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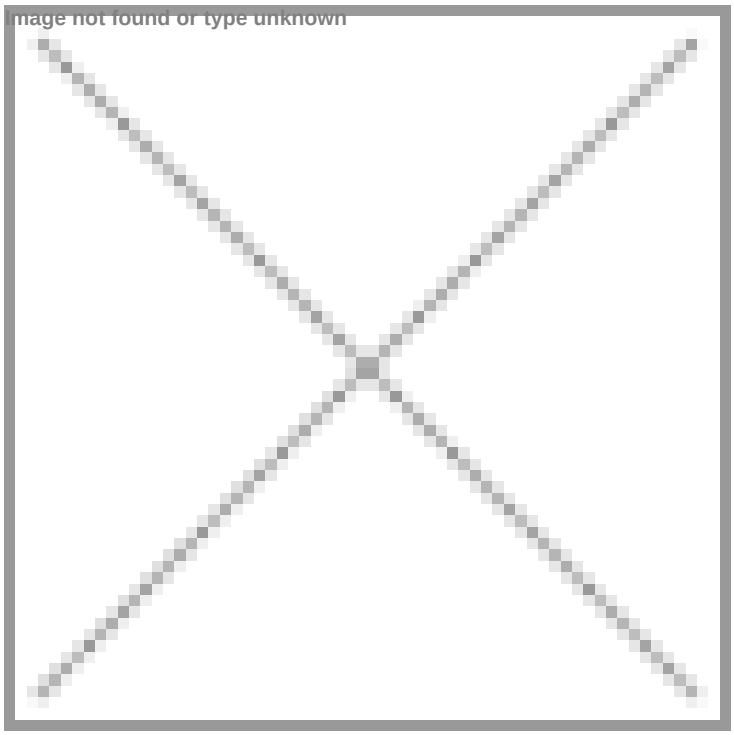
"India is on the cusp of embracing phage therapy"

31 January 2024 | Views

As part of BioSpectrum India's interactions with researchers and entrepreneurs in the area of bacteriophages, the team had the opportunity to discuss with Dr Ellie Jameson, Teaching & Research Lectureship Molecular Ecology and Evolution at Bangor (MEEB), Bangor University School of Natural Sciences, UK. Her knowledge on the global bacteriophage industry is wide and in an email interaction she stresses on the need for GMP facilities for bacteriophages.



How according to you has India progressed in the application of phage therapy to combat AMR?

India is on the cusp of embracing phage therapy. There is a lot of promise in the application of phages in compassionate treatment for patient infections that have no other treatments, such as diabetic foot ulcers. Prof Gopal Nath really helped to bring the human element home, showing graphic images of phage applications to horrific foot ulcers that have not healed for months or years, then their rapid response to the phage therapy and they finally heal. Hearing the clinicians talk about all the patients this has helped is amazing.

I was also inspired by Pranav Johri how he set up Vitalis phage therapy to make phage therapy accessible to more people living with antimicrobial resistance infections in India. Dr Taruna Anand is involved in establishing a phage bank, where other researchers can deposit or request phages. All these elements showcase the excitement and promise that brought so many of to work on phages, yet there is still an air of frustration about how to make phages more mainstream, but also ensure their safety.

This is a balancing act between ensuring that seriously ill people have access to life saving treatments, but not overstretching our capabilities and using phages as an unregulated medicine that might cause unknown harms or widespread resistance as has happened with antibiotics.

How do you envision the future of research in phage therapy in the coming years, especially in India?

The next developments that will be expanded in India and across the globe are well stocked and characterised phage banks combined with a Good Manufacturing Practice (GMP) facility for phage production. To step up phage therapy I foresee that a GMP facility for phage production is established. These central repositories will hold thousands of characterised, sequenced phages to ensure that they do not contain any harmful elements, but that phages can be quickly accessed to treat 100s of different bacteria, as needed.

There was a strong call to ensure that phages are manufactured to GMP standard so that phage therapy can be controlled as a drug for widespread use. To step up phage therapy I foresee that a GMP facility for phage production will need to be established in India to keep cost manageable and enable production to meet demand. This will ensure each batch is identical and that endotoxin levels are negligible to prevent adverse effects. With these in place I believe that due to the positive stories of phage therapy it will continue to grow and work with our antibiotics to help more and more patients.

Anusha Ashwin

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