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What are "natural medicine" ? Many people would answer that medicinal plants or traditional Chinese medicines are a major part of natural medicine. While those still have important roles as natural medicine, advanced research on natural medicines that differ from traditional ones is being actively promoted. In this symposium, we introduce research on candidates for medicine from new resources such as marine invertebrates or marine microorganisms. The biosynthesis of plant constituents is explained using newly developed genetic manipulation technology. We also introduce the creation of "artificial natural products" through mutagenesis of the biosynthetic pathway.