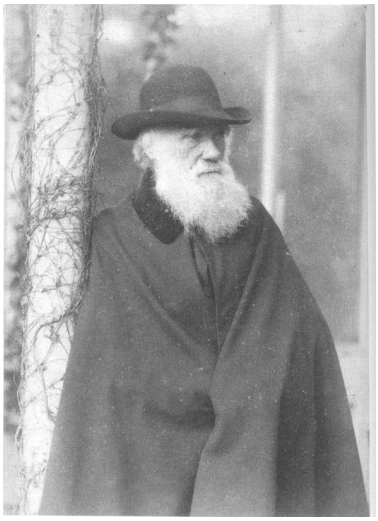
Among these, the first book mostly deals with the argument for 'descent with modification' and the evidence consistent with his evolutionary views, whereas really detailed exposition of selection as the mechanism driving adaptive evolution can be found in the second book. The third book deals with sexual selection and the evolutionary explanations for human behaviour.

Janet Browne's collection, 'The Quotable Darwin' is an interesting but somewhat strange publication. The main body of the book consists of 306 pages of carefully selected quotes from Darwin's various writings, ranging from working notebooks to letters to books, as well as some quotes from contemporaries and friends. The quotes are collected thematically into six major sections, and the main text is preceded by a brief chronology of major events in Darwin's life. What this means is that there is no overview to guide the reader through the selection of quotes. Effectively, the book loses much of its charm for a reader who is not already quite familiar with the general events and historical context of Darwin's life and work. In this sense, this is really an 'insider' book that is certainly a most enjoyable read and ready reference for evolutionary biologists and historians of biology, but is unlikely to be of similarly high interest to the general reader. As this book is one among the 'Quotable…' series by Princeton University Press, perhaps the format is a nod to the present era of social media dominating the dissemination of information in small postable packets.



Darwin, photograph by Elliott and Fry, c 1881.

One advantage of the format of this book is that it makes for convenient reading in fits and bursts, suitable perhaps for modern life. The more interesting quotes to me – a practising evolutionary biologist – were actually the ones not directly about Darwin's work. There are a large number of autobiographical notes and observations of nature and humans in distant lands that are of interest to any fan of Darwin. Of particular interest are quotes expressing Darwin's observations on many of his contemporaries and vice versa. Some quotes by Darwin's contemporaries who knew him in England or visited him from Europe, like Hugo de Vries and Ernst Haeckel, sketch little word pictures of Darwin that are most interesting to read. Also of considerable interest are the quotes pertaining to religion, through which we get a glimpse into how Darwin slowly abandoned hitherto strongly held Christian beliefs, despite the disapproval of many among his closest family and friends.

Also of great interest are the many quotes reflecting Darwin's views on science as a venture, and how he came to see scientific investigation as far superior to religious pronouncements as a means of making sense of the world. Also fascinating to read are quotes that set Darwin apart from many of the common prejudices of his time, especially his abhorrence of slavery and the unjust treatment of those considered inferior to Europeans, although in some respects he does echo the times as when he implicitly assumes European civilization to be the pinnacle of human development.

What is missing in this collection are quotes from the second book, which would be particularly relevant to a reader who happened to be an evolutionary biologist, as it was in those two volumes that the concept of natural selection was developed in its richest detail. Other than that this book is an excellent read and, importantly in the present times, a good source of ready quotes that can be posted on social media sites. The book also introduces Darwin the person to the reader, through the many quotes dealing with mundane or personal topics, or his observations of his children. Overall, it is an excellent book for those interested in, and already somewhat familiar with, Darwin and his work. For those who have read Darwin's technical books, this little volume will be a wonderful complement to their appreciation of one of the most remarkable figures in the intellectual history of mankind.

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Annual Review of Pharmacology and Toxicology, 2017. Paul A. Insel *et al.* (eds). Annual Reviews, 4139 El Camino Way, Palo Alto, California 94303-0139, USA. Vol. 57. xiv + 656 pages. Price: US$ 107.

This is an important and timely collection and presentation of the concepts related to pharmacology and toxicology. It contains several chapters/units, covering a wide spectrum of topics under this subject.

The book gives an insight on major advances resulting from the recent scientific discoveries and applications of the new scientific techniques, experimental tools and approaches, and their impact in the field of basic and clinical research in pharmacology and toxicology. It also highlights the patient care aspects of the above-said practices. The concepts described in this book include: nanobodies to study G protein-coupled receptor structure, strategies to develop inhibitors of motif-mediated protein, aptamers as therapeutics, pharmacology of antisense drugs, targeted protein degradation by

small molecules, stem-cell extracellular vesicles, accelerating drug development and antiviral therapies, central nervous system (CNS) target identification and validation, approaches to improve anti-infective vaccine efficacy: regulation and target for drug development for dyslipidaemia, big data for systems pharmacology, changing provider behaviour in the context of chronic diseases, endocannabinoids and cannabis at the intersection of stress and reward, organophosphorus xenobiotic toxicology, cure for ebola, challenges and opportunities in protease-activated receptor drug development, autophagy, intestinal and hepatocellular transporters and their therapeutic effects, adipose vascular coupling and potential therapeutics, mitochondrial mechanism of neuronal cell death, nanodomain regulation of cardiac cycle nucleotide signalling, functions of lysosome in cancer biology, discovery of Suvorexant and the first orexin receptor drug for insomnia, mitochondrial dysfunction and myocardial ischaemia-reperfusion, implications for novel therapies, GPER (GPR30): a nongenomic receptor for steroid hormones with implications for cardiovascular disease and cancer, and new targets for drug treatment of obesity.

Nanobodies described are recombinant antigen-binding fragments of camelid heavy chai only antibodies highly useful for stabilizing distinct conformational states of G protein coupled receptors (GPCRs) and have the potential to be explored as therapeutics. The protein–protein inhibitors that are peptidic in nature are described covering the solutions to pharmacokinetic challenges associated with administration of these molecules. Details of the extensive pharmacological optimization required to tailor an aptamer as a therapeutic agent and the pipeline that is developing in this area are highlighted in the chapter. Applications of antisense nucleotides targeting RNAs, including stability, tissue availability and biological activity along with their pharmacokinetic and pharmacodynamics studies are described. The role of small molecules in the degradation of proteins and their potential in regulating intracellular protein levels are covered. The chapter dealing with extracellular vesicles (EVs) derived from stem cells in healing the injured tissues with the help of proteins and nucleic acids has been described with challenges in quality, regulatory and safety aspects of EVs. Acceleration of the drug-discovery process for emerging infections, such as present outbreaks, and their wider application for other therapeutic areas are described in detail. The chapter deals with the idea of implementing target-based screening rather than the presently followed phenotypic screening for drug development in the area of CNS diseases. Focus on vaccinology is the theme of a chapter, with emphasis to generate and administer new, general and improved vaccines for the treatment of even antibiotic-resistant species. There is a review of proprotein convertase subtilisin/kexin type-9 (PCSK-9), a recently recognized target for dyslipidaemia and its inhibitors. The pharmacological data generated during drug development are of immense value, and the chapter lists several obstacles and suggests potential solutions to the use of big data. The last chapter deals with different aspects of implementation of available knowledge and clinical inertia that is detected.

Overall, this is an effective and reader-friendly book with chapters covering wide concepts in pharmacology and toxicology. All the topics and concepts are organized and presented in an impressive format using tables, photographs, diagrams and flowcharts wherever necessary so as to make it simple and understandable. I recommend this book as reference to universities and research institutes engaged in the fields of pharmacology and toxicology.

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