

Breakthrough in fight against malaria

Killer bites are caused by older insects – so scientists have developed a pesticide that attacks only them

By Steve Connor, Science Editor

Tuesday, 7 April 2009

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The fight against malaria has entered a new phase with an insecticide specifically targeted at older mosquitoes, which scientists believe will be more effective than existing pesticides.

Most malaria infections, which kill about one million people a year, result from humans being bitten by older mosquitoes. Yet existing insecticides kill mosquitoes of all ages and, as a result, the chemicals soon become ineffective because the insects develop pesticide resistance. Killing the younger creatures encourages the development of that resistance.

Researchers have begun the development of slow-acting pesticides that kill mosquitoes only after they have reached a certain age in their lifecycle, when they are most likely to transmit the malaria parasite to human hosts.

"If we killed only older mosquitoes we could control malaria and solve the problem of resistant mosquitoes," said Andrew Read, professor of biology and entomology at Penn State University. "It is one of the great ironies of malaria. Most mosquitoes do not live long enough to transmit the disease. To stop malaria, we need to kill only the old mosquitoes."

Female mosquitoes transmit malaria when they feed on blood, which they need to make their eggs. After they pick up a malarial parasite, it takes between 10 and 14 days, or two to six cycles of egg production, for the



REUTERS

Mosquitoes have been able to build up a resistance to existing pesticides

parasite to migrate to the insect's salivary glands, from where the malarial parasite can be transmitted.

Existing pesticides kill mosquitoes of all ages which exerts immense selection pressure on the insect to develop resistant strains, which can then quickly spread, making the chemical useless as a means of malarial control.

"Insecticides sprayed on house walls or bed nets are some of the most successful ways of controlling malaria, but they work by killing the insects or denying them the human blood they use to make eggs," Professor Read said. "This imposes an enormous selection in favor of insecticide-resistant mosquitoes." A study, in the online journal Public Library of Science, found that late-acting insecticides will not have much, if any, impact on the spread of resistance because younger mosquitoes will already have bred several times. Professor Mathew Thomas, of Penn State, said: "We are working on a fungal pesticide that kills mosquitoes late in life. We could spray it on walls or on treated materials such as bed-nets, from where the mosquito would get infected by the fungal spores."

It would take between 10 and 12 days for the fungi to kill the insects, so destroying the old, dangerous mosquitoes, and dramatically reducing the demand for the insects to develop resistance, Professor Thomas said.

Using data on mosquito lifespan and malaria development from hotspots in Africa and Papua New Guinea, the scientists found that insecticides killing only mosquitoes that have completed at least four cycles of egg production reduce the number of infectious bites by about 95 per cent.

Critically, the researchers also found that resistance to late-acting insecticides spreads much more slowly among mosquitoes, compared to conventional insecticides, and that in many cases, it never spreads.

Mosquitoes: The killer facts

- * Only female mosquitoes transmit malaria because, unlike males, they need a blood meal to make their eggs. They produce several batches of eggs during their lifecycle.
- * Mosquitoes find their human hosts by detecting carbon dioxide on peoples' breath, from up to 1,000ft away.
- * When she gets closer, the female mosquito makes her final choice using body odour, other volatile chemicals and sight, which accounts for why some people get bitten more than others.
- * Most mosquitoes remain within about a mile of their breeding site. They need water to lay their eggs and for the larvae to develop. But they can cross continents on aeroplanes.
- * Mosquito bites often do not hurt. But the immune reaction of the body to the foreign proteins released into the bloodstream can result in a painful swelling.
- * The malaria parasite, or *plasmodium*, infects the mosquito when the insect feeds on an infected host. But the mosquito itself does not become infectious until the plasmodium migrates from the insect's gut to its salivary glands.

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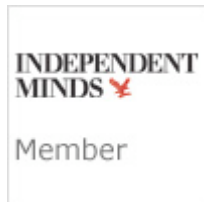
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not a word about..

 [tommytcg](#) wrote:

Tuesday, 7 April 2009 at 04:27 am (UTC)

the natural cure, known and used for over 2000 years, artemesia absinthium. The shrub wormwood`s leaves and stems have powerful anti-parasitic properties. Many parasites killed by the plant chemicals have been identified by cancer curer H R Clark, PhD ND.

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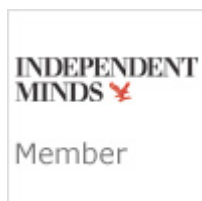
Re: not a word about..

