

Preface

This section of Annali dell'Istituto Superiore di Sanità is dedicated to the memory of Professor Lorenzo Tomatis, Director of the International Agency for Research on Cancer (IARC) from 1982 until his retirement in December 1993. He passed away on September 21, 2007. Professor Tomatis stimulated and supported, with his advise, the planning and implementation of ISS's (Istituto Superiore di Sanità) Carcinogens Data Bank. Lorenzo Tomatis has recently ended his difficult way towards the improvement of prevention strategies, leaving us essential lessons. The papers discussed in this issue are aimed at providing information suitable for prevention, and therefore the two papers highlighting Tomatis' indications in this field appeared appropriate.

The overall number of new chemicals synthesized and made available for the market, as underlined below, is extremely high and continuously growing. The Chemical Abstract Registry System data on the number of registered chemicals shows about 212 thousands in 1965, about 1.6 millions in 1970, and about 88.7 millions in 2006. Only some of these registered chemicals however have been marketed; information relevant to possible hazards of the substances presently in use is relatively poor. Moreover, chemical hazard and risk testing is time consuming and not simple. In fact, even the European Union Base Set of toxicity data (the minimum information on dangerous properties of substances) has difficulty in following the extremely high trend of new chemicals increase. This critical problem may however find a solution in the collaboration of the different countries involved in a planned task distribution and in methodological and technical improvement standardized at international level. Furthermore, an appropriate priority setting, giving attention to the chemicals with a higher level of production and/or higher import and use, is necessary. Both in the United States (e.g., the "Gore Initiative") and in the European Union (the Registration Evaluation Authorization of Chemicals – REACH policy) a big effort has been dedicated to this solution, within standardized procedures and appropriate collaboration.

The need for comprehensive data production for safety assessment, risk classification and risk management of new and existing chemicals introduced in the environment, is also remarkably increasing, with significant difficulties. An efficient and easily availa-

ble support for the retrieval of relevant information in the field of chemical hazard and risk, is necessary. The number and quality of online information systems is presently very high, and has remarkably increased during the last decades. For instance, about 30 years ago ISS was assigned by the Italian Ministry of Health the task to set up the Inventario Nazionale delle Sostanze Chimiche (INSC – National Inventory of Chemical Substances) data bank. INSC furnishes comprehensive information on chemical risk for emergency responses (e.g., the Seveso case), prevention criteria for occupational and general population exposure, hazard classification, and other purposes. In the beginning information was primarily obtained from printed scientific studies, reviews, and books; only few electronic sources were available through ISS's Documentation Service which since 1979, is the National Reference Center for MEDLARS (Medical Literature Analysis and Retrieval System) of the National Library of Medicine (NLM) of Bethesda (USA), a set of biomedical databases, including PubMed.

Presently, data collection is easier; however, the consultation of a very large number of relevant or possibly relevant existing databases may not be simple and time consuming. In this context, databases of health risks associated to chemical agents represent an important tool.

The presently available databases of ISS and connected institutions, are aimed at rapidly providing essential information and allowing direct consultation of other databases through appropriate links.

Some of the papers here presented concern comprehensive aspect of chemicals such as the INSC data bank, while others refer to specific topics such as the Carcinogens Data Bank, the Endocrine disrupting chemicals-Diet Interaction Database, the Sensitizing Agents Data Bank; the Reclamation Data Bank, the Toxicological database of soil and derived products, the ISS Dangerous Substances Classification and Labelling Data Base; MATline, job exposure matrix for carcinogenic chemical; the ISSCAN database on assessing chemical carcinogenicity; the ISS Reclamation Data Bank and the Toxicological database of soil and derived products.

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The diffusion of toxicological information plays an important role for human health protection. In this context the Istituto Superiore di Sanità (ISS), in conformity to a specific legal framework, has given particular attention to the construction of databases and websites which enable information access to different kind of users.

The ISS Data Management, Documentation, Library and Publishing Activities Service gave fundamental support in realizing various database projects on chemical agents being the web the tool for information communication. Keeping this in mind, the web facilities recently realized, will allow important developments for the future. Consequently, as the present web facility is not the point of arrival, it will be necessary to continue to invest funds in this project in order to allow ISS users (internal and external) to exchange information and data having always satisfactory performances/services. The matter can be considered from different points of view:

1. Website and diffusion of information

All the developed applications and databases must be located in the institutional website. Results of researches carried out in ISS, as well as published articles and national registers, are made available on the Internet. Databases, except when granting confidentiality of sensible information, should be dynamically accessible.

2. Decentralization of responsibilities during the phases of selection and collection of information

Considering the multiplicity of activities that scientists perform in ISS, the phases of selection and collection of information to be made available online should be carried out by researchers closely involved in the production of information: project leaders, persons in charge of registries, publishers of documents, standard forms authors. Consequently the ISS internal units should be allowed to publish directly the web pages containing important public health information.

3. Development of application software

Cooperation between ISS Data Management, Documentation, Library and Publishing Activities Service and ISS researchers is obtaining excellent results in the realization of projects whose goal is producing databases managed through application software. It is important to underline that such cooperation between different structures should be promoted in order to produce more satisfactory results rather than outsourcing informatic development.

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