

## COINS Seminar #22

### “Nucleic Acid Nanoparticles for Cancer Therapy”

Dr. Ernst Wagner

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Nanosystems Initiative Munich (NIM)

**Date: Thursday, December 1, 2016**

**Time: 10:30am – 11:30am (Open at 10:00am)**

**Venue: 3F Rm#3001, Innovation Center of NanoMedicine (iCONM)**

**Capacity: 30 people**

**Registration: By sending an email to <[jimukyoku-coins@kawasaki-net.ne.jp](mailto:jimukyoku-coins@kawasaki-net.ne.jp)> including your “Name”, “Affiliation, Division, Position” and “email address”.**

#### — Abstract —

A personal perspective on > 25 years development of tumor-directed polyplexes is provided. Recognition of endosomal escape as a key bottleneck in receptor-mediated gene delivery resulted improved carrier systems such as AVET (adenovirus-enhanced transferrinfection, applied in clinical studies with IL-2 pDNA modified cancer vaccines), or PEI-based synthetic viruses for tumor-targeted systemic delivery of TNF- $\alpha$  pDNA or poly(IC) RNA in murine models. A series of delivery functions have to merge with chemical precision. For optimization, the basic design principles of natural evolution may be utilized. A chemical evolution process can take advantage of combining empirical with rational design and utilize a far more diverse chemical design space than the natural variation of only 20 amino acids. Sequence-defined artificial peptide-like oligomers can be designed for the different nucleic acid cargos and applications.



**Organizer: Center of Innovation (COI Program) by JST,  
Center of Open Innovation Network for Smart Health (COINS),  
Chairman: Kazunori KATAOKA, Research Leader,  
Kawasaki Institute of Industrial Promotion, Innovation Center of NanoMedicine (iCONM),**

**For more information: Please email to “COINS Research Support Office”**

**<[jimukyoku-coins@kawasaki-net.ne.jp](mailto:jimukyoku-coins@kawasaki-net.ne.jp)>**

**Web: <http://coins.kawasaki-net.ne.jp/>**

<Venue access>

Name: Innovation Center of Nanomedicine (iCONM)

Address: 3-25-14, Tonomachi, Kawasaki-ku, Kawasaki 210-0821, JAPAN

Access by train:

Keikyu-Kawasaki Sta. to Kojima-Shinden Sta. by Keikyu-Daishi Line (ride time about 10 minutes) and Walk about 15 minutes to iCONM (See below access map)

Access by bus

“Bus stop on East Terminal at JR Kawasaki Sta.”

- 1) No. 20 bus stop (KAWASAKI TSURUMI RINKO BUS Co.,LTD)  
 Il (kawa) 02 line; Tonomachi terminal, to “Tonomachi” bus stop (ride time about 30 minutes), walk about 3 minutes to iCONM from the bus stop
- 2) No. 20 bus stop (KAWASAKI TSURUMI RINKO BUS Co.,LTD)  
 Il (kawa) 02 line; Ukishima-Bashi terminal, to “King Sky Front Irigchi” (ride time about 20 minutes), walk about 5 minutes to iCONM from the bus stop
- 3) No. 16 bus stop (KAWASAKI TSURUMI RINKO BUS Co.,LTD)  
 Il (kawa) 03 line; Ukishima-bus terminal, to “King Sky Front Irigchi” (ride time about 30 minutes), walk about 5 minutes to iCONM from the bus stop

**Access Map**

