Cancer still remains a most important killer and even though synthetic chemotherapeutic agents are currently used, they are cost-intensive and do not always meet the expectations. In parallel, there is increasing evidence for the potential of nature-derived compounds on the inhibition of different steps of cancer initiation, promotion and progression. We believe that all diseases can be found in Nature but that Nature also provides the efficient cures as said the Prophet of Allah: Allah did not create any illness without also creating the remedy. The content of this book gives a multi-disciplinary approach into the anti-cancer research field related to natural products and dietary compounds. Mainly, it covers the area of antitumor activity through an in-depth description of the cytotoxic, anti-inflammatory and anti-oxidant properties in cancer, inflammatory and cardio-vascular diseases. The cell death inducing mechanisms (apoptosis, anti-proliferative activity, angiogenesis, cell cycle control, cytostatic property and autophagy) give an overview of how natural products are able to target cancer cells. We believe that all diseases can be found in Nature but that Nature also provides the efficient cures as said the Prophet of Allah: Allah did not create any illness without also creating the remedy. The content of this book gives a multi-disciplinary approach into the anti-cancer research field related to natural products and dietary compounds. Mainly, it covers the area of antitumor activity through an in-depth description of the cytotoxic, anti-inflammatory and anti-oxidant properties in cancer, inflammatory and cardio-vascular diseases. The cell death inducing mechanisms (apoptosis, anti-proliferative activity, angiogenesis, cell cycle control, cytostatic property and autophagy) give an overview of how natural products are able to target cancer cells.