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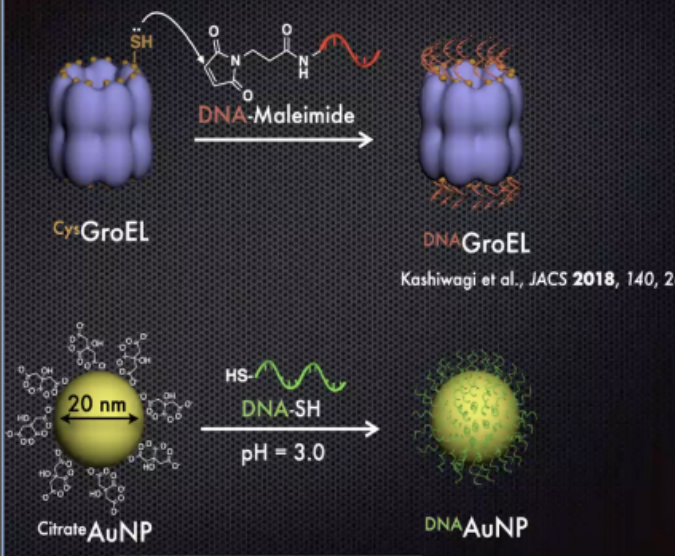
Date & Time: April 21, 2021 (15:30-16:30 JST)
Speaker: P. K Hashim
Affiliation: Project Researcher, Department of Chemistry and Biotechnology,
The University of Tokyo, Japan.
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Supramolecular Chemistry for Bio-applications: Responsive Nanocarriers for RNA Delivery

In this talk, I am hoping to introduce novel designs based on supramolecular chemistry (non-covalent interaction between molecules), which could be used as 'nanocarriers' for RNA delivery. Small molecule-based drugs (e. g. paracetamol for painkiller, doxorubicin for chemotherapy etc.) cure many of the diseases, however, only less than 20% of the diseases are 'druggable' by small-molecule drugs. An alternate approach is to use gene or protein as a therapeutic drug, which in principle can cure any diseases including cancers. One crucial problem with the gene- or protein-based drug is its instability in the bloodstream, where the drug mostly cleaved by enzymes or proteases before reaching the diseased site. Hence, nanocarriers that can 'carry' a drug from outside the body into the diseased site are necessary to achieve an effective therapeutic benefit. Important points to be considered are; the drugs should be non-covalently encapsulated into the 'carrier', should protect in the bloodstream and deliver the drug at the diseased site by a stimulus. I will introduce some of our nanomedicine formulations developed for RNA delivery (1) a 'template polymerization' approach to encapsulate a small interfering RNA (a therapeutic gene fragment) in a polymer 'nanocaplet', (2) a Protein-based nanotube consisting of an array of RNA at its interior and (3) a porous architecture based on a three-component system (chaperonin protein, DNA and nanoparticle).

DNA Functionalization



90 PARTICIPANTS

THANK YOU FOR YOUR PARTICIPATION!

In this meeting (45) Mute all

- KhuranaMalika Organizer
- "ARYA (Guest)"
- "Archana (Guest)"
- "DEBYANI (Guest)"
- "sharath (Guest)"
- ASWIN.C.B. External
- AVRAL KUMAR External
- Babitha K.S. (MAHE-SOLS) External
- Dhanraj S.B 20170002 External
- Dhvani Sandip Vora External
- Malikarjun (Guest)
- Manasa Manjunath Hegde External
- MeidinnalHazna
- Muthusamy A. (MAHE-SOLS) External
- P. K Hashim (Guest)
- PALLAVI 181701084 External
- Parama Dey External
- Ramya (Guest)
- Rekha K.N-191700102 External
- RITHIKA C BEKAL-181701066 External
- Roopa Nayak (MAHE-SOLS) External
- Vanjakshi Chandrasekharapp... External
- Vandha Rana External
- Venkidesh B.S 201700104 External
- ViswanAnchu
- YuYue
- ZHANGHuayue
- カワスニル
- ワダフレスー
- 中村史
- 高田啓之介
- In this meeting (51) Mute all
- ワダフレスー
- "ARYA (Guest)"
- "Archana (Guest)"
- "DEBYANI (Guest)"
- Manasa Manjunath Hegde External
- MeidinnalHazna
- Muthusamy A. (MAHE-SOLS) External
- P. K Hashim (Guest)
- PALLAVI 181701084 External
- Parama Dey External
- Ramya (Guest)
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- カワスニル
- ワダフレスー
- 中村史
- 高田啓之介
- KAULAshish
- Keshav (Guest)
- Kishore Banik External
- KRISHAN KUMAR THA External
- LIXiaoshuai