EPILOGUE

Concluding Message in Connection with the Closing of the 30th Anniversary Symposium of the DIMS Institute of Medical Science, Inc

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In October 1997, a Workshop was held in the International Agency on Research (IARC) on Cancer, Lyon, France. Invited experts from different countries discussed about short- and medium-term tests for evaluation of carcinogenic hazard. The workshop consensus and novel assay systems were published as the IARC Scientific Publications No. 146, in 1999.

Ten years later, we are still focusing on medium-term assay systems for evaluation of carcinogenicity of environmental chemical substances. The present symposim gave a good opportunity for up-dating the field.

Dr. Jerrold Ward evaluated the gold standard 2-year carcinogenic bioassay using rodents and he concluded that the 2 year study is still best for determining risk to humans even though many rodent carcinogens will never cause tumors in humans, mostly due to low daily and lifetime exposures.

Dr. Samuel M Cohen made an appeal that now it is time to stop doing the 2-year rodent bioassay based on his long and intensive experience of carcinogenicity results withn the long-term assay and as an alternative screening approach, he proposed a 13 week bioassay.

Dr. Seiko Tamano reported feasibilities and usefulness of the medium-term liver bioassay and multiple-organ bioassays, both of which have been established in the DIMS Institue of Medical Sciences. The data are numerous and are very persuasive.

Dr. João Lauro Viana de Camargo from Brazil reported practical experience with data on pesticides using one of multiple-organ bioassays in his Institute and stressed that the Brazilian government has accepted results of the medium-term multi-organ carcinogenesis bioassay for registration of household chemicals and agricultural pesticides.

Dr. Katsumi Imaida talked about a new medium-term bioassay specified for detection of lung carcinogens and provided evidence for use of A/J mice as useful model animal for investigation of the lung system.

Dr. Shoji Fukushima presented his numerous data on dose response studies with multiple endpoints using medium-term experimental systems and proposed a new concept that there would be practical threshold even for genotoxic carcinogens.

Dr. Hiroyuki Tsuda reported results on tumor promoting potentials of nanomaterials using medium-term systems and emphasized the necessity for urgent safety evaluation of nanomaterials in order to not repeat the tragedy of asbestos.

Finally, Dr. Yoshinobu Hirayama talked about differences in safety assessment between medicines and food components. The former is primarily for therapy, diagnosis and prevent of diseases and its priority is effectiveness but the latter is for health and must be safe for our long term consumption.

This symposium provided a valuable opportunity for exchange and discussion on carcinogenicity and its assessment to researchers who historically have been closely associated with the successors to Professor Katsusaburo Yamagiwa and one of his doctoralstudents, Dr. Kouichi Ichikawa, who first succeeded in the experimental induction of skin cancer as a first in the world. Dr Ichikawa became a professor and established the Laboratory of Comparative Pathology in Hokkaido University. A sequence in the educational chain from Prof. Ichikawa, through Prof. Ryojun Kinoshita and Prof. Hisamasa Sato leads directly to Prof. Nobuyuki Ito who spent a lifetime researching into chemical carcinogenesis and cultivated many human resources that continue to play leading roles in this field.

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