Tentative Outline

Special Issue for Current Pharmaceutical Biotechnology

TITLE of the thematic issue:

Nanotechnology and their impact on vascular tissue: A double edged sword

Guest Editors:

Dr. Arun K. Sharma

Aims & Scope:

Endothelial is the inner most layer of blood vessels and maintain the homeostasis in vascular system. The imbalance or damage in vascular lining leads to vascular endothelial dysfunction (VED) which is one of fatal pathological condition and considered as a hallmark for cardiovascular and renal diseases. Most of the targeted therapeutic agents including nano-formulations directly or indirectly hit this most vital organ system. Moreover, advanced drug delivery associated with either natural or synthetic therapeutic agents have their individual impact on vascular derived factors. VED is characterized by imbalance between endothelium-derived vasodilator and vasoconstrictor factors. Reduced endothelial nitric oxide synthase (eNOS) activation, decreased nitric oxide (NO) production and its bioavailability, eNOS uncoupling and increased oxidative stress in the vessel wall are the prime root cause of VED. Instead of various natural and synthetic therapeutic agents, metal nanoparticles have been widely applied in various fields of biomedical sciences because of their exceptional theranostic applications in treatment and diagnosis. Additionally, recent studies report that different nanoformulation may cause detrimental effect as well which limits the application of this novel class of treatment. Indeed, a high mortality rate is associated with vascular disorders, it creates a need of revisit the mechanistic insight of nano-formulation interaction with vascular tissue so that a novel and targeted therapeutic application may be investigated. I believe, current thematic issue will provide some interesting and promising scientific outcomes including expert review articles which open the new vista of therapeutic approach and highlight recent research developments.

Keywords:

Nano-formulations, Mechanistic insights, Vascular disorders, Advance drug delivery, Natural verse synthetic nano-medicine.
Subtopics:

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

1. Possible interaction of Nano formulations to vascular tissue at molecular level
2. Mechanistic insight of nanotechnology against Vascular Complications
3. Comparative analysis of nano-formulations impact on vascular system: Friend or foe?
4. Advance drug delivery system to enhance the efficacy of nano drugs
5. Impact of nano-formulations obtained from natural verse synthetic resource on vascular tissues

Schedule:

✧ Manuscript submission deadline: July 10, 2020.
✧ Peer Review Due: September 10, 2020.
✧ Revision Due: October 10, 2020
✧ Announcement of acceptance by the Guest Editors: November 30, 2020.

Contacts:

Guest Editor:

Dr. Arun K Sharma

Affiliation: Department of Pharmacology, Division of Cardiovascular Pharmacology, Amity Institute of Pharmacy, Amity University Haryana, Gurugram- 122413, India

Email: akumar10@ggn.amity.edu

arunpharma2013@gmail.com
List of possible contributing authors and their institutional affiliations

Titles of the proposed papers

1. Dhvanit I. Shah
   Associate Scientist, Brigham and Women's Hospital,
   Instructor in Medicine, Harvard Medical School,
   Brigham and Women's Hospital, Department of Medicine, Hematology,
   75 Francis Street, Boston, MA 02115
   Email: dhshah@research.bwh.harvard.edu
   Proposed titles: Grounds of vascular endothelial dysfunction

2. Dr Sunita Dahiya
   Department of Pharmaceutical Sciences, School of Pharmacy, University of Puerto Rico, San Juan, PR 009365067, Puerto Rico, United States
   Email: sunita.dahiya@upr.edu
   Proposed titles: Nanocarrier for drug delivery system: An emerging area to revisit

3. Ravinder Kumar Kaundal
   Postdoctoral Associate,
   Senior Research Fellow, Yale university
   Email: ravinder.kaundal@yale.edu
   Proposed titles: Possible interaction of nano/micro and target specific medicine with endothelium

4. Hari Prasad Devkota
   Department of Pharmaceutical Sciences, Kumamoto University, 5-1 Oe-honmachi, Chuo-ku, Kumamoto 862-0973, Japan
   Email: devkotah@kumamoto-u.ac.jp
   Proposed titles: Role of nanobiotechnology in regenerative biology

5. Kamal Dua
   Discipline of Pharmacy, Graduate School of Health at University of Technology Sydney Ultimo, New South Wales, Australia
   Email: kamalpharmacist@gmail.com
   Proposed titles: Emerging technologies on Nanomedicine and Nanotechnology

6. Balakumar P
   Associate Professor and Head Pharmacology
   Unit Faculty of Pharmacy AIMST University
   Semeling, 08100 Bedong Kedah Darul Aman Malaysia
   Email: pbala2006@gmail.com
   Proposed titles: Smart Drug Delivery Technology and Impact on Vascular System

7. Dr Nahlah E Ismail
   Deputy Dean of Pharmacy (Academic & Operations), MAHSA University, Malaysia
   Email: elkudassiah77@yahoo.com
   Proposed titles: Nanomedicine in Theranostics
8. Mohamed El-Shazly  
Associate Professor and Head of Pharmaceutical Biology Department, the German University in Cairo, Egypt  
Email mohamed.elshazly@pharma.asu.edu.eg  
Proposed titles: Nano Toxicology and Major challenges at Molecular Level

9. Naser Al-Tannak  
Assistant Professor at Faculty of Pharmacy- Kuwait University, Kuwait  
Email dr.altannak@hsc.edu.kw  
Proposed titles: Nano medicine and nanotechnology are a key window for cardiovascular health: fact or fiction

10. Samah Sabry  
Assistant Professor of natural products chemistry and pharmacognosy faculty of pharmacy MUST University Egypt  
Email rssmelhaggar@yahoo.com  
Proposed titles: Vascular Complications: Can metal nanoformulation illuminate the dark tunnel?

11. Seyed Abbas Mirzaei  
Associate Professor of Pharmaceutical Biotechnology at Shahrekord University of Medical Sciences, Tehran, Iran.  
Email mirzaei.a@skums.ac.ir  
Proposed titles: Effect of metal nanoparticle in diabetic and associated vascular complications