The combination of the words "biochemistry" and "molecular biology" evokes debates about the definition and institutional boundaries of the two disciplines. Participants in the discussions on the relationship between biochemistry and molecular biology have linked their claims to knowledge and authority on historical issues. Foremost among these is the question of the origin of molecular biology. Biochemists have repeatedly stressed their contributions to the making of the new "molecular" paradigm. They have particularly vindicated their role in the understanding of the structure of macromolecules and of protein synthesis. Erwin Chargaff's accusation that molecular biologists were "biochemists practicing without a license" falls within this context. Historians have taken up this question by insisting on the multidisciplinary origins of molecular biology and by showing the complex, broad, and heterogenous interests that led scientists to work on proteins and other macromolecules from the 1930s onward.

In preparing this issue on "biochemists and molecular biologists", our aim was not to take up the discussion on the origins of molecular biology, but to further the studies on the realignments of practices and disciplines during the postwar era when "molecular biologists" firmly established themselves in the biological landscape. Recently Pnina Abir-Am studied the debates on the boundaries between the old and the new molecular study of life that took place in Britain and the United States in the 1960s. By analyzing the politics and the rhetoric of the discussions, she showed that not only did scientists struggle for the allocation of funds, for the definition of biological curricula,

or for the creation of institutes, but that institutional issues served to legitimize claims to knowledge.

We were interested in localizing power relationships and in bringing the study of experimental practices to bear on the creation of disciplines. Thus, we focused on biochemists and molecular biologists rather than on biochemistry and molecular biology. We wanted to look at disciplines as bodies of practices and to investigate how work at the bench was made relevant to institutional negotiations and policy-making processes, and vice versa.

All four papers in this issue focus on small groups of scientists, laboratories, departments, or informal networks where scientists of different training, cultures, and work habits interacted and contributed to establishing what was then regarded as molecular biology or biochemistry. In addition to this “bottom-up” approach to discipline building, a further specific feature of the contributions gathered for this issue is the fact that they offer detailed analyses of the different ways in which techniques, equipment, and biological materials have mediated between places and people and have stabilized new working practices. All four papers thus stress the part played by the techniques, the instruments, the concepts, or the metaphors that circulated between practitioners who would call themselves molecular biologists or biochemists according to the arena in which they acted. By analyzing these exchanges, this set of papers highlights an aspect of the relationship between biochemists and molecular biologists that has rarely been addressed – namely, the fact that in the late 1950s and in the 1960s it was not just a few individuals but many biochemists who started to employ the vocabulary of genetic information, or to work on DNA and RNAs.

The four papers follow roughly in chronological order. The first, by Angela Creager, presents Wendell Stanley’s attempt to create a biochemistry department that was not in a service role to medicine or agriculture, at the University of California, Berkeley, in the aftermath of World War II. As Creager recounts, the attempt to mobilize the Berkeley biochemists around the study of viruses and macromolecules failed. In the 1950s the Virus Laboratory established by Stanley became an institution independent of biochemistry; in 1962, the transformation was completed, with the laboratory becoming part of a newly created department of molecular biology headed by Stanley. Creager’s analysis focuses on the links between these institutional shifts and the differences in research practices between Stanley’s collaborators and the Berkeley biochemists. Stanley’s commitment to the development and use of elaborate pieces of physical instrumentation such as the ultracentrifuge plays an important role in this account of the local differentiation of biochemistry and molecular biology.