.5.3. A treatment which is efficacious in the narrow conditions of a trial may be ineffective or even dangerous in general practice.
- 2.5.3.1. For example, “Since people with complex health problems (e.g., hypertension or heart disease) are not usually participants in RCTs evaluating mental health treatments, it is reasonable to consider the possibility that patients prone to adverse effects are not studied. But approval of the drug then has the potential of increasing the risk of those vulnerable individuals to exacerbation of their pre-existing health problems.” (Bonnie J. Kaplan, Gerald Giesbrecht, Scott Shannon and Kevin McLeod, ‘Evaluating treatments in health care: The instability of a one-legged stool’, *BMC Medical Research Methodology*, 11 (2011), 65 at <<http://www.biomedcentral.com/1471-2288/11/65>>) [See “Kaplan”]
- 2.5.4. Every drug which has its licence withdrawn had previously passed tests for efficacy and safety, but evidence of its effectiveness in practice has revealed it to be either unsafe or inefficacious, so evidence of effectiveness in general clinical practice outranks evidence of specific efficacy in controlled conditions.
- 2.5.5. The failure of a drug to demonstrate efficacy does not invalidate the whole system of conventional medicine within the EBM paradigm, so it is inconsistent to claim that the failure of a homeopathic treatment to demonstrate efficacy disproves the validity of homeopathy as a system.
- 2.5.6. At the same time, evidence of effectiveness (evidence of the effects of treatments in the real world of clinical practice) is crucial for those determining healthcare policy, and our advertisement was aimed at this audience, so our use of evidence of effectiveness was appropriate, whereas evidence of efficacy was inappropriate.
- 2.5.6.1. “As Concato and colleagues pointed out: “... an observational study would usually include patients with coexisting illnesses and a wide spectrum of disease severity.” But the most typical characteristic that excludes people from RCTs is just that - the presence of a co-existing disorder.” (Bonnie J. Kaplan, Gerald Giesbrecht, Scott Shannon and Kevin McLeod, ‘Evaluating treatments in health care: The instability of a one-legged stool’, *BMC Medical Research Methodology*, 11 (2011), 65 at <<http://www.biomedcentral.com/1471-2288/11/65>>) [See “Kaplan”]
- 2.5.7. *Since the investigation team has offered no legitimate basis for demanding evidence of efficacy and rejecting evidence of effectiveness, we insist that it abides by the principles of EBM and removes the inappropriate demands for evidence of efficacy.*

## **2.6. The issue of a “scientific rationale”**

Requirement for proof of a “scientific rationale” is irrelevant within the EBM paradigm, and inappropriate within a science based paradigm.

- 2.6.1. EBM is explicitly an approach to medicine oriented on evidence, not on scientific theory, and so there is no basis for excluding evidence on the grounds of a lack of a “scientific rationale”.
- 2.6.2. Much of conventional medicine would be indefensible if it had to meet such a demand, since the best “scientific rationale” for any conventional treatment is an ad hoc hypothesis.
- 2.6.3. Within a science based paradigm theories (“scientific rationales”) cannot be proved, but only disproved.
- 2.6.4. Homeopathy has a general theory which has not been disproved.
- 2.6.5. *In the absence of a paradigm justify the demand for proof of a “scientific rationale”, we insist that the investigation removes this demand.*
- 2.7. *The investigation team has presented no legitimate basis for ignoring the legal status of homeopathy which recognises that it is efficacious and effective, and we insist that the team base its assessments on the fact of this legal status or provide a legitimate basis for rejecting it.*

### **3. Issues of language**

We are concerned about the fact that the investigation team is confusing popular and scientific definitions of terms, systematically ‘slanting’ the presentation of our responses and its assessments, and misrepresenting evidence.

#### **3.1. Confusion of terms**

Terms such as ‘proof of efficacy’, ‘symptoms’ and ‘objective’ have very different meanings in a scientific argument from their meanings in a popular argument, and the investigation team is using these meanings interchangeably.

- 3.1.1. *Proof of efficacy:* In popular terminology “proof of efficacy” is “proof that it works” but this is not the scientific definition. The scientific definition involves very precise information about circumstances of the test, including the ‘intention to treat’, the process of selection of subjects, the specific condition being treated, any process of randomising or blinding, the definition of successful outcomes, and so on. As such, the scientific proof of efficacy is relevant to a specific circumstance and has validity only within narrow constraints; it can in no way be treated as a general proof (see 2.5.3-2.5.5).
- 3.1.2. *Efficacy and effectiveness:* Evidence of efficacy and evidence of effectiveness are relevant to different circumstances, and they cannot be used interchangeably. For evidence that a specific treatment has worked in specific circumstances, one needs evidence of efficacy; for evidence that the same treatment has worked in the real world with its wide variety of circumstances, one needs evidence of effectiveness (see 2.5.6).
- 3.1.3. *Symptoms:* In popular terminology “symptoms” includes “signs”, whereas the scientific definition distinguishes between these two types of evidence. In understanding and treating a case, both forms of evidence are required, and both are valuable, because there is no direct correlation between symptoms and signs. Symptoms are indications only observable by the patient, whereas signs are indications observable by others and include visible changes in function (such as changes in skin colour, blood pressure or temperature) or pathological changes (changes in the structures of the body). Symptoms will always precede signs in illness but may not accompany them. Different methods are used to gather each form of evidence.

3.1.4. *Objective:* In popular terminology objective evidence is evidence of signs, but this is a scientifically invalid definition. Assessment of the evidence of symptoms, where they are present, is essential for an objective evaluation of a medical case. In some cases (such as nausea, a headache or some other pain) the only evidence may be the symptoms.

3.1.5. *Because the investigation team's confusion of terminology has led to invalid and unsound reasoning, we insist that only the scientific meanings of these terms should apply, and that the terms should be used consistently throughout the Recommendation.*

### **3.2. The use of 'slanting'**

We are concerned at the systematic 'slanting' exhibited by the investigation team in its presentation of information. [Attached as "Slanting"]

3.2.1. In our responses we have made statements, provided documentary evidence to support those statements, and drawn conclusions from this information.

3.2.2. The investigation team has consistently presented our responses in a negatively slanted way:

3.2.2.1. By stating that H:MC21 'believes' its conclusions to be the case;

3.2.2.2. By stating that H:MC21 'believes' that its evidence supports its statements;

3.2.3. This distortion is particularly significant because the investigation team presents its own opinions in a positively slanted way:

3.2.3.1. By 'considering' statements to be the case which are actually beliefs or opinions unsupported by any evidence;

3.2.3.2. By 'concluding' from these opinions, even though they are unsupported.

3.2.4. *Because this practice is misleading, we insist that the investigation team use accurate and neutral terms throughout the Draft Recommendation.*

### **3.3. The misrepresentation of evidence**

On several occasions the investigation team has presented the evidence in such a way as to affect perceptions of its validity, including the following:

3.3.1. The House of Commons Science and Technology Committee report is described as "a comprehensive review of evidence for the efficacy of homeopathy", whereas the Chair of the committee explicitly stated that "this is not an enquiry into whether homeopathy works or not" (Q174, House of Commons Science and Technology Committee, *Evidence Check 2: Homeopathy* (London: The Stationery Office, 2010), p. Ev 64). [See "Evidence Check"]

3.3.2. On more than one occasion homeopathic organisations are acknowledged as sources, whereas non-homeopathic sources are not acknowledged, implying that our evidence is drawn only from the homeopathic tradition. This is misleading.

3.3.3. Reference to information in support of homeopathy drawn from conventional medical texts is not acknowledged, implying that all H:MC21's evidence is derived from homeopathic texts. This is misleading.

