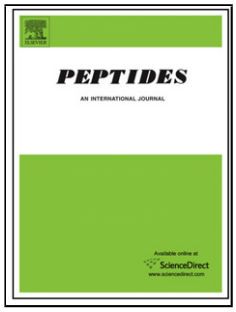

Peptides and their receptors: Treasures for pharmacological interventions

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Peptides and their receptors: Treasures for pharmacological interventions

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Peptides and their receptors are fundamental to communication within our bodies and therefore continue to be of major interest for drug discovery. The U.S. Food and Drug Administration (FDA) considers any polymer composed of 40 or fewer amino acids to be a peptide, while in PEPTIDES we are broader, defining peptides as up to a maximum of 100 amino acids.

Currently, there are approximately 100 peptide drug products marketed in the U.S., Europe, and Japan with annual global sales of about $15 to 20 billion (FDA website). In January this year, the FDA approved specialized monoclonal antibodies as a new class of drugs to treat migraine by targeting the calcitonin gene-related peptide (CGRP) receptor. Tringali and Navarra reviewed in the June issue the biology/pathophysiology of CGRP in the vascular system together with CGRP receptor antagonists/ anti-CGRP receptor mABs (1).

In addition, in September the FDA approved semaglutide oral tablets to improve control of blood sugar in adult patients with type 2 diabetes, along with diet and exercise. The physiological and pharmacological background of incretins as peptide-based agents for the treatment of Type 2 Diabetes has been covered in a special issue comprising 35 articles edited by Peter Flatt and Michael Conlon in the February 2018 issue of PEPTIDES (2) (https://www.sciencedirect.com/journal/peptides/vol/100). The market is estimated to be $7.7 billion in 2019 (www.marketwatch.com April 2019). Currently, there are several agents that constitute unimolecular agonists at incretin and glucagon receptors in Phase II clinical trials: MEDI0382 AstraZeneca - dual

GLP-1 and glucagon receptor agonist, JNJ-64565111 Johnson & Johnson/Hanmi Pharmaceutical - dual GLP-1 and glucagon receptor agonist, SAR425899 Sanofi - dual GLP-1 and glucagon receptor agonist, LY3298176 Eli Lilly - dual GIP and GLP1 receptor agonist (BioMedTracker).

This year two special issues were published in PEPTIDES – one in January on Heart Peptides: Physiology and pathophysiology with 19 articles, edited by Kazuhiro Takahashi and Karl-Heinz Herzig (3) (https://www.sciencedirect.com/journal/peptides/vol/111) and the other in June on opioid addiction with 9 articles, edited by Richard Bodnar (4) (https://www.sciencedirect.com/journal/peptides/special-issue/108QQ06874D).

At the beginning of 2020 a new issue on Glucose-dependent insulinotropic polypeptide (GIP) will be published, edited by Peter Flatt and Michael Conlon with more than 30 articles.

Antimicrobial peptides have been another important, long-time subject area in PEPTIDES and a vast resource for the development of novel antimicrobial drugs (5; 6). A new Data Repository of Antimicrobial Peptides (DRAMP, http://dramp.cpu-bioinfor.org/) has been created as an open-access comprehensive database containing general, patent and clinical antimicrobial peptides containing 19,899 entries (7).

PEPTIDES would like to continue its mission as the prime publishing forum for peptide-related research. Currently, our impact factor is 2.63 and we would like to increase it. The top countries/region for accepted articles are the EU, followed by China, Japan, and the United States. In the first 10 months of this year, the time to the first decision has been ~17 days. About 20% of the submitted manuscript are finally accepted. Editors and members of the editorial board will provide an initial screen of the manuscripts before they are subjected to peer review in order to give the authors a fast feedback in case the manuscripts should be submitted elsewhere. Authors are strongly encourage to read “Towards establishing a higher acceptance rate for PEPTIDES - The peer review process and criteria for acceptance or

rejection" in the February issue of PEPTIDES this year in order to increase the acceptance rate (8).

It has been an exciting time in peptide research and hopefully the best is still to come!

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