

## Essentials of Medical Pharmacology

*KD.Tripathi* (Editor), Jaypee Brothers Medical Publishers, 8<sup>th</sup> edition 2019, 1064 pages. ISBN: 978-93-5270-499-6

This is a well written, comprehensively structured book written in a simple, clear, easy and understandable language published on the 50<sup>th</sup> Anniversary of Jaypee Publishers with cover page giving a royal look. The first edition was printed in 1985. The new book provides an updated information on the newer drugs like sacubitril, fifth generation cephalosporins etc and covers all aspects of the drugs from mechanism of action to clinical application. All the drug classifications are colourfully well illustrated and well tabulated in this edition to enhance rapid comprehension and retention of information. Important points have been highlighted in tabular column in each chapter. The addition of a new chapter on Nitric Oxide and Vasoactive peptide signal molecules provides a deep insight into the newer molecular targets in cardiovascular disorders and is worth reading. The unique traditional feature of the book providing common brand names of the drugs with the dosage forms for the commonly

used drugs is maintained in this edition too. Case scenarios given at the end of each chapter motivates the reader to apply the pharmacological principles into clinical therapeutic decision making. Answers are provided later in the book. This is a concise guide to pharmacology for undergraduate and postgraduate medical students. The contents of the book provide adequate scientific content in a simple language that is easily understandable. The book is a valuable asset to the medical students preparing for the competitive examination both inside and outside the country. Major changes have been done in chapters on tuberculosis, viral infections, HIV on the treatment guidelines based on the latest recommendations. The book also contains CD/DVD-ROM that is complimentary with the purchase of the book. We strongly recommend this book for medical undergraduates and postgraduates for a personal collection as the scientific content of the book satisfactorily meets the needs of the current medical curriculum.

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### Scientists accidentally create mutated plastic-eating enzyme

Scientists accidentally created an enzyme that degrades plastic which is used to make water bottles usually. This plastic can otherwise take hundreds of years to degrade.

Researchers examined at the crystal structure of a recently identified enzyme called PETase, that evolved naturally and was already known to digest plastic made of polyethylene terephthalate (PET). However, their research had a serendipitous result when they introduced a mutation to PETase. The result was a new type of enzyme that degrades plastic more efficiently than the original. PETase was initially found in the bacterium *Ideonella sakaiensis*, which was used to degrade plastic in PET bottle-recycling facility in Japan. The enzyme's function was to break down a waxy coating on plants and the researchers made modifications to the enzyme such that it digests plastic.

Humans have loaded down the planet with an estimated 9 billion tons (8.3 billion metric tons) of plastic, half of which has been produced since 2004. The new discovery suggest that it may be possible to solve the global problem of plastic pollution by introducing human-engineered improvements to an enzyme.

*Source: Proceedings of the National Academy of Sciences. 2018 May 8;115(19):E4350-7.*