3.3.4. Some of the summaries of H:MC21's responses fail to make it clear which points in those responses relate to the original complaint, and which relate to subsequent arguments put forward by the investigation team. This implies that H:MC21 originally identified, and accepted as valid, interpretations of the complaints which it has vehemently opposed.



- 3.3.5. *Because this approach to the evidence is likely to mislead the ASA Council, we insist that the evidence be properly and accurately presented by the investigation team.*
- 3.4. *We insist that the investigation team correct these systematic distortions resulting from the misuse of terminology, the use of ‘slanted’ language and the misrepresentation or selective attitude to the evidence supplied.*

## **Issues**

### **4. Issue 8**

- 4.1. We note that the investigation team has re-written complaint 8 in version 4 of the Draft Recommendation, nearly seven months after the original notification of the complaints.
- 4.2. We note:
- 4.2.1. That “Complaints must be made within three months of the marketing communication’s appearance” (ASA’s *Non-broadcast Complaint Handling Procedures*);
- 4.2.2. That this is so radical a change of complaint as to constitute a new complaint;
- 4.2.3. That this change appears to be an attempt to resolve the serious discrepancy between the arguments used by the investigation team in its assessment in version 3 of the Draft Recommendation and the complaint as stated originally and in every version up to and including version 3 of the Draft Recommendation.
- 4.3. We note that the investigation team:
- 4.3.1. Has given no indication in the Draft Recommendation that this complaint has ever been changed; and
- 4.3.2. Has given no explanation in the Draft Recommendation of the reasons for such a change.
- 4.4. *We consider that the ASA Council should be informed that we were only presented with this version of complaint 8 seven months after the original notification of the complaints.*

## **Responses**

The points made below are in addition to the General Points made above.

### **5. General**

- 5.1. Our argument that the effect of homeopathic treatment is not consistent with the placebo effect is misrepresented, since it is based on four points, not one:
- 5.1.1. The placebo effect is predicated on the use of an inert treatment, whereas homeopathic medicines have not only not been proved inert, but there is evidence that they are biologically and medicinally active.
- 5.1.2. The placebo effect is fundamentally dependent on expectations, whereas the effect of homeopathic treatment has not only not been proved to be dependent on specific expectations, but there is evidence that it conflicts with expectations.
- 5.1.3. The placebo effect is fundamentally minor and short-lived, whereas the effect of homeopathic treatment has not only not been proved to be only minor and short-lived, but there is evidence that it can be major and long-lived.

5.1.4. The only basis for claims that the effect of homeopathic treatment is a placebo effect is the result of some RCTs, whereas high quality and replicated RCTs have shown that homeopathic treatment is more efficacious than placebo, so either homeopathic treatment is efficacious, or RCTs are incapable of reliably identifying a placebo effect.

5.2. In response to the investigation team's arguments, we have pointed out that no evidence has been provided to support claims that homeopathy is a controversial system of medicine, and so the legal recognition of homeopathy as a valid medical approach represents the status quo on which the ASA's investigation of complaints should be based.

## **6. Response 1**

6.1. This summary of our response currently presents an argument for "like cures like" which is circular, whereas we presented an argument which is linear and derived from evidence.

6.2. We provided information and examples from conventional medical texts that conventional medicine recognises the contrary homeostatic response to a treatment, including that:

6.2.1. The toxic effects of a treatment can closely resemble the condition being treated.

6.2.2. A treatment having an action which conflicts with the condition being treated can lead to a 'rebound effect' when the treatment is stopped.

6.3. We note that the investigation team has again left out reference to the Complementary Medicine Research Group at the University of York as a source of evidence, whilst retaining references to two specifically homeopathic sources.

6.4. We note that the investigation team has again left out reference to the fact that the ASA has had in its possession since 2008 information in support of homeopathy.

## **7. Response 2**

7.1. The investigation team has described the Bristol study as a trial, when it was an outcome study.

7.2. The supporting evidence also consisted of outcome studies and not trials.

7.3. We stated that the Bristol study demonstrated that 70.7% of patients in the outcome study benefited from homeopathic treatment, and that reduced reliance on conventional medication formed part of the objective evidence.

## **8. Response 3**

8.1. We note that the investigation team has again left out reference to the Complementary Medicine Research Group at the University of York as a source of evidence, whilst retaining references to two specifically homeopathic sources.

8.2. Despite us making our points clearly, the summary of our response concerning the unreliability of RCTs of homeopathy is extremely confusing and misrepresents our case.

## **9. Response 4**

9.1. The summary of the research supplied is wholly inadequate.

9.2. In the light of the investigation team's misrepresentation of the evidence in its assessment, there is a serious risk of the ASA Council being misled about this issue.

9.3. The summary of our response should include the key facts about the magnitude of the change in the infection rate and the four methods of comparison used to measure this change.

## **10. Response 7**

- 10.1. The statement that “if NHS spending on homeopathy increased, treatments for chronic conditions would be started earlier and savings on conventional medicines would be even greater” misrepresents what we actually said.
- 10.2. The statement that “this would result in cumulative savings because the effects of homeopathic treatment could last up to eight years” misrepresents what we actually said.
- 10.3. The failure to include our calculation of the possible savings means that it is difficult to relate the magnitude of the benefit to the potential reduction in cost, and so the summary is misleading about our response.

## **11. Response 8**

### **11.1. Accounts**

- 11.1.1. As regards the accounts, our statement was based on the most recently published accounts for Sense About Science and the context of the accounts for the previous five years.
- 11.1.2. We wish to point out to the investigation team that the figure for the total income from the pharmaceutical industry in 2006 should be £53,000 and the percentage 36.3%, making the average percentage 35.7% over the six years. We acknowledge that this was our error.

### **11.2. The basis of Sense About Science’s activities**

- 11.2.1. As regards the activities of Sense About Science, in its submission to the Commons Science and Technology Committee, Sense About Science made it clear that the basis of its activity on the subject of homeopathy was opinions and reports:
  - 11.2.1.1. “We monitor public discussions, together with our own log of requests for help and concerns raised by scientists, to identify frequently occurring misconceptions or misleading information. In 2006 we reviewed discussion about homeopathy”
  - 11.2.1.2. “We also noted regular reports of homeopathic remedies being marketed for serious diseases, notably at that time anti-malarial prophylaxis.”
- 11.2.2. Sense About Science made it clear that these were the opinions of people uninformed about homeopathy.
  - 11.2.2.1. “It was believed to contain an active ingredient, and was often confused with herbal medicine (and, related to this, that people were often unaware of the mystical belief in water memory and in “like cures like” on which it is based).”
  - 11.2.2.2. “Because it was supplied on the National Health Service, it was assumed that it “must be effective” and “there must be something in it”.
  - 11.2.2.3. “there was an atmosphere of resigned frustration about the possibility of addressing the misconception that homeopathic products contain active ingredients and the misconception that there was reliable evidence of efficacy beyond the placebo effect.”
  - 11.2.2.4. “We also noted their frustration about the acclaimed “holistic” approach of homeopathy despite its inability to diagnose disease and the potentially dangerous consequences of that.”
  - 11.2.2.5. “if the use of some unproven and unlikely remedies is officially flattered and endorsed, then this affects our ability to reason through debates about the suitability or provision of any other remedy.”
- 11.2.3. Sense About Science did not provide any information indicating that it had quantified these allegations objectively.

11.2.4. Sense About Science did not provide any evidence that it had researched the scientific accuracy of these opinions.

11.2.5. In other words, there is no evidence that the subsequent activities of Sense About Science are based on anything more than unsubstantiated opinions.

11.2.6. At the same time Sense About Science claimed that it has a mission “of equipping the public to make sense of science and evidence”.

