

The use of formaldehyde as a biological reagent occurred rather late in the history of histological methodology. The reason for this lay not in any lack of astuteness on the part of pathologists and histologists, but rather with the late development of formaldehyde manufacture by the chemical industry. While formaldehyde was discovered by Butlerov in 1859, practical aspects of the manufacture of this, the simplest aldehyde, only emerged in 1868 when Van Hoffman, as an academic exercise, developed a practical method for synthesis from methanol, and further established its properties. First production of formaldehyde as an industrial reagent occurred after the patent issued to Trillat in 1889, who in turn licensed several firms in France and Germany for manufacture (27). One such firm was Meister, Lucius and Brunig, located at Hoechst am Main, near Frankfurt am Main. While this firm, later to become one of the giants of chemical manufacturing under the name Hoechst, probably did not manufacture formaldehyde on any appreciable scale until 1891 (27), there was considerable interest in developing uses for formaldehyde. One likely possibility was in finding medical applications for aqueous solutions of formaldehyde. There had been reports from France that aqueous formaldehyde could be used as an antiseptic, either to treat or prevent wound infections. At that time, only a relatively few antiseptic agents were available and most of these were highly toxic and corrosive to tissues and instruments alike. The possibility that formaldehyde solutions might provide a "nontoxic sublimate" was a desirable goal that was not lost on Meister, Lucius and Brunig. In 1892 the firm approached a young physician in Frankfurt with the proposal that he test the antiseptic properties of formaldehyde. This young man, Ferdinand Blum, was a native of Frankfurt, born 3 October 1865. He attended the Universities of Kiel, Munich, Heidelberg, and graduated in medicine from Freiburg. Following graduation, and in the fashion of the time, he worked in several clinics, including the mental hospital at Schloss Marbach and the gynecologic clinic at Freiburg. On his return to Frankfurt he began a remarkable career, beginning with the project with Meister, Lucius and Brunig (14).