This 54th issue of the Swiss Medical Informatics is devoted to our annual scientific meeting, held in Innsbruck in fall 2004. This conference has been organized jointly with the German and Austrian associations for medical informatics, biometry, and clinical documentation under the hospices of the “Private Universität für Medizinische Informatik und Technik Tirol” (UMIT) and Prof. Dr. Reinhold Haux. This first joint meeting is a strong signal for a new collaborative era between our associations, as stated by their respective presidents, Prof. Dr. Walter Lehacher for the German association, Prof. Dr. Bernhard Tilg for the Austrian association and Dr. Martin Denz for the Swiss Society for Medical Informatics.

The papers presented in this issue are a selection from the Swiss contribution to this conference. They illustrate the wide area of skills available in the domain of medical informatics in our country. Eikemeier, et al., in their paper entitled “Outline of a Surveillance Service for Drug Prescription”, present an original approach to build a distributed and collaborative peer-to-peer network of knowledge for computerized patient order entry (CPOE). CPOE is one of the important challenges faced by medical informatics, and this is especially true when speaking about the up-to-date knowledge needed to bring timely and useful decision support at the point of care. Securing the whole drug prescription process, from prescription to distribution to the final patient delivery, is a complex process involving many actors. One of these steps is the drug preparation for distribution, which is a lot allocation for each patient. Oertle, et al., in their paper “Kombination von elektronischer Verordnung und elektronischer Medikamentendistribution im Spital: Qualitätss- und Prozessoptimierung bei der Medikation”, address this topic and discuss how an automated drug distribution system can be linked with a computerized patient record. They also show the effect of such an integrated system on both costs and safety. From drug to care, involving nurses at all stages of care is becoming important, emphasizing the need for structured care documentation. This highlights the work pursued since years within the Nursing data project in Switzerland. Stark, et al., in their paper entitled “Pflegeinformationsysteme: Das Projekt NURSING data in der Schweiz”, present the current state of this project and stress its importance for public health in Switzerland. Classifications and nomenclatures are progressively involving all parts of the patient record and it is increasingly important to be able to acquire such data within the clinical activities. Uesbeck, et al., present a strong and pertinent integration of gaining clinical and technical interventions for billing using TarMed directly in the clinical record in their paper “Die Integration der elektronischen Leistungserfassung nach TAR MED in das Klinikkosystem KISIM”. The future use of Diagnostic-Related Groups encoding for inpatient billing is reinforcing the need for a complete and correct encoding of diagnosis and procedures of patients. This is a complex task that cannot be easily accomplished by clinicians not used to the utilization of classifications and their rules. Straub, et al., in their paper “Wie können Ambiguitäten bei der automatisierten Diagnosekodierung aufgelöst werden?”, discuss some original semantic approach to sustain the development of tools helping the automatic encoding of freetext. The move from data to information and finally knowledge cannot be reserved to text only and multimedia information processing will become a major challenge in the coming years within life sciences. Muller, et al., in their paper “Enriching content-based image retrieval with multi-lingual search terms”, consider the combination of images content-based retrieval techniques and natural language processing to query large image database for clinical information. Finally, Despont-Gros, et al. present the use of the digital pen and paper technology to indirectly understand and analyze how triage nurses perform in emergency room in their paper entitled “Use of an innovative technology and Markov models to record and analyze the triage procedure in an emergency center”.

I would like to express all my congratulations to the Swiss participants at this conference, for the quality of their contributions. It is an important sign to our neighbours, contributing to show the quality of our research and our ability to bring this research towards care providers and industry, helping finally to improve patient care and outcome.