11.2.6.1. “Scientists’ resignation to public misconceptions is anathema to Sense About Science’s mission of equipping the public to make sense of science and evidence. It disenfranchises the public by removing scientific reasoning to senior common rooms and private clubs.”

### **11.3. Sense About Science’s position on homeopathy**

11.3.1. In 2006 Sense About Science published a document *Sense About Homeopathy*, written by Chris Tyler. [Attached as “SAS Homeopathy”]

11.3.2. The central premise of this document is that homeopathic treatment is a placebo, but it fails to make it clear that this claim is purely conjectural.

11.3.3. We attach a detailed critique of this document which establishes 17 major flaws in its reasoning (listed below). [Attached as “Nonsense, Not Science”]

11.3.3.1. “1. It fails to define some basic terms (such as ‘disease’, ‘condition’ and ‘effective’).

2. It defines the ‘placebo effect’ but then surreptitiously re-defines it as the complete opposite of the original definition.

3. It uses the term ‘homeopathy’ indiscriminately to mean the system of homeopathy, homeopathic treatment and the medicines used by homeopaths.

4. It ignores five of the seven principles on which homeopathy is based, despite their crucial importance to many of the arguments used. For example, the requirement in homeopathy to treat the ‘totality of symptoms’ invalidates many of the arguments used in this leaflet.

5. It fails to acknowledge or discuss the fact that homeopathy has a definition of effectiveness.

6. It misrepresents potentisation by equating it with dilution, which is only a part of the process, without providing any evidence that the effect of succussion is insignificant.

7. It invents terminology to create distinctions which are never explained, such as that between “disease” and the “symptoms of disease”, and ‘inducing physiological changes’ and ‘working in a clinical sense’.

8. It fails to provide any evidence that the nature of homeopathic treatment is essentially the same as that of placebos.

9. It misrepresents the evidence from randomised controlled trials (RCTs) in order to justify the claim that homeopathic treatment is a placebo.

10. It fails to acknowledge that RCTs are not infallible guides to efficacy or effectiveness, and so cannot be used as the sole basis for categorising a treatment as a placebo.

11. It fails to examine the real problems with designing appropriate RCTs to test homeopathic treatment.

12. It relies heavily on a single meta-analysis (by Shang and others), and not only misrepresents the conclusions of this analysis, but fails to take into account the serious criticisms levelled at it. These criticisms have subsequently been justified, but the leaflet has not been amended.
13. It also misrepresents the conclusions of four other major meta-analyses.
14. It fails to acknowledge that meta-analyses are inherently subjective, and so constitute an unreliable basis for categorical decisions.
15. It misrepresents other research. For example, research showing that a reduction in stress reduces inhibition of the immune system is claimed to show that placebos can “boost” the immune system.
16. It repeatedly relies on assertions which have no general basis in reality in order to present spurious arguments as though they were significant. Examples include claims that homeopathy works “like a vaccine”, that homeopathy has “a powerful placebo effect”, that people use homeopathy because they “believe” it works.
17. It repeatedly exhibits a fundamental lack of understanding of physiology and orthodox medical practice.” [William Alderson, *Nonsense, Not Science* (Stoke Ferry: Homeopathy: Medicine for the 21<sup>st</sup> Century, 2011), pp. 32-33] [See “Nonsense, Not Science”]

#### **11.3.4. The author of *Sense About Homeopathy***

- 11.3.4.1. The author of this document, Chris Tyler, has provided no evidence of having qualifications or experience in medicine or homeopathy. His first degree was in anthropology, and his doctorate was on ‘Population history and palaeoinformatics’. [See attached “Tyler Biography” and “Tyler Thesis”]
- 11.3.4.2. Chris Tyler has acknowledged his unwillingness to be academically rigorous, and his preference for campaigning.
  - 11.3.4.2.1. “Dr Tyler said he knew early on in life that a traditional academic career was not for him. ‘I realised after six months of starting my PhD that I didn't want to be an academic,’ he said. ‘I didn't have the patience, I wanted to make a difference and have influence straight away, and academics tend to build that over a career.’ Instead, Dr Tyler joined what was then a fledgling charity, Sense about Science, helping to build a contact base for the organisation and working on various campaigns.” (‘Appointments’, *Times Higher Education* supplement online, 20 May 2010 at <<http://www.timeshighereducation.co.uk/story.asp?storyCode=411629&sectioncode=26>>) [Attached as “Tyler THE”]
- 11.3.4.3. This preference and his lack of medical qualifications or experience is consistent with the evidence of *Sense About Homeopathy*.
- 11.3.4.4. Chris Tyler’s position is also hypocritical, since he has himself objected to those acting “with scant regard to relevant academic expertise”.
  - 11.3.4.4.1. “It is false because of a contradiction that lies at the heart of the expert advisory system: the system itself has developed with scant regard to relevant academic expertise.” (Chris Tyler and Rob Doubleday, ‘Where is the evidence about evidence-based policy?’, *Research Blogs* at <[http://exquisitelife.researchresearch.com/exquisite\\_life/chrystler\\_&\\_robdoubleday.html](http://exquisitelife.researchresearch.com/exquisite_life/chrystler_&_robdoubleday.html)>) [Attached as “Tyler Blog”]

11.3.4.5. The field within which Chris Tyler does appear to have expertise is that of communication and the influencing of politicians and the media (our emphases):

11.3.4.5.1. “Chris has a broad range of expertise on the relationships between science and policy.” (‘CSaP Appoints New Executive Director’, Centre for Policy and Science, Cambridge University, 15 March 2010 at <<http://www.csap.cam.ac.uk/news/article-csap-appoints-new-executive-director/>>) [Attached as “Tyler Appointment”]

11.3.4.5.1. “... according to Chris Tyler from the Centre for Science and Policy, it is often only possible to influence a politician before they are elected.” (Katrina Charles ‘How to engage effectively with parliamentarians’, *Report of the British Science Association & Wellcome Trust Science Communication Conference 24 & 25 May 2010* at <<http://www.britishtscienceassociation.org/NR/rdonlyres/57BA3097-7FE7-4643-A074-EE1A5CB7B994/0/ScienceCommunicationConferencereport.pdf>>) [Attached as “Tyler Conference”]

11.3.4.5.2. “Tyler recommended some different ways to approach the parliamentarians. A direct way to pass information to parliamentarians is face-to-face, through MP surgeries, for example, or by the phone. It is also important to approach them using their preferred method of communication, whether that be through a letter, phone call, email or even twitter. But there are also a number of indirect ways. Local media can be used to raise an issue on which your local MPs might be asked for comment, raising the profile of that issue with the MP.

It is often worthwhile developing good relationships with the staff, researchers and advisors of parliamentarians. Select committees will have researchers who will determine the content and agendas of their meetings so targeting these people can be [sic] give you a good chance of success. (Katrina Charles ‘How to engage effectively with parliamentarians’, *Report of the British Science Association & Wellcome Trust Science Communication Conference 24 & 25 May 2010*, p.18 at <<http://www.britishtscienceassociation.org/NR/rdonlyres/57BA3097-7FE7-4643-A074-EE1A5CB7B994/0/ScienceCommunicationConferencereport.pdf>>) [Attached as “Tyler Conference”]

11.3.4.5.3. “Standing up for science; the nuts and bolts: What is there for early career researchers to play for? Not yet the leaders in the field what can you do to encourage good science and evidence in the public domain? This session offers practical guidance for early career researchers to get their voices heard in debates about science, including how to talk about the status of research (peer review); how to respond to bad science when you see it; and top tips for if you come face-to-face with a journalist!

