

A newsletter from the *IARC Monographs* programme



IARC Nouveau Centre, COPYRIGHT: IARC

Welcome to Dr Andrew Kunzmann

IARC Monographs Senior Epidemiologist

Tell us about your background

After finishing a degree in psychology (York, UK), I decided to pursue a career in health research, which started with a master's in human nutrition (Sheffield, UK). I then moved to Queen's University Belfast to do a PhD in cancer epidemiology, which included a master's in public health. I was then awarded a Vice-Chancellor's Fellowship.

What is your area of specialization?

My main area of expertise is gastrointestinal cancer epidemiology, but I have covered a broad range of exposures, including nutrition, pharmacoepidemiology, viruses, and microbiota; as well as risk prediction and biomarkers.

Why did you choose the IARC Monographs programme?

The *Monographs* programme is the most prestigious programme worldwide for the evaluation of carcinogens and has a huge impact on public health and cancer research. My interest in causal inference and broad background of exposures seemed well suited to this role and complementary to the expertise within the programme.

What was your impression of your first Monographs meeting?

Intense but well guided by the Secretariat.

What advice would you give to early-career researchers?

A career in research will involve considerable collegiality, competition, and setbacks. Focusing on collegiality, whilst challenging pressures to be competitive or to doubt yourself, will help you (and your colleagues) to enjoy the journey.

Call for Data

IARC is interested in identifying studies that are relevant to the carcinogenicity of the agents that will be reviewed in each volume. This includes all pertinent cancer epidemiology studies, cancer bioassays, and mechanistic evidence in both exposed humans and experimental systems. Eligible studies should be published or accepted for publication in the openly available scientific literature. Relevant exposure data (particularly from low- and middle-income countries) that are or can be made publicly available are also requested. Please see the [IARC Monographs Preamble](#) for details of the types of study that may be reviewed.

The **Call for Data** and **Call for Experts** are announced approximately 1 year before the meeting on the [IARC Monographs website](#).

Meeting 137: Hydrochlorothiazide, Voriconazole, and Tacrolimus

Meeting dates: 5–12 November 2024

[Call for Data](#) closing date: 5 October 2024

[Call for Experts](#) CLOSED: 15 January 2024

Meeting 138: Automotive Gasoline and Some Oxygenated Additives

Meeting dates: 25 February to 4 March 2025

[Call for Data](#) closing date: 24 January 2025

[Call for Experts](#) CLOSED: 3 June 2024

Meeting 139: Hepatitis D virus, human cytomegalovirus, and Merkel cell polyomavirus

Meeting dates: 3–10 June 2025

[Call for Data](#) closing date: 1 May 2025

[Call for Experts](#) closing date: 15 August 2024

IARC encourages the participation of Representatives of national and international health agencies. If you are interested in serving as a Representative, contact us at imonews@iarc.who.int.

The Team

Introducing Mary Schubauer-Berigan and Caterina Facchin



Where are you originally from?

MSB: The upper Midwest of the USA (we moved around a lot when I was a child).

CF: I am from Italy, more precisely from a little town in the Veneto region in the north-east. I lived abroad for several years, in France and Canada.

How long have you been at IARC?

MSB: Six years.

CF: I am celebrating my one-year anniversary.

What is your role in the IMO team?

MSB: I am the Head of the *IARC Monographs* programme, and my background is in occupational cancer epidemiology.

CF: I am a toxicologist providing expertise for the “Mechanistic Evidence” section, which focuses on data on mechanisms of carcinogenesis for each agent under evaluation. I am Co-Responsible Officer with Dr Madia for the upcoming *IARC Monographs* Meeting 137: Hydrochlorothiazide, Voriconazole, and Tacrolimus, in November 2024.

If you were to recommend one place in Lyon to visit, where would it be and why?

MSB: I really enjoy sharing the street art of the city with visitors. Among my favourites are the [Bartholdi Fountain](#) in Place des Terreaux (which has a very interesting history), the haut-relief by André Vermare of “[Le Rhone et La Saône](#)” in front of the Lyon stock exchange, and the works of the street artist Ememem – gorgeous mosaics called “[flackings](#)” that fill the potholes of Lyon.

