Lea Haller. *Cortison. Geschichte eines Hormons, 1900–1955.* Zürich: Chronos Verlag, 2012. Pp. 273. €59.00.

In 1948, tests showed the astonishing effect of cortisone in the treatment of rheumatoid arthritis. Cortisone is an organic compound belonging to the steroid family, a hormone of the adrenal cortex. Soon after the tests, this hormone was hailed as a wonder drug with broad therapeutic effects for rheumatic fever, chronic intestinal inflammation and pneumonia, as well as for asthma and various allergies. But this came at the price of considerable complications in long-term therapy. Nobody knew how cortisone worked, but it soon became clear that this hormone, unlike other medicines, only suppressed symptoms. This discovery signified that cortisone, as a medicine, was something unique; therefore, in order to investigate its career in a scholarly way, unconventional procedures were required. Contrary to the usual studies of pharmaceutical and medical development derived from basic research, cortisone, as a medicine, was the outcome of completely different, uncoordinated ideas, practices and interests by endocrinologists, biologists, chemists, pharmacologists, medical doctors, entrepreneurs and journalists.

In order to come to grips with her methodologically demanding topic, Lea Haller draws inspiration from theorists such as Michel Foucault and particularly Nikolas Rose, who introduced the concept of differentiation practices in the production, transformation and implementation of medical knowledge. She also makes good use of the scholarly approaches of Paul Rabinow, Peter Galison, Susan Leigh Star and James R. Griesemer, all of whom suggest regulations and rules on which the transfer of scientific knowledge is based. Using these concepts as an analytical starting point, Haller regards the history of cortisone as a history of knowledge rather than a history of science or medicine, and she sees it as a history which cannot be properly investigated using conventional scientific patterns of explanation. Pursuing this path, she succeeds in making valid theoretical and empirical statements about things, concepts and developments which seem to have no constants.

Lea Haller's book, based on her PhD dissertation, is a concise study of a highly demanding, complex topic. To take up this challenge required intellectual curiosity and considerable courage. The author needed the ability to work with new approaches in the history of knowledge, science and medicine in an analytical and critical manner. Haller has met these challenges impressively, and it is probably no exaggeration to call this study 'path breaking', certainly an unusual praise for a book based on a dissertation.

Are there deficiencies? While Haller's book focuses on Switzerland, a closer look at countries like the U.S. or Germany could have shown how representative the Swiss case was. Also, the author stops her period of investigation in the mid-1950s, while some remarks on later developments would

have been useful. But these deficiencies are marginalities and should not detract from the high quality of Haller's book.

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Cyrus Mody. *Instrumental Community: Probe Microscopy and the Path to Nanotechnology*. Cambridge, MA: The MIT Press, 2011. Pp. 280. $36.00.

When Gerd Binnig started in 1978 as a young researcher at IBM in Rüschlikon Switzerland, nobody could foresee that his expertise on superconductivity and deep temperature physics eventually would lead to the development of a path breaking new instrument. Together with Heinrich Rohrer he tried to use the quantum mechanical effect – that electrons tunnel under certain conditions between two semiconducting surfaces – to come up with a new method to localise surface inhomogeneities in Josephson junctions, which, at that time, where the basis for a future supercomputer at IBM. But while the Josephson Computer was abandoned at IBM, Rohrer and Binnig carried on and tried to use the idea of tunnelling electrons to develop a new method to localise and scan the topography of crystals and clusters of molecules. The story of the scanning tunnelling microscope (STM)) is a remarkable chapter in the recent history of science, not only because of the Nobel Prize for Binnig and Rohrer. It also stands for a culture of industrial research that enabled or at least tolerated far reaching basic research and that vanished in the 1990s, exactly at the point when nanotechnology was coined as the new big thing in U.S. science policy circles.

In this well told, already standard book on the STM, Cyrus Mody published the long-awaited results of his PhD from 2004. It is based on 150 oral history interviews with scientists that shaped its invention and spread in and across diverse scientific disciplines and cultures. Mody focuses on the Zürich-U.S. connections and especially those American research groups at Stanford and Santa Barbara that, indeed, were important to develop the instrument. The author spent time at the STM laboratories and has an intimate ethnographic knowledge, which allows him to closely following the main developments of the instrument in telling this story. While Jochen Hennig* is interested in the role of images produced by the STM that allowed to picture individual atoms and molecules in real space, Mody cuts across different thematic fields. He uses the concept of 'instrumental

* Jochen Hennig . *Bildpraxis: Visuelle Strategien in der frühen Nanotechnologie* [Image practice: Visual Strategies in early Nanotechnology], Bielefeld, Germany, 2011.