Special Issue

Copper Radiopharmaceuticals for Theranostic Applications

Message from the Guest Editor

Cu ions are essential for multiple biological processes and are indispensable in the maintenance of life. Cu is found in several effective compounds with anti-inflammatory and anti-proliferative properties and is involved in cancer development, angiogenesis, and metastasis. 60Cu, 61Cu, 62Cu, 64Cu, and 67Cu are promising for molecular imaging applications. 64Cu is the most widely studied radioisotope for PET imaging and cancer therapy. Copper chloride (64CuCl2) is a radiopharmaceutical with theranostic capacity and simultaneous diagnostic and therapeutic abilities. 64Cu, with a half-life of 12.7 hours, decays by emission of □- particles, electron capture, and emission of □+ particles. The □+ can be used for PET imaging, and □- particles and Auger electrons emitted have therapeutic properties. 64Cu enters cells via the CTR1 enzyme, and it is distributed in different organelles. The direct link between 64Cu and the DNA chain allows for noninvasive and effective theranostic applications. This Special Issue is dedicated to all efforts towards copper radiopharmaceuticals for theranostic applications.

Guest Editor

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We hope to handle your contribution to *Pharmaceuticals* soon.

Editor-in-Chief

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