 [corporeal4now](#) wrote:

Tuesday, 7 April 2009 at 09:02 am (UTC)

I agree, natural medicines should be used where possible.
Is the Wormwoods plant a Chinese cure?

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Re: not a word about..

 [tommytcg](#) wrote:

Tuesday, 7 April 2009 at 03:49 pm (UTC)

Now used in Nieria to cure Malaria. Recorded use in the bible. used worldwide, especially so in Dr. H R Clarks protocols.

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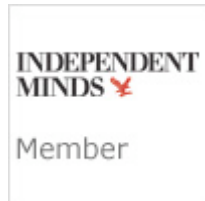
Re: not a word about..

 [wer_wind_blows](#) wrote:

Tuesday, 7 April 2009 at 09:28 am (UTC)

Probably because there's no money to be made in natural cures. Afterall, if they're natural anyone should be able to get a hold of them without much expenditure...not what the big wigs want.

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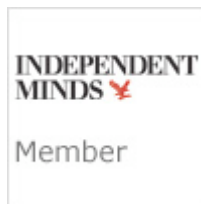
**Re: not a word about..**

 [rmcbride05](#) wrote:

Tuesday, 7 April 2009 at 01:00 pm (UTC)

Have you been, or do you know anyone personally cured of cancer by H R Clark?

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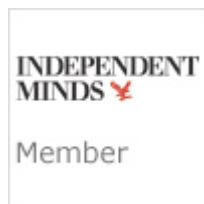
**Re: not a word about..**

 [tommytcg](#) wrote:

Tuesday, 7 April 2009 at 03:44 pm (UTC)

i have used her protocols and cured so called terminals since 1995. Sorry, not a fraud.

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**Re: not a word about..**

 [rmcbride05](#) wrote:

Wednesday, 8 April 2009 at 08:29 am (UTC)

Interesting...but I just can not agree with her hypothesis that there are only two health problems - pollutants and parasites. Unless pollutants have some sort of metaphorical meaning of which I am unaware.

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Re: not a word about..

 [adampooler](#) wrote:

Wednesday, 8 April 2009 at 02:41 pm (UTC)

There is no evidence whatever to suggest she is anything other than a quack, and rather a lot of evidence that her advice is likely to lead to many preventable deaths.

Her claims about the cause of diseases are risible. If coming from one of the ignorant television nutritionalists such as Gillian McKeith, they would be laughable; from someone advocating their 'treatments' over scientifically proven methods, they are deeply disturbing. This kind of witch-doctory mumbo-jumbo dressed up as science can serve a purpose when not touted as an alternative to real medicine, but when somebody is making unsubstantiated claims about cures for cancer, they have crossed the line from harmless quack to dangerous parasite.

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Member

Re: not a word about..

 **tommytcg** wrote:

Wednesday, 8 April 2009 at 04:57 pm (UTC)

Read the 668 pages 2007 work, then come back and comment. You have omitted plant phenols, radio activity, heavy metals, dyes etc. These are not pollutants. In any case, mainstream medicine does not recognize that all cancers are curable. That makes it fraudulent for a mainstream physician to cure you on any alternative therapy. However, a lay person may legally cure their own cancer, and they may also legally advise/help/give use of Zappers, analyze with Dr Clarks patent Synchronometer etc so as to effect a cure. Dr Clarks protocols work, and are accepted by the lay community We dont know how many physicians may use it for themselves and family, especially when we read that almost half would refuse chemo. Big Pharmas and Mainstream Medicine`s paid misinformers leap in to attack any mention of alternatives cancer cures, to defend their trillion dollar industry. They are easily identifiable with their insults, and by their referring to conspiracy theorists, conspiracy sites, and anti vaccine sites. If you dont accept Dr Clarlks work, thats your business. Go ahead and have your chemo, radiation and surgery for self and family. Those of us who do, avoid all that nonsense.

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Re: not a word about..

 **adampooler** wrote:

Thursday, 9 April 2009 at 11:52 am (UTC)

Your arguments are entirely inconsistent. Where is the motivation for 'big pharma' companies to advocate chemotherapy and radiotherapy over any alternatives? They have no patents on these, so don't stand to gain anything by suppressing effective treatments. Indeed, they have a lot to gain by finding cures- and I'm sure would be more than happy to speak to Dr Clark, were she anything more than a snake oil peddler. I'm not suggesting radiotherapy and chemotherapy are very good solutions, but unfortunately, at present they are the best we have.

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Member

Re: not a word about..

