



# Microbes: Hidden Helpers of Human Life

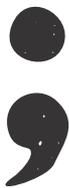
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# Microbes: Hidden Helpers of Human Life

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## Preface

Some of the strongest allies are the invisible ones in the world of nature and its enormous complicity. Microbes - small living beings that cannot be seen with the naked eye have silently determined the health, industry and the environment of a man throughout centuries. Nevertheless, the efforts made by them are always in the shadow because they are regarded as disease causing agents. This book, the Microbes: Hidden Helpers of Human Life attempts to give light to the astonishing part of the microscopic companions in our day to day lives.

In the human body, gut microbes create a prolific ecosystem which affects the mechanisms of digestion, immunity and even psycho-emotional health. They are silent builders of health and convert food into energy and save us against the bad designers. In addition to the body, biodegradable microbes are the recyclers of nature and they take apart waste materials and other pollutants in order to bring about balance back to the ecosystems. They remind us of the fact that sustainability starts at a microscopic level where life is renewed by death and regeneration.

No less interesting are the microbes that are used in our kitchens and bakeries to enrich them. Through the ingenuity of human beings, yeasts and bacteria are used to transform simple substances to bread, cheese and fermented dainties. They craft their art in the chemistry of taste, feel and food, transforming the simple meals into traditions and activities of their cultural experience.

It is an adventure into the unknown microorganized world, not in the form of danger, but of assistance. Delving into their many different uses in human health, environmental sustainability and food production we find out a truth of humbling and inspirational importance; without them, in one form or other, life as we know it would not be possible.

Hopefully, these Chapters of the Book prompt the readers to realize that microbes are an important part of biology, who are critical to human survival and development.

Dr. Rupa Verma

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