Speakers: Dr Chris Tyler, Sense About Science, Dr Claire Bithell, Science Media Centre.” (Programme of the Standing Up for Science Media Workshop organised by Sense About Science for 18 May 2007 at <<http://network.nature.com/groups/postdocs/forum/topics/51?page=1>>) [Attached as “Tyler Workshop”]

11.3.4.5.4. At Sense About Science Chris Tyler “managed and developed the charity’s extensive network of scientists and promoted science in public debates on issues as diverse as climate change, chemicals, alternative

medicines and nuclear power.” (‘CSaP Appoints New Executive Director’, Centre for Policy and Science, Cambridge University, 15 March 2010 at <<http://www.csap.cam.ac.uk/news/article-csap-appoints-new-executive-director/>>) [Attached as “Tyler Appointment”]

11.3.4.6. The field of communication and the influencing of politicians and the media constitutes propaganda if practised on the basis of promoting opinions in the absence of evidence.

11.3.4.7. In this context it is also important to note that Chris Tyler left Sense About Science to work as advisor to the House of Commons Universities, Innovation and Skills Committee which subsequently became the Commons Science and Technology Committee, where he “pioneered the Science and Technology Committee’s ‘Evidence Check’ programme.” (‘CSaP Appoints New Executive Director’, Centre for Policy and Science, Cambridge University, 15 March 2010 at <<http://www.csap.cam.ac.uk/news/article-csap-appoints-new-executive-director/>>) [See attached as “Tyler Appointment”]

11.3.4.8. *In summary, Chris Tyler, with acknowledged expertise in influencing politicians and the media, wrote the document which sets out Sense About Science’s position on homeopathy, despite having no qualifications in the field of medicine or homeopathy, despite his own objections to those who pay “scant regard to relevant academic expertise”, and despite Sense About Science’s lack of an objective basis for its views on homeopathy. He was later instrumental in initiating the Commons Science and Technology Committee’s Evidence Check 2: Homeopathy, which may explain why Sense About Science was invited to give oral evidence to the Committee, despite its lack of qualifications in the field of medicine or homeopathy. This is the behaviour of a propagandist, not a scientist.*

### **11.3.5. The Managing Director of Sense About Science**

11.3.5.1. The representative of Sense About Science who gave oral evidence to the Commons Science and Technology Committee was Tracey Brown.

11.3.5.2. Tracey Brown “has a background in social research” and appears to have no qualifications or expertise in medicine or homeopathy. (‘Office Team’ page on the Sense About Science website at <<http://senseaboutscience.org.uk/index.php/site/about/28>>) [Attached as “SAS Brown”]

11.3.5.3. As part of her oral evidence to the Commons Science and Technology Committee in 2009, Tracey Brown was asked whether there is evidence to show that homeopathy works or evidence to show that it does not work, apart from the placebo effect. In reply she stated that she had not seen any evidence.

11.3.5.3.1. I have not seen any evidence to suggest there is any systematic benefit beyond the placebo benefit. (Tracey Brown, response to Q86, House of Commons Science and Technology Committee, *Evidence Check 2: Homeopathy* (London: The Stationery Office, 2010), p. Ev 18.) [See “Evidence Check”]

11.3.5.4. The document detailing Sense About Science’s position on homeopathy, *Sense About Homeopathy*, cites the 2005 meta-analysis by Shang et al., and this meta-analysis included eight trials of homeopathic treatment for upper respiratory tract infection. In a re-analysis of this meta-analysis in October 2008, Rutten and Stolper pointed out that these trials showed that homeopathic treatment performed significantly better than placebo.

- 11.3.5.4.1. “Shang et al’s 110 trials included 8 of homeopathy for acute upper respiratory tract infection, with no evidence of quality bias and a considerable effect size, OR = 0.36, 95% CI: 0.26–0.50.” (A.L.B. Rutten, and C.F. Stolper, ‘The 2005 meta-analysis of homeopathy: the importance of post-publication data’, *Homeopathy*, 97 (2008), 169-177, p. 173) [Attached as “Rutten”]
- 11.3.5.5. In other words, research specifically cited by Sense About Science included evidence of benefit of homeopathic treatment, but over a year after an important re-evaluation of the research revealed this, the Managing Director of Sense About Science claimed that she had “not seen any evidence”.
- 11.3.5.6. *In summary, Tracey Brown, with expertise in social research but no qualifications in the field of medicine or homeopathy, gave evidence to the Commons Science and Technology Committee which was inconsistent with the facts contained within an analysis cited by Sense About Science in the document which sets out its position on homeopathy. This is the behaviour of a propagandist, since it clearly places the unsubstantiated opinions of Sense About Science over the reality of the evidence actually in its possession.*

### **11.3.6. Another key spokesman for Sense About Science**

- 11.3.6.1. Simon Singh is a member of the Board of Trustees of Sense About Science and an outspoken critic of homeopathy. [Attached as “SAS Trustees”]
- 11.3.6.2. Simon Singh has a doctorate in particle physics, but appears to have no qualifications or expertise in medicine or homeopathy. Indeed he has explicitly stated that he is “an outsider” (*Trick or Treatment?*, p. 3). [See “Trick p2”]
- 11.3.6.3. Despite his lack of qualifications or expertise in medicine or homeopathy, Simon Singh has co-authored a book attacking homeopathy and complementary and alternative medicine in general.
- 11.3.6.4. In the light of his background in studying fundamental particles, it is particularly curious that *Trick or Treatment?* states that there are questions more fundamental than a fundamental question.
  - 11.3.6.4.1. “In particular, we will answer the fundamental question: ‘Is alternative medicine effective for treating disease?’ Although a short and simple question, when unpacked it becomes somewhat complicated and has many answers depending on three key issues. First, which alternative therapy are we talking about? Second, which disease are we applying it to? Third, what is meant by effective?” (*Trick or Treatment?*, p. 3). [See “Trick p2”]
- 11.3.6.5. As has been pointed out in *Halloween Science*, this fundamental question actually depends on 25,920 questions.
  - 11.3.6.5.1. “In the first stage of ‘unpacking’ Ernst and Singh admit for the first time that alternative medicine is not a homogeneous entity but just a convenient group name for a range of very different therapies, so by the count of this book alone the “fundamental question” is now 36 questions. In the second stage of ‘unpacking’ Ernst and Singh decide that the specific disease is important. They do not define disease, but if we use the orthodox medical view, *The Merck Manual of Medical Information* lists about 240 types of illness, most of which have subcategories. Even if we ignore the subcategories, this would mean that the “fundamental question” is now 8,640 questions. In the third stage of ‘unpacking’ Ernst and Singh acknowledge that the term “effective” requires defining. Within orthodox medicine the term has an arbitrary definition, but this is not accepted by all



forms of alternative medicine, and it may not accord with the views of patients themselves. However, if we accept that there are only three alternatives (those of orthodox medicine, homeopathy and the general public), this would still mean that the “fundamental question” is actually more than 25,920 questions.” (William Alderson, *Halloween Science* (Stoke Ferry: Homeopathy: Medicine for the 21st Century, 2009), pp. 15-16) [See “Halloween Science”]

