

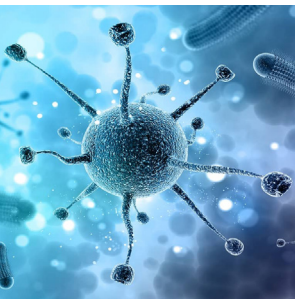
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# Scientific Tracks & Sessions

## May 20, 2019

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### *Medical Microbiology 2019*



4<sup>th</sup> International Conference on  
**Medical Microbiology**  
May 20-21, 2019 | Vienna, Austria

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# Medical Microbiology

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## Virus hunting: A new variant of torque teno virus identified in Kawasaki disease

**Yoshiro Nagao**

Fukuoka Tokushukai Hospital, Japan

**K**awasaki disease (KD) is an acute febrile illness which was first reported in 1967. KD affects children, mainly of 0-10 years. Without prompt treatment, KD damages the arteries in children's hearts, and can be potentially fatal. The number of KD has been increasing rapidly in Japan, as well as in many other countries. KD is possibly infectious, although its aetiology has been unknown. To explore the aetiological agent(s) of KD, we enrolled 11 patients of KD and 22 matched control children. The blood, faeces and nasopharyngeal aspirates were collected from these 33 children. The DNA/RNA in these samples were sequenced by a next generation high-throughput sequencer (Illumina®). Subsequently, Livermore Metagenomic Analysis Toolkit classified the DNA/RNA sequences into microbial species. It was revealed that the samples from 2 of the 11 KD patients contained large amounts of a new variant of torque teno virus (TTV). In contrast, none of the control samples contained this virus. TTV was first discovered by Nishizawa et al in 1997, but it is yet to be elucidated whether TTV

causes a human illness. Our small-scale study showed that TTV is a candidate for the aetiological agent(s) of KD. We also estimated the sample size for a future large-scale study, which would be necessary to determine the aetiology of KD. The estimated sample size was very large.

### Speaker Biography

Yoshiro Nagao earned BSc from University of Tokyo, MSc from London School of Hygiene and Tropical Medicine and MD & PhD from Osaka University. His clinical specialty is general internal medicine and pediatrics. He worked in Fukushima (2011-2013) after the nuclear disaster and served as Médecins Sans Frontières in South Sudan (2016). His research interest is epidemiology of infectious diseases (e.g. malaria and dengue hemorrhagic fever in Thailand and Indonesia) for which Cozzarelli Prize was awarded from the National Academy of Sciences of the US. He is currently working for Department of Pediatrics, Fukuoka Tokushukai Hospital.

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## Identification of new inducing signals of the MdtABC resistance-nodulation-cell division multidrug efflux pump

**Abi Khattar Z**

Lebanese University, Lebanon

One of the most relevant antimicrobial resistance mechanisms of gram-negative bacterial pathogens involves active efflux of clinically important agents by multidrug transporters from the Resistance-nodulation-cell division (RND) family. Polyselectivity of RND efflux pumps is of concern for the development of efficient drugs and inhibitors that act against the functioning and/or expression of these transporters. Using an *in vivo* insect infection model and reporter gene technology coupled to an *ex vivo* approach, we showed that the entomopathogenic enterobacteria *Photorhabdus luminescens* highly induce the expression of the MdtABC efflux pump in a tissue-specific manner and in response to proteolysis by-products during late infection stages. We are currently working on purifying such signal molecules. These findings provide a new evidence that interference with bacterial virulence and/or signal transduction pathways is an especially compelling approach, as it is thought to apply less selective pressure for the development of bacterial resistance than traditional

strategies, which are aimed at killing bacteria or preventing their growth. They should also pave the rational development of an improved new generation of efflux pump inhibitors that can competitively repress RND pumps expression rather than their blockage in order to overcome multidrug-resistance in gram-negative bacteria.

### Speaker Biography

Abi Khattar Z has completed his PhD at the age of 27 years from University of Montpellier, France and Saint Joseph University, Beirut, Lebanon. He is a research associate professor in microbiology/parasitology and the coordinator of the master program in applied microbiology at the Faculty of Science of the Lebanese University. He has just founded his own research team in microbiology in the L2GE laboratory where he is co supervising two PhD theses in collaboration with research teams from "INRA" and "CNRS" in Montpellier and Paris-Orsay in France. He has over 4 publications that have been cited over 90 times, and his publication H-index is 3.

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## Studies on antifungal activity of two edible oyster mushrooms *Pleurotus florida* and *Pleurotus eous*

**Remya Kakkot**

Bharathiar University, India


The use of mushrooms as food is probably as old as civilization itself. Many species of medicinal mushrooms have been used in folk medicine for thousands of years. The use of medicinal mushrooms in folk medicine, is best documented in the East. International mushroom research continues today, with a focus on mushroom's that may have hypoglycemic activity, anti-cancer activity, anti-pathogenic activity, immune system enhancing activity, anti-bacterial and cholesterol lowering agents; additionally, they are important sources of bioactive compounds. As a result of these properties, some mushroom extracts are used to promote human health and are found as dietary supplements. In this topic, two mushroom extract in different concentrations for *in vitro* screening were

used and found to be antagonistic against three fungal pathogens. So, the compound responsible for the activity can be separated and identified to exploit in the drugs used for the infections caused by the organisms.

### Speaker Biography

Remya Kakkot has completed her Master of Science in microbiology at the age of 22 years from Bharathiar University, Tamilnadu, India with distinction and currently residing at Vienna, Austria. She has done researches on the mushrooms and other foods that helps in the betterment towards human health. Her researches mainly focus on the area of food microbiology that involves the medicinal and effective value.

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