

Introduction

The RNA World reveals a little more of itself every day. Glimpses of a previously unseen community of RNA individuals — fragile and strong, permanent and evanescent, enzymes and substrates, structural components and co-factors — have seduced many new investigators. It is as if a door has opened onto the world of a Breughel painting with hundreds of RNA molecules doing everything imaginable and unimaginable. The discovery of microRNAs — exciting enough in its own right — was just the first taste of non-coding RNAs, with a startling array of biological functions. In parallel, new systems of RNA metabolism and biology have emerged.

In this issue, we present articles from scientists who walk through this startling universe. Two articles explore new functions for non-coding RNAs in bacteria and animal cells. The other two describe new systems of RNA decay that destroy aberrant, undesirable or damaged RNAs. As exciting as these areas are, one can be sure that they are only the beginning.

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