- 11.3.6.6. Significantly, Simon Singh and his co-author do not answer these 25,920 questions, and they even fail to ever address the issue of “which disease are we applying it to?” or “what is meant by effective?”, despite defining the purpose of their book as providing the answer to these questions.
- 11.3.6.7. Simon Singh’s position is also hypocritical, since he himself has objected to “people who have no expertise championing a view ...”.
  - 11.3.6.7.1. “What shocks me is people who have no expertise championing a view that runs counter to the mainstream scientific consensus.” (Interview with *Wired*, 30 August 2010 available at [http://www.wired.com/magazine/2010/08/mf\\_qa\\_singh/](http://www.wired.com/magazine/2010/08/mf_qa_singh/)) [Attached as “Singh Wired”]
- 11.3.6.8. Simon Singh also played a central role in the malaria ‘sting’ described below (see 11.4.6 and subsections).
  - 11.3.6.8.1. “In 2006, Simon Singh, one of the authors of this book, attempted to highlight the extent to which homeopaths give bad advice by finding out what they would offer to a young traveller seeking protection against malaria. Working with Alice Tuff and the charity Sense About Science, Singh developed a storyline ...” (Simon Singh and Edzard Ernst, *Trick or Treatment? Alternative medicine on trial* (London: Bantam Press, 2008), p. 187) [See Trick p186”]
- 11.3.6.9. The fact that Simon Singh has no qualifications or expertise in medicine or homeopathy explains why this test lacked any vestige of scientific rigour in the way it was organised.
  - 11.3.6.9.1. “Tuff found a variety of homeopaths by searching on the internet, just as any young student might do. She then visited or phoned ten of them, mainly based in and around London.” (Simon Singh and Edzard Ernst, *Trick or Treatment? Alternative medicine on trial* (London: Bantam Press, 2008), p. 187) [See Trick p186”]
- 11.3.6.10. It should also be noted that this description of the process of selecting the homeopaths differs significantly from that given by Sense About Science (see 11.4.6.2), in that it is not an impartial selection but one seriously open to bias.
- 11.3.6.11. It would have been entirely possible to conduct a scientifically valid study which could have yielded important information about differences between registered and unregistered homeopaths; differences between GPs; and differences between advice from travel clinics and non-specialist clinics.
- 11.3.6.12. The failure to establish the study on a sound scientific footing goes a long way towards explaining why it had no significant outcome, other than as publicity against homeopathy.
- 11.3.6.13. *In summary, Simon Singh, with expertise in physics and journalism but no qualifications in the field of medicine or homeopathy, has actively and*

*unscientifically used the media to attack homeopathy on behalf of Sense About Science. This is the behaviour of a propagandist.*

#### **11.4. Sense About Science's activities**

11.4.1. Sense About Science's evidence to the Commons Science and Technology Committee included information about a number of initiatives it has encouraged and supported.

11.4.2. None of these activities involved scientific research or even evidence of an objective or impartial approach.

11.4.3. All of these activities were aimed at creating policy changes by influencing the media or decision-making bodies.

#### **11.4.4. Letters to Primary Care Trusts**

11.4.4.1. The first activity involved putting pressure on Primary Care Trusts (PCTs)

11.4.4.1.1. "In May 2006, a group of medical specialists, led by cancer surgeon Professor Mike Baum, writing to the medical directors and directors of public health at NHS trusts to draw attention to the provision of homeopathy and the lack of evidence in support of its efficacy. ... This letter was followed one year later with a letter led by Professor Gus Born, enclosing a copy of an evidence review by a London NHS trust." ('Memorandum submitted by Sense About Science (HO36)', House of Commons Science and Technology Committee, *Evidence Check 2: Homeopathy* (London: The Stationery Office, 2010), para. 3.1, p. Ev 7) [See "Evidence Check"]

11.4.4.2. The second letter (at least) was printed on paper with the NHS logo, and led to complaints which resulted in the following statement from the Department of Health

11.4.4.2.1. "A document entitled "Homoeopathic Services" which was distributed to Directors of Commissioning earlier this year has caused some confusion because it carried the NHS logo. We would like to clarify that this document was not issued with the knowledge or approval of the Department of Health and that the use of the National Health Service logo was inappropriate in this instance." (Department of Health, 'Homoeopathic Services' document, 25 October 2007, Gateway reference: 8971, at <[http://www.dh.gov.uk/en/Publicationsandstatistics/Bulletins/theweek/DH\\_079859](http://www.dh.gov.uk/en/Publicationsandstatistics/Bulletins/theweek/DH_079859)>.) [See "DoH Logo"]

11.4.4.3. *In other words, Sense About Science supported an initiative which deliberately over-stated the authority of those putting the case against homeopathy.*

#### **11.4.5. Medicines for Human Use Regulations**

11.4.5.1. In 2006 Sense About Science also coordinated a challenge to the government's *Medicines for Human Use (National Rules for Homeopathic Products) Regulations 2006*. ('Memorandum submitted by Sense About Science (HO36)', House of Commons Science and Technology Committee, *Evidence Check 2: Homeopathy* (London: The Stationery Office, 2010), para. 3.5, p. Ev 7) [See "Evidence Check"].

11.4.5.2. The government has subsequently said that these regulations were intended to bring UK law into step with EU law.

11.4.5.2.1. "In 2006, the UK introduced the National Rules Scheme, which allows the marketing of homeopathic products, with a strictly limited range of

therapeutic indications under European Directive 2001/83, in accordance with the principles and characteristics of homeopathy as practised.”

(Response to question 1, ‘Memorandum submitted by the Department of Health (HO 00)’, House of Commons Science and Technology Committee, *Evidence Check 2: Homeopathy* (London: The Stationery Office, 2010, p. Ev 60) [See “Evidence Check”].

- 11.4.5.3. The response of Sense About Science was that “The MHRA has designed the regulations to respond to pressure from the homeopathic industry, which wants to expand”, though we know of no evidence to support this. (‘Memorandum submitted by Sense About Science (HO36)’, House of Commons Science and Technology Committee, *Evidence Check 2: Homeopathy* (London: The Stationery Office, 2010), para. 3.5, p. Ev 7) [See “Evidence Check”]

#### **11.4.6. Malaria stings**

- 11.4.6.1. In 2006 Sense About Science also sought media attention by claiming “to warn the public that homeopathic medicines offer no protection against malaria or other serious tropical diseases”. (‘Memorandum submitted by Sense About Science (HO36)’, House of Commons Science and Technology Committee, *Evidence Check 2: Homeopathy* (London: The Stationery Office, 2010), para. 3.3, p. Ev 7) [See “Evidence Check”]
- 11.4.6.2. This was not based on any systematic research, but on “a short investigation by Sense About Science, which showed that the first ten homeopathic clinics and pharmacies selected from an internet search and consulted were willing to break public health protocols by providing unproven homeopathic pills to protect against malaria and other tropical diseases such as typhoid, dengue fever and yellow fever”. (‘Memorandum submitted by Sense About Science (HO36)’, House of Commons Science and Technology Committee, *Evidence Check 2: Homeopathy* (London: The Stationery Office, 2010), para. 3.3, p. Ev 7) [See “Evidence Check”]
- 11.4.6.3. The true scale of this alleged “problem” has never been researched or scientifically assessed, and the repetition of the ‘sting’ operation by the BBC *Newsnight* programme did not result in any convictions, any formal complaint against any homeopath, or any upheld formal complaint against a pharmacy.
- 11.4.6.4. Nonetheless the ‘sting’ operation has been used to attack the credibility of the Society of Homeopaths, which is the largest organisation of homeopaths in Europe (most recently in *Newsnight* on 4 January 2011), despite the fact that no members of that organisation were implicated, and the organisation has guidelines advising there is no clinical trial evidence for the use of potentised substances for protection against disease.
- 11.4.6.5. *In other words, Sense About Science supported an initiative which generated publicity over an alleged “problem” for which there was no objective evidence.*

#### **11.4.7. Voice of Young Science Network**

- 11.4.7.1. In 2009 an off-shoot of Sense About Science, Voice of Young Science Network (VoYS), wrote to individuals at the World Health Authority (WHO) because they had “concerns about the aggressive promotion of homeopathy” for serious diseases, though no evidence has been produced to substantiate this claim.
- 11.4.7.1.1. As a group of early-career medics and researchers from the UK and Africa, we wrote to the WHO in June this year raising concerns about the aggressive promotion of homeopathy for these serious diseases. (Voice of Young Science, ‘Letter to Health Ministers’, [August, 2009] at

