Innovative therapeutic strategies in the molecular targeting era.

Title of thematic issue: Innovative therapeutic strategies in the molecular targeting era.

Guest Editors: Jun-ichi Nishimura

Aims & Scope:

Our group at Osaka University identified the responsible gene for paroxysmal nocturnal hemoglobinuria (PNH), termed PIGA, in 1993. Since then, I have consistently been doing the research into pathogenesis of PNH. During my tenure at the Duke University, I worked on the development of new therapeutics using RNA aptamers. Unfortunately, this project did not result in major fruition, but at about the same time eculizumab, a humanized monoclonal antibody to complement component 5, was developed as a remedy against hemolysis in PNH. Eculizumab showed remarkable suppression of hemolysis, as well as improvement in patient quality of life and life prognosis. However, some of Japanese patients, but none of Caucasian patients, did not respond to eculizumab. We reported that poor response to eculizumab in a subset of Japanese patients could be explained by the inability of a subset of lysis-competent C5 in these patients to bind and undergo blockade by eculizumab, indicating that polymorphisms in the target proteins of antibody-based treatments that are used for other diseases might also be a point of consideration for poor responder cases. Amid such trends, several companies aiming for the development of new therapeutics are in a situation to survive, and the clinical research in this area has also become vigorous. Here, I would organize a special issue under the theme of “Innovative therapeutic strategies in the molecular targeting era”, and would introduce attractive and promising treatment strategies in the field of non-malignant hematologic disorders, including recycling antibody, bispecific antibody, small-molecule reversible protease inhibitor, RNAi therapeutic, and RNA aptamer and antidote.

Keywords: Antibody therapeutics, Bispecific Antibody, RNAi therapeutic

Subtopics:
The subtopics to be covered within this issue are listed below:

- Antibody therapeutics
- A novel recycling antibody
- Bispecific Antibody
- Small molecule compounds
- Small-molecule reversible protease inhibitor
- Nucleic acid therapeutics
- RNAi therapeutic
- RNA aptamer and antidote

Schedule:

- Publication: July 2018

Contacts:

Guest Editor: Jun-ichi Nishimura
Affiliation: Department of Hematology and Oncology
Osaka University Graduate School of Medicine
C9, 2-2 Yamadaoka
Suita, Osaka 565-0871, Japan
Email: junnishi@bldon.med.osaka-u.ac.jp

Any queries should be addressed to cmc@benthamscience.org.