

Short Note on Nuclear Pharmacy

Yamini Patel*

Department of Pharmaceutical Chemistry, Dattakala College of Pharmacy, Maharashtra, India

DESCRIPTION

Nuclear pharmacy is a subject area of pharmacy practice which involves compounding and the dispensing of radioactive materials for use in nuclear medicine procedures. The development of nuclear pharmacy as a better field followed the development of the nuclear medicine as a recognized field by the American Medical Association in the early 1970's.

Earlier to discuss the field of nuclear pharmacy, it is very important to understand some background regarding the radioactivity and how it is used in patients. The Most familiar word radiation, and immediately have an image of danger or injury. However, most of the people do not realize that there is a radiation in everyone's lives in many different forms. Electromagnetic radiation which is emitted from the sun, from signals which are sent from radio and TV stations and from radar used to track airplanes, and even visible light. In this particular field, we are interested in a type of radiation which is termed as radionuclides. A radionuclide is an atom that has an unstable nucleus, Recalling chemistry, the nucleus of an atom consists of protons and the neutrons. There is a chance of a few naturally occurring radionuclides. Any nuclide containing atomic number greater than 83 is to be called as radioactive.

The type of emission that is given off will determine whether or not the radionuclide will be suitable for imaging or for treating a patient. The radiologic specialty of the nuclear medicine uses small quantities of the radioactive materials with a known type of the emission. By "tagging" the radioactive source to some of the

compounds that is known to be localizing in a specific area of the body, the compound will carry the radioactive compound to the desired site. By using the specific detection device called as a gamma camera, which makes possible to detect the emissions given off by the radioactive material and to create images of the relative distribution of the radioactive source in the body.

As nuclear medicine procedures became more often used, the need for someone to prepare the labeled products for the administration to the patients became more evident. While many large hospitals were able to use the pharmacists with training in the handling of the radioactive material, smaller hospitals were unable to utilize the nuclear medicine procedures because they did not have the staff to prepare the appropriate doses in a cost effective manner. As a result, in the early 1970's, the concept of the centralized nuclear pharmacies was initiated. The developed, the centralized nuclear pharmacy served as a "drugstore" for the nuclear medicine department. Nuclear pharmacists serve as vital links in the provision of the nuclear medicine services. By working closely with the nuclear medicine staff, nuclear pharmacists can contribute a tremendous amount to the provision of the care for the patients who are undergoing nuclear medicine procedures. While similar to the traditional pharmacy, nuclear pharmacy is also in many ways unique, and this can be a challenging and the rewarding career choice for the pharmacists.

Correspondence to: Yamini Patel, Department of Pharmaceutical Chemistry, Dattakala College of Pharmacy, Maharashtra, India, E-mail: yami79277@gmail.com

Received: 04-Mar-2022, Manuscript No. PACO-22-17063; **Editor assigned:** 07-Mar-2022, PreQC No PACO-22-17063 (PQ); **Reviewed:** 21-Mar-2022, QC No. PACO-22-17063; **Revised:** 28-Mar-2022, Manuscript No. PACO-22-17063 (R); **Published:** 04-Apr-2022, DOI: 10.35248/2471-2698.7.148

Citation: Patel Y (2022) Short Note on Nuclear Pharmacy. Pharm Anal Chem. 7:148.

Copyright: © 2022 Patel Y. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.
