

GangaGen Biotech receives funds to tackle drug resistant pneumonia bacteria

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Multidrug-resistant *K. pneumoniae* is a leading cause of life-threatening infections, including hospital-acquired and ventilator-associated pneumonia



Combating Antibiotic-Resistant Bacteria Biopharmaceutical Accelerator (CARB-X), based in the US, is awarding up to US\$2.5 million to GangaGen Biotechnologies, headquartered in Bangalore, India, to develop novel antibacterial proteins, called klebicins, to treat pneumonia caused by *Klebsiella pneumoniae*, a difficult-to-treat bacteria belonging to the Enterobacterales family of Gram-negative pathogens.

GangaGen will be eligible for an additional \$8.1 million in funding from CARB-X if project milestones are met, subject to available funds.

“GangaGen is researching a highly innovative approach to treat infections caused by multidrug-resistant *K. pneumoniae*, including the carbapenem-resistant and Extended-Spectrum β -Lactamase (ESBL)-expressing strains of particular clinical concern,” said Erin Duffy, R&D Chief of CARB-X, a global partnership led by Boston University dedicated to supporting the development of antibacterial products to diagnose, prevent and treat drug-resistant infections. “The project is in the early stages of development and if successful, it could represent progress in the treatment of multidrug-resistant bacterial infections.”

Tanjore S Balganes, President of GangaGen Biotechnologies, said: “We are delighted to receive CARB-X’s support to progress the klebicin programme. *K. pneumoniae* is a hard-to-treat pulmonary pathogen resistant to many of the current antibiotics. Additionally, hypervirulent strains of the pathogen are being isolated in many parts of the globe.”

GangaGen is developing klebicins, which are naturally occurring protein antibiotics, as precision agents to target *K. pneumoniae*. Klebicins' novel mechanism of action enables specific killing of the target pathogen without impacting the microbiome. Klebicins have shown potent activity against *K. pneumoniae* in in vivo studies. The CARB-X award will support further discovery, protein engineering and development of potent klebicins for the treatment of hospital-acquired pneumonia (HAP) and ventilator-associated pneumonia (VAP) caused by *K. pneumoniae*.

Vivek Daniel Paul, GangaGen's Principal Investigator said: "The klebicin molecules have a novel mode of action and represent a unique opportunity to discover, design and develop novel antibacterials. We look forward to progressing these molecules."