"To me, there's always something to learn everyday no matter how experienced we are; and today I feel the amount of learning was huge. I too like the way we can exchange ideas".

Guess what? This is not a promotional statement given by any big pharmacy conferences or symposia, but just a genuine feeling laid down on the facebook page by our colleague who just joined the recent SHPHK Pharmacy Practice Forum!

The forum was held at the Pharmacy Department of Kwong Wah Hospital in the evening of 20th July. Around fifteen colleagues have participated in this forum, including pharmacists, pharmacy school teaching staff, interns and students. The forum was set off by a dynamic presentation, namely, "What do you know about MABs?—drug nomenclature for dummies!" given by Mr. Ng Man Keung (the pharmacist of CPO). In the beginning, Mr. Ng gave us some unfamiliar examples of monoclonal antibodies (MAB), such as Alacizumab, Technetium (99mTc) pintumomab, rozrolimupab etc. and asked the participants to guess what they are and how to pronounce them. However, we really looked like a dummy that we didn't exactly know what these "strange terms" are. Meanwhile, the participants just pronounced them in an amusing manner (you can always hear "zu", "si" "mab" "pa" during the forum just like the school kids had their ABC class!). After the interactive explanations of Mr. Ng, however, we all knew what the scientific basis behind the naming of the MAB, as well as the beauty of the pronunciations of these tedious MAB!

In brief, the nomenclature of MAB is based on the naming scheme of World Health Organization's International Nonproprietary (INN) and the United States Adopted Names (USAN) for pharmaceuticals. All MABs can be divided into four parts:

Stem—All MAB names end with the stem "–mab" as to distinguish MAB from other classes of drugs.

Source substem—It denotes the original source from which the MABs were derived: It can be produced from different animals species with their respective source substems, For instance, the first MABs,Muromonab-CD3, was generated in mice with the substem (–o-), yielding the ending (–omab). Other examples include rats (-a-), hamsters (-e-), primates (-i-) , human (-u-), chimeric (-xi-), humanized (-zu-) and chimeric/humanized hybrid (-xizu-).

Target substem—It refers to the target of the MAB, for example the targets may be tumors -t(u)- , circulatory system –c(i)-, bacteria -b(a)-or viruses –v(i)-.

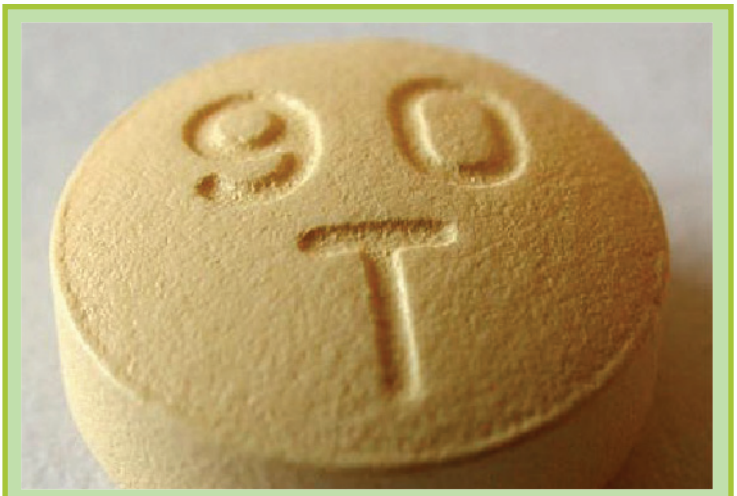
Prefix—It does not contain any meanings and is just simply the unique designation for each medicine to contribute a well sounding name!

Additional words—This is the second word following the name of the MAB which implies another substance is attached to the MAB. For example, a cytotoxic agent can be linked to an anti-tumor MAB for drug targeting purposes. In this case, the word "vedotin", which is a toxin that conjugated to glebatumumab for affecting cancer cells will give the name like glembatumumab vedotin.

Prefix-Target-substem-Source substem-Stem

e.g. Ab-ci-xi-mab (medication indicated for percutaneous coronary intervention)

So, if one day, a doctor calls for pharmacy asking what "Abciximab" is, don't panic!, I think all of us now can tell this is the monoclonal antibody(-mab), generated from human & foreign species (-xi-), which targets the circulatory system (-ci-). Also, you can pronounce the fancy name confidently to the doctor as well!



The image of a 90mg Tablet of Ticagrelor, a new antiplatelet that reversibly inhibit platelet P2Y12 ADP binding site and has to be taken twice daily

The second part of the forum was the inspiring presentation entitled "New drug info from a NON-sales rep—Ticagrelor" conducted by Ms. Ritchie Kwok (the pharmacist of QMH). It is the third P2Y12 receptor antagonist (after clopidogrel and prasugrel) indicated for acute coronary syndrome (ACS) including ST-elevation myocardial infarction (STEMI), non-ST-elevation myocardial infarction (NSTEMI) and unstable angina (UA). The main point of the discussion is it is the first reversibly binding oral P2Y12 receptor antagonist for ACS which is different from thienopyridines that bind covalently to the P2Y12 ADP-binding site for the life of the platelet. Also, it does not require hepatic metabolic activation, and provides fast onset of its antiplatelet effect as compared with high-loading dose clopidogrel in patients with ACS with aspirin. What impressed Ms. Kwok & other participants the most is the primary efficacy endpoint (i.e. the time to the first occurrence of a composite of cardiovascular death, myocardial infarction, or stroke) in the study. This efficacy endpoint demonstrates ticagrelor (loading dose of 180mg followed by a maintenance dose of 90mg BID) plus aspirin (75 to 100mg/day) reduces the rate of cardiovascular death, myocardial infarction or stroke at 12 months by 16% as compared with clopidogrel (a loading dose of 300mg followed by a maintenance dose of 75mg OD) plus aspirin (75 to 100mg/day) in a total of 18624 patients with ACS ($p<0.001$). Having said that, however, the participants also found out the drawbacks of the drug that it will increase fatal intracranial bleeding (0.1% in Ticagrelor group vs 0.01% in Clopidogrel group; $p=0.02$) and create the problem of dyspnea. Importantly, some participants pointed out the clinical decision support in HA's computerised dispensing system is triggered whenever ticagrelor is prescribed with high dose aspirin (i.e. >100mg). Hence, some measures need to be employed to solve the problems.

Last but not least, the forum ended with clinical case sharing that Febrile neutropenia was discussed between participants. Everybody is generous to share their practice experiences and knowledge regarding the treatments of this condition!

So, want to learn and share something with your colleagues regarding your daily clinical practices as well as to obtain some CE points? Don't miss out the SHP Pharmacy Practice Forum and please do join next time!

References:

1. General policies for monoclonal antibodies. (2009) World Health Organization. http://www.who.int/medicines/services/inn/generalpoliciesmonoclonalantibodiesjan10.pdf. accessed on 20/8/2012.
2. Wallentin L. & Becker R.C. et al. (2009) Ticagrelor verus Clopidogrel in Patients with Acute Coronary Symdromes. N Engl J Med; 361:1045-57.

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