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The engines of Hippocrates: from the dawn of medicine to medical and pharmaceutical informatics / Barry Robson, O.K. Baek

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Abstrak

The convergence of medical science, biology, pharmacology, biomedical engineering, healthcare, and information technology is revolutionizing medical and scientific practice, and has broader social implications still being understood. The Engines of Hippocrates provides a unique, integrative, and holistic look at the new paradigm of information-based medicine, covering a broad range of topics for a wide readership.

The authors take a comprehensive approach, examining the prehistory, history, and future of medicine and medical technology and its relation to information; how history led to such present-day discoveries as the structure of DNA, the human genome, and the discipline of bioinformatics; and what the future results of these discoveries may hold. Their far-ranging views are their own and not necessarily those of the IBM Corporation or other employers.

The Engines of Hippocrates helps readers understand:

- Forces shaping the pharmaceutical and biomedical industries today, including personalized medicine, genomics, data mining, and bionanotechnology
- The relationship between pharmaceutical science today and other disciplines such as philosophy of health, history, economics, mathematics, and computer science
- The integrated role alternative and non-Western medicines could play in a new, information-based medicine
- Practical, ethical, organizational, technological, and social problems of information-based medicine, along with a novel data-centric computing model and a self-adaptive software engineering model, and corresponding information technology architectures, including perspectives on sharing remote data efficiently and securely for the common good