Medichem

Your Key to Excellence for Occupational Health in the Chemical Industry

Medichem
Organizational Profile

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SUSTAINABILITY AND THE CHEMICAL SECTOR

INTRODUCTION

The 1970s witnessed several significant chemical disasters that had a profound impact on public safety and the awareness of the risks associated with chemical substances. Here are a few notable examples:

1. Minamata Disease (1956-1970s): Although the initial outbreak of Minamata disease occurred in the 1950s, its effects were felt throughout the 1960s and 1970s. Minamata disease was caused by industrial wastewater containing methylmercury being discharged into Minamata Bay in Japan. Local communities, particularly those relying on seafood as a major food source, suffered from severe neurological damage and other health issues. The incident led to increased awareness of the environmental and health risks of mercury pollution and contributed to stricter regulations on industrial waste disposal.
2. Torrey Canyon Oil Spill (1967): The Torrey Canyon oil spill was one of the largest and most significant oil spills of its time. In March 1967, the oil tanker Torrey Canyon ran aground off the coast of Cornwall, England, releasing approximately 120,000 tons of crude oil into the sea. The spill caused extensive damage to marine life, coastal ecosystems, and beaches. It highlighted the need for improved oil spill response and prevention measures, leading to the development of stricter regulations for maritime oil transportation.
3. Love Canal Disaster (1970s): Love Canal, located in Niagara Falls, New York, became a symbol of environmental contamination and the dangers of improper waste disposal. In the 1970s, it was discovered that a housing development had been built on top of a former chemical waste dump site. Toxic chemicals, including dioxins and various organic compounds, were found to be leaking into the soil and groundwater, leading to serious health issues for residents. The Love Canal disaster prompted the creation of Superfund legislation in the United States, which established a program for the cleanup of hazardous waste sites.

These are just a few examples of the chemical disasters that occurred during the 1960s and 1970s. These incidents raised public awareness about the environmental and health risks associated with chemical pollution and contributed to the development of stricter regulations and improved safety practices in industries handling hazardous substances. Some more examples followed during the late 70's and 80's.

1. Flixborough Disaster (1974): In June 1974, a massive explosion occurred at a chemical plant in Flixborough, United Kingdom. The explosion was caused by a ruptured reactor, resulting in the release of toxic substances and the collapse of several buildings. The incident led to 28 fatalities and significant damage to the surrounding area. The disaster prompted improvements in process safety management and raised awareness about the importance of risk assessment and prevention.
2. Seveso Disaster (1976): The Seveso disaster occurred in July 1976 in Seveso, Italy, when a chemical plant released a cloud of dioxin-contaminated gas following an explosion. The toxic cloud spread over a wide area, leading to the evacuation of thousands of people. The disaster highlighted the severe health and environmental consequences of dioxin exposure and resulted in the implementation of stricter regulations for chemical safety.
3. Bhopal Gas Tragedy (1984, but its impact was felt in the 1970s): Although the Bhopal gas tragedy technically occurred in December 1984, the events leading up to the disaster started in the 1970s. The Union Carbide pesticide plant in Bhopal, India, experienced a catastrophic gas leak of methyl isocyanate (MIC), resulting in one of the deadliest industrial disasters in history. Thousands of people died immediately, and the long-term effects on health and the environment continue to be felt. The Bhopal tragedy highlighted the need for stringent safety regulations and proper emergency response planning.

These disasters, along with others occurring during the 1970s, brought attention to the importance of chemical safety, risk management, and the need for stronger regulations to protect human health and the environment. They played a significant role in shaping international and national policies related to chemical handling, storage, and emergency response, leading to improved safety standards and the establishment of regulatory bodies to monitor and enforce chemical safety measures.

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Medichem was established in 1972 and is the international scientific association for occupational and environmental health in the production and use of chemicals. It has a worldwide membership.

It is the home of all occupational and environmental health professionals, such as occupational physicians, toxicologists, occupational hygienists, epidemiologists, occupational psychologists, safety engineers and managers, regulators, occupational health nurses, and others of graduate status with an interest in occupational and environmental health, whether from industry, university, government departments or institutions.

Medichem's prime objective is international cooperation in those occupational and environmental health issues related to the production and use of chemicals that are of global concern and that are most effectively resolved through a globally coordinated approach. Our underlying objective is to contribute to the prevention of adverse effects on employees, customers and the general public, arising from the production and handling of chemicals.

Medichem is apolitical and is engaged in the scientific and technological aspects of occupational health rather than the formulation of national or company policies. We recognize each country's right to make its own decisions, but through the dissemination of reliable information contributes to the development of rational legislation in the field of occupational health.

Medichem promotes the exchange of information and ideas between all those concerned with occupational health in the production and use of chemicals worldwide.