CF: I really like the Parc de la Tête d'Or, a large urban park located in the north of Lyon. It includes a lovely botanical garden with plants from all over the world and a small zoo where you can see giraffes, deer, reptiles, primates, and other animals.

At the end of your visit, I recommend having a relaxing walk around the lake.



Results of *IARC Monographs* Meeting 136: Talc and Acrylonitrile

Meeting held in Lyon on 11–18 June 2024

The infographic is titled "IARC MONOGRAPHS VOL. 136 TALC AND ACRYLONITRILE (11-18 JUNE 2024)". It is organized into two columns for Acrylonitrile and Talc, and three rows: IARC Group, Main Uses, and Exposures.

	ACRYLONITRILE $C_3H_3.5N$	TALC $Mg_3(OH)_2Si_4O_{10}$
IARC GROUP	Group 1 Carcinogenic to humans Sufficient evidence for cancer in humans (lung), limited evidence (bladder)	Group 2A Probably carcinogenic to humans Limited evidence for cancer in humans (ovary)
MAIN USES	Acrylonitrile is a volatile organic compound that is mainly used in the production of polymers. Their uses include fibres for clothing, carpets and other textiles as well as plastics	Talc is used in the rubber, pottery, cosmetics, food, and pulp and paper industries. It is widely used in cosmetics, pharmaceuticals, and personal care products (e.g. body powder, deodorants, make-up)
EXPOSURES	General population: mainly from tobacco smoke (first- and second-hand), air pollution and potentially 3D-printers Workers: in production of acrylonitrile, plastics, resins, fibres and synthetic rubber	General population: through the use of talc-containing cosmetics, body powders and oral medications Workers: in mining or milling of talc, or in the production or use of talc-containing product

Click to enlarge

A summary of the results of *IARC Monographs* Meeting 136 has now been published in *The Lancet Oncology*.

Acrylonitrile, a high-production-volume chemical, is used to prepare polymers for manufacturing textiles, clothing and carpets, resins, synthetic rubber, and plastics. Occupational exposure occurs mainly in production industries, but the primary exposure source for the general population is tobacco smoke.

Talc is a hydrated magnesium silicate that can be lamellar or fibrous, including asbestiform. Although asbestiform talc is not asbestos, some talc deposits may be contaminated with asbestos. With a high production volume, talc is used in plastics, ceramics, paint, paper, roofing, rubber, animal feed, food, fertilizers, cosmetics, and pharmaceuticals, and for pleurodesis. Occupational exposure occurs mostly via inhalation during mining and milling. The general population may be exposed via talc-based consumer products (e.g. body powders) via ingestion, inhalation, or dermal contact.

The Working Group classified acrylonitrile as *carcinogenic to humans* (Group 1) based on *sufficient* evidence for cancer in humans. There was also *sufficient* evidence in experimental animals and *strong* mechanistic evidence in experimental systems. Talc was classified as *probably carcinogenic to humans* (Group 2A) based on *limited* evidence for cancer in humans, *sufficient* evidence for cancer in experimental animals, and *strong* mechanistic evidence in human primary cells and experimental systems. Previous evaluations of talc were superseded, except for “Talc containing asbestos”, which remains in Group 1, within “Asbestos”.

Selecting agents for evaluation by the *IARC Monographs*: what happens after the Priorities meeting?

In March 2024, IARC convened an Advisory Group of international experts to review approximately 220 agents nominated by the public and recommend priorities for evaluation according to the [IARC Monographs Preamble](#). Since 1984, each quinquennial meeting of the Advisory Group has provided a blueprint for *IARC Monographs* volumes over the subsequent 5 years. Of the candidate agents reviewed by the 2024 Advisory Group, 106 were proposed for evaluation with high priority, meaning that there is evidence of both human exposure and carcinogenicity that warrants first-time evaluation or re-evaluation.¹

From the list of priorities assembled by the Advisory Group, the IARC Secretariat selects and schedules the agents that will be evaluated over the coming years. This process encompasses discussions within IARC and, more broadly, with colleagues from related programmes of WHO and the wider research community.