 **tommytcg** wrote:

Thursday, 9 April 2009 at 04:33 pm (UTC)

No money in chemo? Dont joke. Do you think I should believe a misinformers, as yourself, rather than a 40-year ex- Canadian Govt cell research biologist? She who has patented the resonance-comparator Synchronometer, with which to identify carcinogenic metals, pathogens, plant phenols, dyes, etc in the individual. Unfortunately.. for those brainwashed by the media, the misinformers and the oncologists, there is nothing else apart from chemo, radiation and surgery. BTW, Dr Clark is peddling information, not snake oil, so I will allow you to use `junk science` to try to discredit her. Good luck with the chemo when you need it, but watch out for chemo-brain, and the destruction of the immune system...

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Re: not a word about..

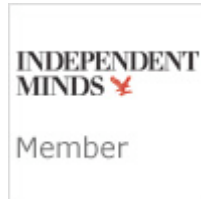
 **adampooler** wrote:

Friday, 10 April 2009 at 11:19 am (UTC)

I'm not suggesting you should 'believe' either of us. I'm suggesting that, since you're making the claim that these so-called treatments are successful at curing cancer, and that big pharmaceutical companies are actively impeding the search for a cancer cure, you yourself should require a high standard of evidence for these claims.

In the case of Dr Clark's purported cures, evidence should surely consist of more than her own written accounts: every other treatment on offer has to prove its own efficacy in clinical trials. Why should Dr Clark's methods be exempt?

In the case of the pharmaceutical companies' hinderance of cancer research, again some kind of evidence is required, not just a vague conspiracy theory.

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Re: not a word about..

 **tommytcg** wrote:

Friday, 10 April 2009 at 02:26 pm (UTC)

Tut Tut, again, gave yourself away as a misinformer, with the use of the term..CONSPIRACY THEORY. The simple reason that Dr Clark does not carry out clinical trials, is that such trials would be for publication in Medical Journals. However, the Journals have been publicly exposed as having been corrupted by Big Farma and Big Medicine. It has been publicly exposed that studies have been ghost-written, ie by paid doctors and professors who took no part in the studies: studies have omitted often deadly side effects; falsified studies have shown efficacy when there was none, and quite often had the Pharma companies sponsor the trials. I dont believe for one moment that any Medical Journal dare publish any trials that show a cancer cure, and destroy a one trillion dollar industry. It is of interest that apart from your attempts to discredit Dr. Clark, she was threatened with imprisonment in USA if she dared publish her 1997 work. She won out in court on freedom of speech. One wonders why someone was so desperate to silence her? I think only you, and your keepers, will find Dr Clarks work a vague conspiracy theory, after you have read the 668 page still ongoing work

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Re: not a word about..

 **adampooler** wrote:

Sunday, 12 April 2009 at 10:29 pm (UTC)

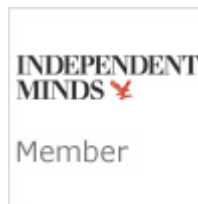
The very idea that all medical journals have been corrupted by the pharmaceutical companies is once again, absolutely absurd. And once again, a notion which would require some kind of proof- something you seem to shy away from consistently. And once again, consistent with a conspiracy theory, and not with reality.

There are many medical journals which are not in the pocket of any pharmaceutical companies (the BMJ for one). But be that as it may, this is still not the point of clinical trials. The end result of a clinical trial is not just to enable publication, but rather to provide an independent standard of proof that the prospective treatment is effective.

Yes, you can point out instances where this system has been abused. But I can point out examples where the judicial system has been abused. Does that mean we should do away with it in entirety? Well, no, it doesn't. It means we should be more vigilant to prevent these kind of systematic failures happening in the first place.

I really don't need to do anything to discredit Dr. Clark; she does a fantastically good job of that herself. Clinical trials are not terribly expensive to perform. If she really were on to something, she would insist, as any good practitioner would, that her treatments be independently verified. But she doesn't. What does this tell you?

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Re: not a word about..