<<http://www.senseaboutscience.org.uk/PDF/Letter%20Health%20Ministers.doc.pdf>>.) [Attached as “VoYS Letter”]

- 11.4.7.2. VoYS has not provided any explanation as to how it selected these individuals, so there is no certainty that the choice of recipients was impartial.
- 11.4.7.3. VoYS then combined selected extracts of these “comments from directors of WHO disease programmes stating that they do not recommend homeopathy for the treatment of HIV, influenza, TB, Malaria and Infant diarrhoea”. (‘Memorandum submitted by Sense About Science (HO36)’, House of Commons Science and Technology Committee, *Evidence Check 2: Homeopathy* (London: The Stationery Office, 2010), para. 3.6 note 1, p. Ev 8) [See “Evidence Check”]
- 11.4.7.4. It is hardly surprising that some figures at the WHO do not positively recommend the use of homeopathy, since homeopathy is not a dominant system of medicine globally, and so expertise will not be widely available.
- 11.4.7.5. At the same time, VoYS has failed to provide any evidence that the selection process did not specifically exclude responses supportive of homeopathy.
- 11.4.7.6. The resultant press release led to headlines around the world of “WHO warns against homeopathy use”, though no such official warning statement has been published by the WHO. [Attached as “BBC WHO”]
- 11.4.7.7. Subsequently VoYS sent a letter “to the health ministers of all countries to highlight the WHO’s position on homeopathy and to call on governments to combat its promotion for serious diseases”. (‘Memorandum submitted by Sense About Science (HO36)’, House of Commons Science and Technology Committee, *Evidence Check 2: Homeopathy* (London: The Stationery Office, 2010), para. 3.6 note 4, p. Ev 8) [See “Evidence Check”]
- 11.4.7.8. This letter also asked that “... you publicise this advice to healthcare agencies in your country and join our effort to combat the promotion of ineffective therapies such as homeopathy (which rarely contains any active ingredient) for these serious diseases. (Voice of Young Science, ‘Letter to Health Ministers’, [August, 2009] at <<http://www.senseaboutscience.org.uk/PDF/Letter%20Health%20Ministers.doc.pdf>>.) [Attached as “VoYS Letter”]
- 11.4.7.9. *In summary, Sense About Science supported an initiative by its Voice of Young Science Network which lacked any evidence of impartiality in its selection criteria, and which used responses from individual WHO directors to present the illusion of an official warning against the use of homeopathy, when they were actually a series of statements about the WHO guidelines on treatment.*

11.5. To conclude, Sense About Science has not established an objective, rigorous and scientifically sound basis for any of its activity around homeopathy, but it has pursued an aggressive programme aimed at shaping UK (and global) policy on homeopathy. The key activists in this campaign have no expertise or qualifications in medicine or homeopathy, but they do have expertise in management of the media and politicians. This is propaganda.

## 12. Response 9

- 12.1. This summary includes no reference to the provision of detailed information we have supplied in support of our claim, and so it is highly misleading about our response.
- 12.2. The only form of evidence which can substantiate our claim is a detailed analysis of *Trick or Treatment?*, demonstrating that it is not scientifically valid.

- 12.3. H:MC21 commissioned such a detailed and peer-reviewed analysis and has presented this as evidence.
- 12.4. The critique has recently been endorsed as “exceptional” by Martin Walker, an investigative writer with no connection to H:MC21.
  - 12.4.1. “Not long after Ernst and Singh's propaganda book *Trick or Treatment? Alternative Medicine on Trial* came out in 2008, William Alderson, a founding trustee of H:MC21, a homeopathy defence group, took five months to write a careful appraisal of the shoddy science and sparse reasoning in the book. The resultant text, *Halloween Science*, is exceptional and brilliantly titled. It can be downloaded free; it turns up nineteen major faults in the Ernst and Singh book, and concludes that *Trick or Treatment?* has no validity as a scientific examination of alternative medicine. (Martin J. Walker, *Dirty Medicine: The Handbook* (London: Slingshot Publications, 2011), p. [attached as “Walker p248” and “Walker p249”])

### 13. Response 11

- 13.1. Professor Edzard Ernst is continuing to claim specific credentials in the field of homeopathy, as shown in the *Daily Mail Online* recently (our emphasis)
  - 13.1.1. “Here the professor, who is himself homeopathically trained and works at the Peninsular Medical School, Universities of Exeter and Plymouth, reveals why he thinks such remedies are a waste of time.” ... “Having worked in Germany’s only homeopathic hospital in my youth, where I advocated the therapy’s use, I have a good understanding of its principles.” (Edzard Ernst, ‘Complementary therapy: What’s the point?’, *Daily Mail Online*, [no date]) [attached as “Ernst Mail”]

### 14. Response 12

- 14.1. In the light of the investigation team’s assessment, the summary of our response should include more information about the evidence we have provided, including:
  - 14.1.1. The fact that we provided three critiques of the report;
  - 14.1.2. The information about 70 MPs signing an Early Day Motion criticising the report;
  - 14.1.3. The Government’s rejection of the key demands of the report;
  - 14.1.4. The additional information about the questionable links between the committee and Sense About Science, an organisation opposed to homeopathy.

## Assessments

The points made below are in addition to the General Points made at the start of this document.

### 15. General

We consider the choice of these general remarks highly misleading.

- 15.1. It is a truism that an empirical paradigm is scientifically unreliable, so it is misleading to suggest that this is simply a belief of H:MC21.
- 15.2. We object to the use of the word “nevertheless” in the second sentence as it produces a fallacious and highly misleading contrast, implying that H:MC21 accepts unreliable evidence when it supports our case. In fact, H:MC21 accepts evidence which uses scientifically valid parameters, and this should be made clear.

- 15.3. As we and others have pointed out, the conclusions of the Commons Science and Technology Committee report are not based on scientifically valid parameters or even on parameters valid within EBM, and so these conclusions are unsound and inconsistent with the ASA's own guidelines (see 2.1.1 and subsections).

## **16. Assessment 1**

- 16.1. As already stated, the status quo is that homeopathy is an established form of medicine (see 2 and subsections above), and so there is no need for us to meet ASA guidelines applicable to “controversial”, “new” or “breakthrough” claims.
- 16.2. As we and others have pointed out, the conclusions of the Commons Science and Technology Committee report are not based on scientifically valid parameters or even on parameters valid within EBM, and so these conclusions are unsound and inconsistent with the ASA's own guidelines (see 2.1.1 and subsections).

## **17. Assessment 2**

- 17.1. The investigation team's argument relies on confusing scientific and popular meanings of terms, and so is an invalid argument (see 3.1.4 above).
- 17.1.1. We used the term “benefited”, but the investigation team has chosen to replace this with the specific term “reduction in the symptoms”, implying a shift to a scientific use of terminology appropriate to the discussion of research evidence. We do not object to this substitution, so long as the argument continues using scientific meanings of terms.
- 17.1.2. In this context, the study used objective methods of information-gathering appropriate to determining changes in symptoms, and supported this information with information about changes in signs.
- 17.1.3. For the investigation team to state that there was no evidence of “objective clinical assessment”, it has to have switched back to the popular meaning of the term “objective”, and this is unacceptable reasoning.
- 17.1.4. Alternatively the investigation team has used these terms only in the popular sense, in which case they have no value whatsoever for assessing research, because they lack sufficient precision.
- 17.2. As already stated, the status quo is that homeopathy is an established form of medicine (see 2 and subsections above), and so there is no need for us to meet ASA guidelines applicable to “controversial”, “new” or “breakthrough” claims.
- 17.3. Furthermore, we have provided appropriate evidence for the context (evidence of effectiveness), and evidence which is both robust and remarkably consistent across differences in the size, location and emphasis of the studies.