Internal discussions consider the agent type and how recently agents of this type have been evaluated, and the availability of relevant scientific expertise within the *IARC Monographs* team. For example, of the 106 high-priority agents, 52% have evidence from studies of cancer in humans, 33% from studies of cancer in experimental animals, and 70% from mechanistic studies. The major categories are chemicals (42%), pharmaceuticals (20%), and biological agents (12%). The searching, screening, organization, and extraction of data from the literature are time-consuming processes. For many agents, the literature to be evaluated is extensive, whereas for others the literature may be less extensive but of high complexity; thus, consideration of the workload for adjacent meetings is important.

External discussions with WHO programmes aim to coordinate cancer hazard identification by IARC and risk assessment by WHO.² For instance, 19 of the agents as-



Photo of the Advisory Group who met in Lyon on 19–22 March 2024

signed high priority are pesticides. Their evaluation will be coordinated with WHO colleagues within the Joint Meeting on Pesticide Residues (JMPR), an expert ad hoc body administered jointly by the Food and Agriculture Organization of the United Nations (FAO) and WHO.

The research community, at IARC and other major cancer research institutions worldwide, is consulted to learn whether any key studies are underway and ensure they are available for consideration at the time of evaluation.

In addition, agents may merit priority consideration if compelling evidence indicating an emerging carcinogenic hazard becomes available within 5 years.

The *IARC Monographs* programme has evaluated the carcinogenicity of more than 1040 agents, providing valuable information to support cancer-prevention strategies.³ The priority agents recommended by the 2024 Advisory Group represent a broad mix of substances, complex exposures, infections, and other external factors that merit evaluation in order to promote public health. Over the next 5 years, the programme aims to conduct two to three meetings per year. We welcome ideas from the research and public health communities on identifying additional resources to permit evaluation of the entire list of prioritized agents.

Aline de Conti

Scientist, *IARC Monographs* programme

Call for Experts

Working Group Members are responsible for all scientific reviews and evaluations developed during the *IARC Monographs* meeting. The Working Group is interdisciplinary and comprises subgroups of experts in the fields of: (1) exposure characterization; (2) cancer in humans; (3) cancer in experimental animals; and (4) mechanistic evidence.

IARC selects Working Group Members on the basis of expertise related to the subject matter and relevant methodologies, and absence of conflicts of interest. Consideration is also given to diversity in scientific approaches and views, as well as demographic composition. Self-nominations and nomination of women and of candidates from low- and middle-income countries are particularly encouraged.

Nomination of Agents

For each new volume of the *IARC Monographs*, IARC selects the agents for review from those recommended by the most recent [Advisory Group Report](#), considering the availability of pertinent research studies and current public health priorities. IARC encourages the general public, the scientific community, national health agencies, and other organizations to nominate agents for review in future *IARC Monographs* volumes.

While the 2024 Advisory Group has just recently met to provide recommendations on priorities for the next five years, urgent public health priorities can be considered at any time.

If you would like to nominate an agent, please complete the [online form](#) (one agent per form) and the accompanying WHO Declaration of Interests. Please contact IARC at priorities@iarc.who.int for further information.

Published in 2024

IARC Monographs



[Vol. 134](#) Aspartame, Methyleugenol, and Isoeugenol (Aspartame only)

Vol. 133 Anthracene, 2-Bromopropane, Butyl methacrylate, and Dimethyl Hydrogen Phosphite (publication expected very soon)

Volumes of the 50th-anniversary collection now available in print at: <https://www.who.int/publications/book-orders>

[Vol. 129](#) Gentian Violet, Leucogentian Violet, Malachite Green, Leucomalachite Green, and CI Direct Blue 218

[Vol. 130](#) 1,1,1-Trichloroethane and Four Other Industrial Chemicals

[Vol. 131](#) Cobalt, Antimony Compounds, and Weapons-grade Tungsten Alloy

[Vol. 132](#) Occupational Exposure as a Firefighter

The Lancet Oncology

Berrington de González A, Masten SA, Bhatti B, Fortner RT, Peters S, Santonen T, et al. (2024). Advisory Group recommendations on priorities for the *IARC Monographs*. *The Lancet Oncology*. 25(1): 16–17. [Published online 12 April 2024](#)

Stayner L, Carreón-Valencia T, Demers P, Fritz J, Sim M, Stewart P, et al. (2024). Carcinogenicity of talc and acrylonitrile. *The Lancet Oncology*. [Published online 5 July 2024](#).



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