 **tommytcg** wrote:

Monday, 13 April 2009 at 04:50 am (UTC)

I think you are running out of ammo. First you say I give no evidence of corrupted Journals, (which have made headlines for years), then in the next breath you admit that not all are corrupted. I am not going to write a ten thousand word essay on that, its been done. If a cure is effective; and has shown to be so by anecdotal evidence; and that that cure is not available from one`s mainstream practitioner, (not only for lack of clinical trials, but for lack of approval from the Medical Assns. that control what the practitioner may or may not practice); and it is a matter of life or death, (mainstream having run out of their admitted useless bullets); and that that cure is side effect free; and that it is completely legal to cure oneself of cancer; and that in fact that cure comes from a 40-year cell research biologist based on science, (Synchrometer and Geiger counter testing), then WHY not go ahead and follow it. This even if ther mainstream dont like it, and scream.. vague conspiracy theories, junk science, snake oil, folk-lore, no climinal trials, false hope, and any other terms they may come up with to discourage one from saving ones own life, let alone learning the causes and pathways so as to prevent. While we still have freedom for self treatment, and have access to information, no amount misinformation from Big Pharmas paid attack dogs will stop people curing themselves.

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Re: not a word about..

 **adampooler** wrote:

Monday, 13 April 2009 at 10:46 am (UTC)

Not in the least: I was simply acknowledging the fact that many

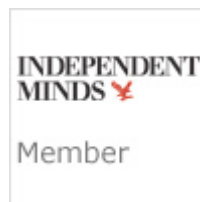
physicians (i.e. the same ones who are writing articles for medical journals) have links to pharmaceutical companies, and that this could potentially lead to a conflict of interest, whilst also pointing out that you seem to have taken Dr. Clark at her word regarding the medical establishment without having done any research for yourself.

But that is beside the point, as I stated above. The purpose of clinical trials is not simply to produce a paper for a medical journal. Publishing the results of clinical trials allows peer-review and repeatability, and these are key to a treatment being independently verified as effective.

If you're such a believer in the power of anecdotal evidence, then why not try petitionary prayer? This has a great deal of anecdotal evidence in its favour. Indeed, there are stories published in the American press with monotonous regularity testifying to its efficacy. I would suggest that a licensing process for new treatments based on anecdotal evidence would be dangerous and irresponsible in the extreme, which is why they don't do it.

You also haven't provided any persuasive reason why Dr Clark's so-called treatments have not been verified by any other practitioner. Either it's because of some shadowy big pharma conspiracy that has prevented every practitioner in the world from following it up, as you suggest. Or it's because it's a bunch of nonsense. I know which of these seems the more likely to me.

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Re: not a word about..

 **tommytcg** wrote:

Tuesday, 14 April 2009 at 01:38 pm (UTC)

Medicine is a strange field. Even though one of the roles of the research biochemist is to make important discoveries about human health, doctors in general, do not read the privately published research, nor the biochemistry research journals. Instead they read the medical journals which are often 10 to 45 years behind the actual scientific discoveries. And should anyone take a preview peak into the literature and report it before some mysterious self appointed authority in medicine does, they have been known down in history (and into this very moment in history) to have been proclaimed as quacks, or the information is branded as unsubstantiated. Oddly enough, this mysterious self appointed keeper of the facts can rely on being believed because rarely does anyone go to the scientific publications to see if indeed what was said is true. This self-policing group actually decides what shall be publicised and what shall not. It is almost as if it is an unwritten rule... It shall not be discovered and announced and taken for common knowledge until we are ready. despite the health benefits to

mankind. This thinking no doubt is based on profit and to a lesser extent on we-know-it-all, so it must be junk science.

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Re: not a word about..

 **tommytcg** wrote:

Tuesday, 14 April 2009 at 04:20 pm (UTC)

And, I forgot to add, (must be getting low on my Ginko and Hydergine supplements), add that the medical journals, including he BMJ, are still harping on about a faulty study in 1953 in Framingham Massachusetts, that has spawned the 24 billion dollar statin fraud.

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Malaria Action

 **alexweir1949** wrote:

Tuesday, 7 April 2009 at 10:36 am (UTC)

In a way it is a shame that Malaria does not kill more people with blue eyes. Then possibly some real action might be taken by the International Community. I am blue-eyed myself, and therefore I feel that I am qualified to make this statement.

Mr Alex Weir, Gaborone and Harare

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Reducing the eggs of the mosquitoes

 **vincechen** wrote:

Thursday, 23 April 2009 at 02:28 am (UTC)

I have be thinking a way if this is possible?

As I understood from the article, mosquitos will not lay its eggs at one place but places within a mile.

It will fly to find water which will be safe for the larvae.

Could we advise every houses to keep two bowls of water seperately at dark corners to lure the mosquitos laying eggs.

Every two to three days change the water once.

The bolws of water could be treated any larvae agent later.

This will totally controll the wide spread of the mosquitos within the area and it is more economic.

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