## **18. Assessment 3**

- 18.1. As already stated, the status quo is that homeopathy is an established form of medicine (see 2 and subsections above), so the question of whether or not most readers would interpret the figures as evidence which “demonstrated that the science behind homeopathy was substantiated” is irrelevant.
- 18.2. As we have stated before, the demands which have to be met to achieve the 44% of RCTs of homeopathic treatment which are “positive” are a much greater than those required to produce the 49% of “inconclusive” RCTs, which can be a result of incompetence, ignorance or accident, so the former figure has considerably more significance than the latter.

- 18.3. In fact, if RCTs have any validity, then it is impossible for homeopathic treatment to be just a placebo and for 44% of RCTs of homeopathic treatment to be “positive” (as opposed to “negative” or “inconclusive”).
- 18.4. In the light of the investigation team’s Draft Recommendations and our responses, it is self-evident that most readers, without the benefit of the detailed explanation we have provided to the ASA, would misinterpret the number of “inconclusive” RCTs as significant evidence that homeopathic treatment is no better than placebo, when this is not the case, and so including this information would be misleading.
- 18.5. In addition, the comparison of the “positive” and “negative” RCTs is presented only generally and in passing, and any reader investigating further through the source given would immediately be presented with all the specific figures.

#### **19. Assessment 4**

- 19.1. We refer the investigation team back to the evidence supplied in our last response (12 and subsections).
  - 19.1.1. The results of the trial in Cuba showed a significant reduction in the disease in a population of 2.3 million people by no less than four different measures: against forecasts, against the historic median, against an untreated population of 8 million, and against normal response to climatic extremes.
- 19.2. The argument that “in order to consider the role of the homeopathy in the treatment of a disease, clinical evidence would need to demonstrate how that remedy acted upon the disease within the body, before then demonstrating how that remedy could be used in the field” is bizarre, since it completely fails to take into account the fact that this was precisely the process followed. The treatment was developed by applying recognised homeopathic principles of how a remedy acts, and the treatment was then successfully demonstrated in the field on 2.3 million people.
- 19.3. It is not clear what exactly the investigation team means by its statement that the treatment needed to be “shown to be efficacious against Leptospirosis under clinical conditions”, though it would appear to mean that the ASA does not accept any evidence as valid but that derived from RCTs. This position has no scientific validity and is not consistent with the EBM paradigm (see 2.5 and subsections).
- 19.4. It is perverse for the investigation team to claim that “the report on the implementation of the epidemic control application did not show that any reduction in the disease was directly or in part attributed to the homeopathic treatment” when the report justifiably concluded that “The homeoprophylactic approach was associated with a large reduction of disease incidence and control of the epidemic. The results suggest the use of HP as a feasible tool for epidemic control, further research is warranted.” [See “Bracho”]
- 19.5. As already stated, the status quo is that homeopathy is an established form of medicine (see 2 and subsections above), and so there is no need for us to meet ASA guidelines applicable to “controversial”, “new” or “breakthrough” claims, and to provide exceptional levels of evidence that the results were a result of homeopathic treatment.
- 19.6. In particular, we were not advocating a specific treatment (such as a “homeoprophylactic formulation ... prepared from dilutions of four circulating strains of Leptospirosis”) for a specific condition (such as Leptospirosis), but were referring to the effective use in principle of homeopathy as part of an integrated approach to national healthcare.

#### **20. Assessment 6**

- 20.1. The investigation team is demanding that we must substantiate the statement that “according to the British Medical Journal, of the 2,500 most commonly used treatments,

51% have unknown effectiveness” by providing evidence that “of the 2,500 most commonly used treatments, 51% have unknown effectiveness”.

- 20.2. This is the equivalent of the investigation team requiring that a marketer substantiate the statement that “according to the Bible Jesus is the son of God” by providing evidence that “Jesus is the son of God”.
- 20.3. This particular syntactical formula is specifically used to express information in a way which informs the reader that the validity of the information is dependent on the credibility of the source cited, and any educated person – the target readership of the *New Statesman* – would be aware of this.
- 20.4. We must also point out that the quotation from the advertisement is inaccurate, since the treatments were explicitly stated as being used “in the NHS”.
- 20.5. The suggestion that these statements “could discourage some readers from seeking essential treatment for conditions for which medical treatment should be sought” requires clarification.
  - 20.5.1. How many readers are included in “some”?
  - 20.5.2. What proportion of the total readership of this supplement is this group of readers?
  - 20.5.3. What distinguishes these readers from the rest?
  - 20.5.4. Is this distinction related to the advertisement or to some other factor?
- 20.6. We note the assertion that “this particular statement is to tell readers that 51% of conventional medicine has an ‘unknown effectiveness’” (Letter, 18 May).
- 20.7. Had we stated that “51% of conventional medicine has an unknown effectiveness”, we would readily accept that readers would be led to believe that 51% of conventional medicine has an unknown effectiveness, and that we would need to substantiate this statement.
- 20.8. However, we did not make that statement, but one with clearly defined limits which was also stated to be the opinion of the *British Medical Journal*, and so anyone who might believe that we made such a general statement would be seriously mistaken, and would be unable to justify their mistake without appearing particularly stupid.
- 20.9. We also note that the investigation team has further extrapolated this to include the possibility “that readers with serious medical conditions who understood that conventional medicine may not be effective, may not seek the opinion of a GP” (Letter, 18 May).
- 20.10. In other words, the investigation team appears to be seriously suggesting that a significant proportion of *New Statesman* readers are so stupid that they would misread a statement in an advertisement and conclude that they should not see their GP if they think that they have a serious medical condition.
- 20.11. We would appreciate it if the investigation could provide some evidence to substantiate such an extraordinary claim.

## 21. Assessment 7

- 21.1. As already stated, the status quo is that homeopathy is an established form of medicine (see 2 and subsections above), and so there is no need for us to meet ASA guidelines applicable to “controversial”, “new” or “breakthrough” claims.
- 21.2. We note that the investigation team has failed to take into account two important points in its argument that “H:MC21 had not sent sufficiently robust scientific data ... “to substantiate the claim that homeopathy could effectively treat chronic medical conditions”.



- 21.2.1. We have provided appropriate evidence for the context (evidence of effectiveness), and evidence which is both robust and remarkably consistent across differences in the size, location and emphasis of the studies.
- 21.2.2. The ASA has also been in possession since 2008 of evidence of the efficacy of homeopathic treatment in double-blinded trials, and so it is disingenuous to claim that “CAP and the ASA has yet to see convincing evidence for the principle of homeopathy” (Letter, 18 May).
- 21.3. We also note that the investigation team has argued that “if homeopaths claim to treat medical conditions and diseases there should be in-depth clinical trials to demonstrate that” (Letter, 18 May), but this overlooks the impact of a significant difference between the approach to treatment of conventional medicine and that of homeopathy.
- 21.4. Conventional medicine uses an empirical approach.
  - 21.4.1. An empirical approach requires that every treatment be tested independently and in carefully limited conditions, whilst acknowledging that these tests may be inadequate as a guide to general effectiveness.
  - 21.4.2. As such, conventional medicine applies treatments to conditions according to ad hoc principles, and treatments cannot be assessed according to a generalised relationship between treatments and what is being treated.
- 21.5. Homeopathy uses a scientific approach.
  - 21.5.1. In a scientific approach, whatever the form of test, the results should be consistent if the general principles are properly applied, and a treatment can be selected entirely on the basis of a general relationship between treatments and what is being treated.
  - 21.5.2. As we have already pointed out, the general principles of homeopathy are more likely to be properly applied in clinical practice, and studies of homeopathic treatment in clinical practice yield consistent and consistently good results.
  - 21.5.3. We have also already pointed out that RCTs are inherently liable to neglect the proper application of the general principles of homeopathy; that there is evidence that this has occurred; and that this easily explains the inconsistent results from such trials.
  - 21.5.4. At the same time, high quality and replicated RCTs of homeopathic treatment in specific circumstances have shown that it is efficacious, and therefore that the selection of a treatment on the basis of homeopathic principles is valid.
- 21.6. In brief, the data support a claim that the principles are valid which determine the choice of a homeopathic treatment for a specific condition being treated, and so the consistent evidence for success in treating chronic conditions can be extrapolated to the treatment of chronic conditions per se.
- 21.7. We have also pointed out that the claim we have made has received confirmation in the statements of the Cabinet Member for Health in the Scottish Parliament.
- 21.8. We note that you “understand that the theory behind homeopathy is not generally accepted” (Letter, 18 May), but this again is disingenuous, since general acceptance of the theory of homeopathy would necessarily have a huge impact on the pharmaceutical industry and medical research, and so objections to the theory cannot be divorced from questions of direct and indirect commercial interest.
- 21.9. As we and others have pointed out, the conclusions of the Commons Science and Technology Committee report are not based on scientifically valid parameters or even on parameters valid within EBM, and so these conclusions are unsound and inconsistent with the ASA’s own guidelines (see 2.1.1 and subsections). At the same time, there are

