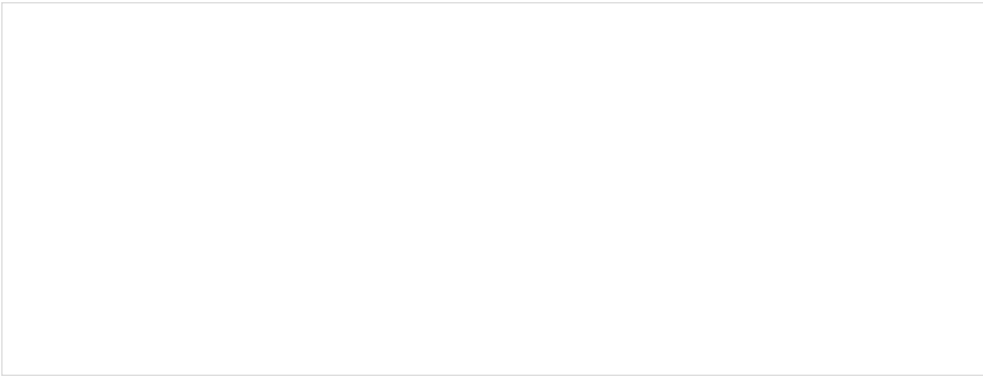




Science 18 AUG 2021 2:42 PM AEST

Infection method behind ‘crop killer’ bacteria revealed



An interdisciplinary team of scientists from Nanyang Technological University, Singapore (Singapore) has identified, for the first time, a key mechanism by which a dangerous plant can infect crops.

The Xanthomonas bacteria, known as the “crop killer”, is a globally prevalent bacterium c infecting 400 different plant species. It causes bacterial spots and blights in the leaves an the plants it infects. In some cases, once the disease takes root, a farmer’s only recourse down and burn the entire crop of plants to stem the spread of disease.

The NTU researchers identified the exact cellular-level mechanism by which the bacteria penetrate and hijack a plant’s immune system, therefore leaving them vulnerable to infec

The Xanthomonas bacteria infects and damages plants by injecting toxic proteins into th These proteins hijack and take over the plant’s normal biological processes, preventing t mounting an immune response.

The research team discovered that the toxic proteins interacts with plant cells like liquid allowing the bacteria protein to “glue” onto the plant cell and merge into it. This lets the Xanthomonas bacteria infiltrate and invade the plant cell, leaving it vulnerable to infectio

Understanding exactly how plants and crops are infected by bacteria is a crucial step in d methods to prevent their infection and produce crops that can resist the disease.

The team has obtained a provisional patent for a toolkit they have developed that allows to replicate the infection process. This will allow researchers to test potential solutions fo strengthening crop immunity in laboratory settings. It also has potential applications for synthetic biology and agri-food technology.

Timeline

Platforms’ dominance of apps market needs to be addressed

12:10 PM AEST

Councillor Suvaal named Deputy Mayor

12:06 PM AEST

Infrastructure Victoria strategy provides much needed boost for Victoria

12:04 PM AEST

Childcare sector under pressure as pandemic hits

12:03 PM AEST

Nationwide search starts for new Council CEO

12:02 PM AEST

ACON statement on arrest of suspect in Raymond Keam case

12:00 PM AEST

Drive-through hub welcomed in bid to improve Hume City vaccine access

12:00 PM AEST

Nation-wide search starts for new Council CEO

11:58 AM AEST

Tag, you’re it: Researchers look to skies for tracking Southern Ocean whales. 19 August 2021

Closure of Riverside Park community facilities

11:54 AM AEST

NT Covid Update: NZ hotspots declaration

11:52 AM AEST

Queensland invests in multicultural workforce

11:52 AM AEST

Dog’s life – they’re not all equal

11:50 AM AEST

Carbon Capture and Storage is key to net zero

11:50 AM AEST

Tree lighting installed at Picnic Bay

11:49 AM AEST

White’s leadership fails at first hurdle

11:48 AM AEST

Shaping healthy and liveable Southern Grampians Community

11:48 AM AEST

Council welcomes incoming TSBE Chair

11:46 AM AEST

Government should create transport plan in response to Infrastructure Victoria strategy

11:42 AM AEST

More Drive-Through Vaccination Clinics For Victoria

11:40 AM AEST

Woman convicted of animal cruelty for starving horses

11:40 AM AEST

Weightlifter receives sanction 19 August

11:38 AM AEST

Interruption to Service – Water Supply Wallerawang 19 August

11:38 AM AEST

Up to \$1.5 billion available for off-farm efficiency projects in NSW

11:34 AM AEST

Falls in participation and hours in NSW in July: Australia

11:30 AM AEST

Average earnings growth in May similar to pre-pandemic: Australia

11:30 AM AEST

Warrgamay people have always known

11:28 AM AEST

Anti-human IgM
no-X-reactivity 1
IgG

Ad nano-tag.com

YES.120GB for I
Kiddos

Ad VIVIFI

AI reveals how c
helps SARS-CoV

miragenews.com



/Public Release. This material comes from the originating organization and may be of a p
nature, edited for clarity, style and length. View in full [here](#).

Tags: bacteria, biological, Biology, disease, immune response, immunity, infection, Nanya
Technological University, protein, research, Scientists, Singapore, species, synthetic biolo
technology, university

You might also like

NSW builders who flout Covid rules should be prosecuted

11:28 AM AEST

[Show More](#)



Popular Topics

Australia Government police
university community Australian
research NSW Victoria business
covid-19 Professor Minister
Queensland New South Wales
environment council UK industry
education Investment investigation
local council health project
infrastructure QLD AusPol crime
coronavirus Aussie import
Emergency court Impact
UK Government future New Zealand
technology Internet science
world Sydney President school

Anti-human IgM Nanobody - no-X-reactivity to human IgG

Ad nano-tag.com

AI reveals how glucose helps SARS-CoV-2 virus

miragenews.com

Surge Protection Device Lightning Protection System

Ad obo-bettermann.com.sg

Outlaw motorcycle gang arrests and seizure, South Australia

miragenews.com

Product Design Engineering - Automation & Machine Design

Ad sigmadesign-sg.com

Protected: Parkes Shire Covid Response | Mirage News

miragenews.com

Reducing Covid risk during dentist appointments

miragenews.com

Update: L452 mutations set off several Covid variants

miragenews.com

NSW latest Covid update: August

miragenews.com

Herbal medicines demonstrate potency against bartonella,...

miragenews.com



NSW latest Covid update as at 19 August

NTU ranked Top 10 globally in 10 subjects by Shanghai Ranking

miragenews.com



Who said online games are for younger generation?

Will Covid become more of a childhood disease?

miragenews.com



Faster, Higher, Stronger Together: Social Change Olympic Games



Key mechanisms behind synapse degeneration in Alzheimer's brain discovered



'Shadow waveguide' casts complex acoustic patterns to control particles



Tokyo Tech Bulletin launched

Mirage.News real-time media portal. We acknowledge the traditional owners of country throughout Australia.

All timestamps on this site are AEST/AEDT and all times in the articles are local times unless indicated otherwise.

All trademarks and rights are owned by their respective owners.

All content is used for news reporting purposes. For news reporting purposes, we rely on fair use (fair dealing) ^[1] ^[2] for textual and media content to keep the public informed of the developments. If you are a person mentioned in the story or you are a copyright holder and believe that any content should be removed, revised or taken down [us](#). See [our disclaimer page](#).