

Text only

Print this page

E-mail this page

Add to favourites

Suggest similar pages

Google™ Custom Search 

UK Science

Research & Collaboration

Science Policy

Science & Society

About us

Climate Change Home

The Earth Debates



ANTI-ALLERGY PARASITE

HYGIENE HYPOTHESIS

As rates of allergy are reported to have tripled in the UK in the past decade, the scientific finger is pointing to an over-sanitised lifestyle making our immune responses overactive. Now, a team of biologists at the University of Edinburgh, led by Professor Rick Maizels, are investigating how parasitic worms could offer a cure for modern illnesses. Countries that have largely eliminated parasites are seeing a rise in allergies and conditions such as multiple sclerosis and asthma. They want to isolate the component that has the most effect on reducing allergies and turn it into a drug using genetic engineering.

DAMPENING ALLERGY RESPONSES

Initially working on the helminth parasite as a public health problem, they found that a good proportion of people were tolerant and in fact had lower levels of allergy.

Maizels recalls, 'the helminth was instructing the immune system to be less reactive - that makes some sense because the immune system doesn't get rid of the parasites. That's not a good thing for humans but what does seem to be good is that the helminths have the effect of dampening allergy.'

If they can identify in the helminth parasite the mechanism that dampens allergy, it can treat allergies without expecting people to be infected by the parasite. They are excited by how their work crosses into other areas of research, including expertise in paediatric allergy and biochemistry

FINDING THE RIGHT MOLECULES

They have the helminth molecules, which they think are involved in the process so now the task is to identify what each one does. Maizels says 'our biggest challenge is that we need to do more than one thing at once, because different things are happening. It's a good problem. The principle of the approach is important, but we don't have the outcome yet.'



He expects it will take at least another year to complete testing of the individual components. Then the next step would be to find an industrial partner who is interested in developing one of them. Another positive impact of their work is the implication it has for our understanding of the relationship between public health and hygiene. We just need to find the right bit of the dirt.

LEARN ENGLISH SCIENCE ACTIVITIES

Why not do a language activity based on this cubed story on [Anti-allergy parasite?](#) You can double-click on any word on this page for a dictionary definition.

'CUBED' WEBZINE



- ▶ [DANCE AND PARKINSON'S DISEASE](#)
- ▶ [HIGH SPEED LIGHT HARVESTER](#)
- ▶ [SECRETS OF REGENERATION](#)
- ▶ [ADDICTION: NATURE OR NURTURE?](#)
- ▶ [SMARTER PARKING](#)
- ▶ [SILVER LINING](#)
- ▶ [ANTI-ALLERGY PARASITE](#)
- ▶ [PANCREAS PROTECTOR](#)
- ▶ [POP HIT DETECTOR](#)
- ▶ [BODY SENSITIVE CANCER TREATMENT](#)
- ▶ [CHEAPER SMARTER PHONES](#)
- ▶ [SPORTS TRAINING TOOL](#)
- ▶ [LIGHT ENERGY HARVESTING](#)
- ▶ [KITCHEN SINK FRENCH](#)
- ▶ [CLEVER CAMERAS](#)
- ▶ [CATALYTIC CLOTHING](#)
- ▶ [SMART SURVEILLANCE](#)
- ▶ [SUPER BROCCOLI](#)
- ▶ [KICK AND CLICK](#)
- ▶ [PICO SECURE ACCESS](#)