

EMERGING

INFECTIONS

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FOREWORD

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Infections have been emerging since the first microbe tried to climb the food chain ladder, preying on the protoalgae who were the primary producers of photosynthate. Some of them learned tit for tat, first learning the joys of putrefaction, then accelerating that process as they learned the comforts of in vivo parasitism. Perhaps this happened even closer to the dawn of life, depending on when the first viruses emerged to take their free lunch out of the hide of their microbial hosts.

Emergence is none other than the dark side of coevolution, a typical, inexorable biological phenomenon. But we came along with marvelous vaccines and antibiotics, with sanitary water and food; for a while, some of us practiced safer lifestyles, from handwashing to discreet sex. And perhaps we thought we had licked the bugs with our technology.

But they kept and do keep evolving, and besides having let down our guard, we have contrived a world that is safer for bugs than ever before, with instantaneous travel, mass production and transport of foodstuffs, and crowded and sharply stratified urban populations.

So, in the past decade, we have begun to rouse ourselves, and specialists in various diseases and etiological agents have learned that they have common cause with many others. And molecular and evolutionary biologists commune with heroic field workers and doctors and the public health system for a new convergence that is as intellectually challenging as it is humanly important.

This exchange of lessons is well typified in the current volume: it will have exciting news, and much to think about, after the headlines have faded. The microbial cosmos is one worldwide web of exchange of genetic information via transmittal of plasmids for virulence and antibiotic resistance. It is the least we can do to drop the parochialism that inscribed artificial boundaries between one infectious agent and another, and perhaps we can keep our place in this game without suffering the immense toll of the plagues of ancient and current history.

Joshua Lederberg
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