Aims & Scope: Hypertension, cardiovascular problems, diabetes together with other forms of mental illness are regarded as the most serious diseases for humans. These seem to arise from subtle phenotypic modifications of signalling pathways. The phenotypic remodelling is involved in the subversion of behaviour of cells so that their normal functions are effected leading to such diseases. Research workers are facing great difficulty in clearly establishing the relationship between molecular signalling and disease. In view of this relatively little progress has been made in designing effective treatments.

Many diseases are caused by defects in signalling pathways which include various communicable and non-communicable diseases. The nature of these defects and how they are induced varies enormously. The pathogenic organisms interfere with signalling events and lead to some of these defects. Many other diseases can also be traced to defects in the function of cell signalling pathways.

The non-communicable diseases are the commonest cause of death and disability in modern world although these are non-infectious and non-transmissible. Obesity, diabetes, cancer, cardiovascular problems, chronic respiratory and neurological diseases are the most common non-communicable diseases. Many of these share common pathophysiological and molecular mechanisms as per the latest findings. These at least in part appear to be different manifestations in different organs of similar molecular alterations.

Mitochondrial alterations, oxidative stress and inflammation are inextricably linked and play major roles in the onset and development of such diseases. The genotypic modifications resulting from either somatic or germline mutations have been somewhat easier to diagnose, but
have also proved difficult to treat as witnessed by the failure of many of the gene therapy strategies.

Keeping these facts in view, there is an urgent need to understand more about the states of these diseases in order to design better therapies. The enormous redundancy built into cell signalling mechanisms offers many opportunities for discovering new ways of correcting many disease states. Therefore, the aim of the present special issue is to invite researchers to contribute review articles pertaining to all the spectrum of communicable and non-communicable diseases and various signalling events involved with them.

The issue will cover advances in technology relevant to the theme at present, as well as most current treatment approaches (including herbal as well as synthetic) for early-stage, advanced and recurrent diseases, while recognizing the importance of oxidative stress, microRNA therapy and few others. The articles to be included in this special issue will fill the gap in the knowledge of modern as well as ancient therapies pertaining to the said diseases like neurodegenerative disorders, nephrological diseases and various cancers.

**Keywords:** cancer, nervous system diseases, nephrological diseases, signaling, microRNA, immunological disorders.

**Subtopics:**

- Interferon signaling pathway and virus-encoded microRNAs.
- Molecular signalling during HCC from the perview of natural products.
- Neuroprotective approaches in drug design.
- Role of Mitophagy in Neurodegenerative disorders
- Deregulated signaling pathways in cancer
- Signalling Pathways during kidney injury.
Schedule:

- Manuscript submission deadline: **December 2019**
- Peer Review Due: **Jan 2020**
- Revision Due: **Feb 2020**
- Announcement of acceptance by the Guest Editors: **March 2020**
- Final manuscripts submitted to Publisher: **March 2020**

Guest Editor Affiliation:

- **Dr. Maryam Sarwat:** Associate Professor, Amity Institute of Pharmacy, Amity University, NOIDA, India.
- **Prof. Munir Öztürk:** Professor, Department of Botany, Faculty of Science, Ege University, Izmir, Turkey.