legitimate questions about whether or not the preparation of this report was influenced by the commercial interests of the pharmaceutical industry.

## 22. Assessment 8

- 22.1. We have now provided evidence in response to the new complaint about Sense About Science's activities.
- 22.2. The statement about Sense About Science's funding was made on the basis of the most recent available accounts and the previous history of the organisation's funding.
- 22.3. The accounts provided cover a period of significant activity by Sense About Science against homeopathy during which it established a reputation as "the leading organisation opposing homeopathy".
- 22.4. As such, the association between Sense About Science's funding and its reputation in respect of homeopathy is not essentially invalid or materially misleading in this context.

## 23. Assessment 9

- 23.1. To simply state that "H:MC21 believed the book was scientifically flawed because they considered that differences between the two fields of medicine had not been appropriately addressed" is to seriously misrepresent the evidence we have provided.
- 23.2. To state that "it presented one side of a controversial argument in which *Trick or Treatment* expressed the opposing view" is factually wrong.
  - 23.2.1. The whole rationale of *Halloween Science* was to assess *Trick or Treatment?* on the basis of its own internal arguments, not external ones. In doing so, it was revealed that the book was profoundly inconsistent, and therefore, scientifically unreliable.
  - 23.2.2. It was also found that the book contained errors of fact, which made it scientifically unreliable.
  - 23.2.3. Many of the errors and inconsistencies related to scientific principles, the conduct of trials, conventional medicine or therapies other than homeopathy, and so have no bearing on views for or against homeopathy.
- 23.3. We repeat that the only possible evidence to support our claim about *Trick or Treatment?* is a detailed and objective analysis of this book, and we have provided exactly this evidence.
- 23.4. We repeat that the critique was peer-reviewed and has recently been praised by an investigative journalist unconnected with H:MC21, who has expertise in this field.
- 23.5. *These arguments form a significant part of our response to this complaint, and we insist that they be included in the summary.*

## 24. Assessment 10

- 24.1. As already stated, the status quo is that homeopathy is an established form of medicine (see 2 and subsections above), so the question of whether or not these statements "would be interpreted by most readers to mean that homeopathy was a viable alternative to conventional medicine" is irrelevant.
- 24.2. As already stated, the ASA has been in possession since 2008 of evidence of the efficacy of homeopathic treatment in double-blinded trials, and so it is disingenuous to claim that "we have not yet seen robust scientific evidence" for "any efficacy claims for homeopathy" (Letter, 18 May).
- 24.3. We note your statement that "readers would interpret the claim within the context of the ad a whole", and also your claim that it could "result in readers not wishing to partake in conventional medicines and may therefore not seek medical advice from their GP."

- 24.4. We also note that it is suggested that our statements “may prevent some readers from seeking ‘conventional’ medical treatment” (Letter, 18 May), though no explanation is offered as to how this could happen.
- 24.5. The advertisement as a whole is clearly and explicitly advocating an increase in the use of homeopathy within the NHS, and so it is clearly and explicitly advocating that access to homeopathy should be through GPs.
- 24.6. In this context there is a need for evidence about these readers and why they might make such a decision.
- 24.6.1. How many readers does the investigation team consider would react in this way?
- 24.6.2. What proportion would this be of the total readership of the supplement?
- 24.6.3. In what way would these readers differ from others not making such a decision?
- 24.6.4. What factors lead to this different reaction, and how many of these factors are actually related to the advertisement and how many to other issues?
- 24.7. As it stands, the investigation team appears to be seriously suggesting that a significant proportion of *New Statesman* readers would react to an advertisement which as a whole proposes an increase in the NHS provision of homeopathy by not seeking medical help within the NHS.
- 24.8. We would appreciate it if the investigation could provide some evidence to substantiate such an extraordinary claim.

## **25. Assessment 11**

- 25.1. We stated that Professor Ernst lacked any qualifications in homeopathy, and this is factually correct.
- 25.2. It is normal for experts in a field to have qualifications in that field, and this fact is recognised in CAP Code 12.2.
- 25.3. Therefore, it is the actual lack of this qualification which implies that Professor Ernst “is not sufficiently qualified”.
- 25.4. To suggest that our stating the fact is denigratory because the fact itself is damaging to professor Ernst’s claim to be an expert in homeopathy is unacceptable.
- 25.5. We would also like to point out that the investigation team has still failed to explain whether Professor Edzard Ernst is a “product, marketer, trade mark, trade name or other distinguishing mark”.
- 25.6. This is important, because, as we understand it, these are the only categories under which a claim of denigration can be addressed by the ASA.

## **26. Assessment 12**

- 26.1. As we and others have pointed out, the conclusions of the Commons Science and Technology Committee report are not based on scientifically valid parameters or even on parameters valid within EBM, and so these conclusions are unsound and inconsistent with the ASA’s own guidelines (see 2.1.1 and subsections).
- 26.1.1. In the light of these points, the ASA needs to clarify on what basis it “understood” that the report was an “objective review of the evidence for the efficacy and effectiveness of homeopathy”, especially as the Chair of the committee explicitly stated that that “this is not an enquiry into whether homeopathy works or not” (Q174, House of Commons Science and Technology Committee, *Evidence Check 2: Homeopathy* (London: The Stationery Office, 2010), p. Ev 64). [See “Evidence Check”]

- 26.2. We note the view that “without providing further contextualisation, the claim was likely to mislead about the context of the vote”, but the evidence (see 2.1.1 and subsections above) is that the more information there is about this vote, the less possible it is to claim that the statement in the advertisement was misleading.
- 26.3. We are also unclear as to who or what is being denigrated.

### **Attached Documents**

Angell.webarchive	Singh Wired.webarchive
BBC WHO.webarchive	Slanting.doc
EDM 908.webarchive	Tyler Appointment.webarchive
Ernst Mail.webarchive	Tyler Biography.webarchive
Faculty Research.webarchive	Tyler Blog.webarchive
Kaplan.webarchive	Tyler Conference.pdf
Mastrangelo.pdf	Tyler THE.webarchive
Nonsense Not Science.pdf	Tyler Thesis.webarchive
PLoS.webarchive	Tyler Workshop.webarchive
Rutten.pdf	VoYS Letter.pdf
SAS Brown.webarchive	Walker p248.pdf
SAS Homeopathy.pdf	Walker p249.pdf
SAS Trustees.webarchive	