

## GENERAL REMARKS

This ninety-third volume of *IARC Monographs* contains evaluations of the carcinogenic hazard to humans of three chemically inert, poorly soluble particles: carbon black, titanium dioxide, and talc. In 2003 an Advisory Group on priorities for future evaluation recommended that carbon black and titanium dioxide be considered with high priority (IARC 2003), and in 2004 an Advisory Group to plan a series of *IARC Monographs* on air pollution recommended that these particles be reviewed before complex mixtures such as diesel engine exhaust. Talc is included in this volume because as an inhaled particle it has many features in common with carbon black and titanium dioxide, and as a consumer product it has been the subject of an abundance of epidemiological studies. Each of the three agents in this volume has been reviewed before. Carbon black was evaluated in Volume 65, titanium dioxide in Volume 47, and talc not containing asbestiform fibres in Supplement 7. New epidemiological and experimental studies are reviewed in this volume.

This volume does not review carbon-based particles of more complex or variable composition, such as activated charcoal, toner, charbone, and soot. This volume also does not review ultrafine and engineered nano-forms of these particles, because there are few pertinent studies. The physical properties and mechanistic studies of ultrafine and nanoparticles that are reviewed in this volume suggest that these smaller particles, due to their greater surface area per unit of mass, may be more effective in inducing toxic effects.

The review of talc in Supplement 7 led to evaluations for two agents: talc containing asbestiform fibres and talc not containing asbestiform fibres. The term ‘asbestiform fibre’ has been mistaken as a synonym for ‘asbestos fibre’ when it should be understood to mean any mineral, including talc, when it grows in an asbestiform habit. To avoid confusion over the term ‘asbestiform fibre’, the present Working Group decided that it is scientifically more precise to call the agent ‘talc not containing asbestos or asbestiform fibres’, and this evaluation supersedes the earlier review of talc not containing asbestiform fibres. The present Working Group also decided to expand the name of the Group-1 agent from ‘talc containing asbestiform fibres’ to ‘talc containing asbestos or other asbestiform fibres’. The present Working Group reviewed the earlier *Monograph* on talc containing asbestiform fibres and determined that the expanded name is consistent with what had been evaluated in Supplement 7. No update was undertaken for this Group-1 agent.

This volume is the first to use the 2006 version of the Preamble, which was amended during 2005 through an open process that solicited comments from the scientific community and peer review by an Advisory Group (IARC, 2006). Another innovation that is being tried for the first time is the consideration of public nominations for expert scientists, several of whom are serving on this Working Group.

A summary of the findings of this volume appears in *The Lancet Oncology* (Baan *et al.*, 2006).

## References

- Baan R, Straif K, Grosse Y, *et al.* (2006) Carcinogenicity of carbon black, titanium dioxide, and talc. *Lancet Oncol* 7: 295–296. PM:16598890.
- IARC (2003) Report of an *Ad-Hoc IARC Monographs* Advisory Group on Priorities for Future Evaluations. Lyon, International Agency for Research on Cancer, Internal Report No. 03/001 [available at <http://monographs.iarc.fr/ENG/Publications/internrep/03-001.pdf>]
- IARC (2006) Report of the Advisory Group to Review the Amended Preamble to the *IARC Monographs*. Lyon, International Agency for Research on Cancer, Internal Report No. 06/001 [available at <http://monographstest.iarc.fr/ENG/Preamble/Preamble-IntReport.pdf>]