Affiliation

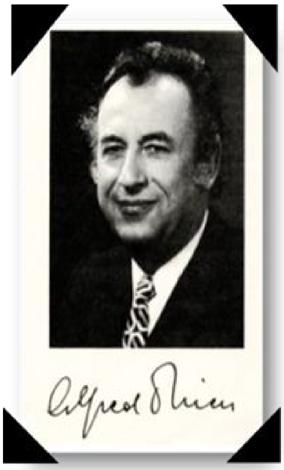
Medichem is affiliated with the International Commission on Occupational Health. The ICOH is a non-governmental international organization (NGO) having consultative status with the United Nations, the UN Economic and Social Council (ECOSOC), and the Specialized Agencies of the UN (ILO and WHO).

Overall, ICOH plays a crucial role in promoting and improving occupational health worldwide by fostering research, education, and collaboration among professionals in the field.

ICOH also contributes to the development of policies and guidelines related to occupational health and safety, working closely with international organizations such as the World Health Organization (WHO) and the International Labour Organization (ILO).

Medichem originated as a standing ICOH subcommittee and later the Medichem Board became the ICOH Scientific Committee Occupational Health in the Chemical Industry (ICOH SC OHCI). Medichem is an affiliate of ICOH as an independent organization and reorganized the ICOH SC OHCI more inclusively and not limited to the Medichem Board members. A close collaboration continues between Medichem, ICOH and SC OHCI.

OUR HISTORY - HISTORICAL ASPECTS



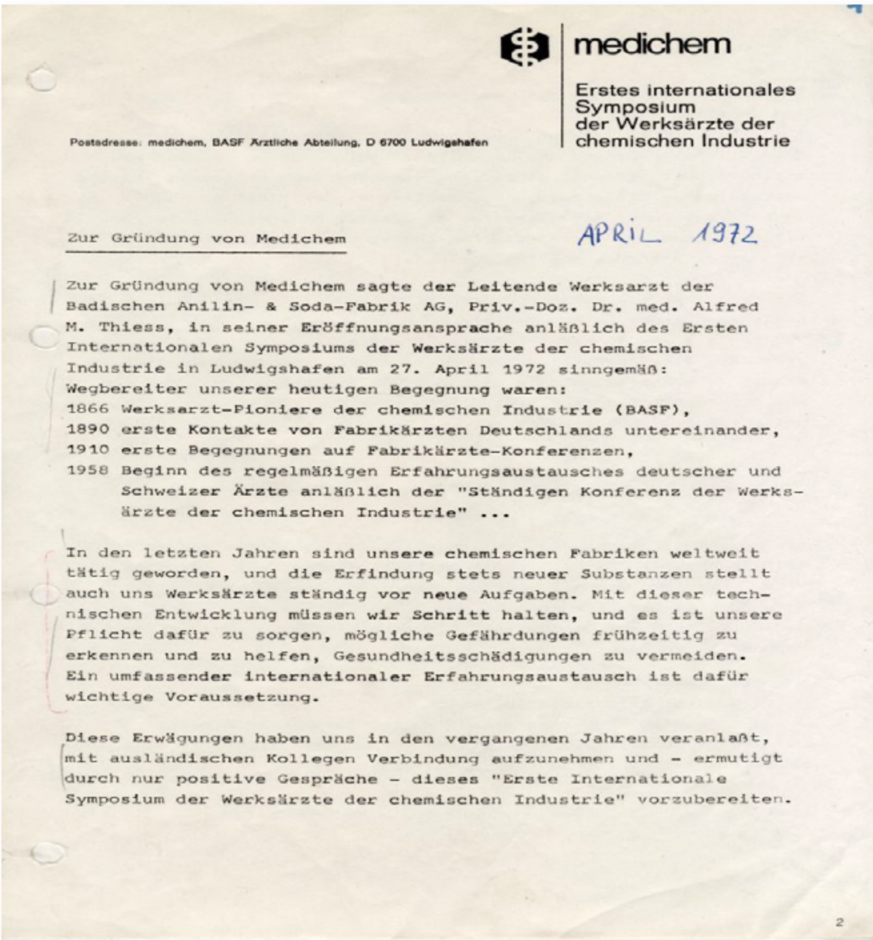
Prof. Alfred Michael Thiess founded and established Medichem on April 27, 1972, when he was Corporate Medical Director at the world's largest chemical company BASF in Ludwigshafen, Germany. He was just 50 years old and had qualified as a professor.

He decisively influenced the development of occupational medicine in Germany by fostering occupational epidemiology, and strengthening health promotion and its evaluation, he not only participated in numerous national and international expert groups, committees and societies and was an internationally well-known personality.

He generously donated his time around the clock to his vision: To create what Medichem is today, the world's leading global international scientific association bringing together experts from all over the world, concerned with occupational and environmental health in the production and handling of chemicals.

After his active professional life and 14 years as President of Medichem he became our Medichem Honorary President in 1986. Prof. Alfred Michael Thiess, Founder & Honorary President of Medichem, passed away on Wednesday, the 3rd of February 2016, exactly four months after his 94th birthday on October 3, 2015.

RE Founding of MEDICHEM [translation of “Zur Gründung von MEDICHEM” from April 1972 Courtesy of Dr Michael Nasterlack]



medichem

Erstes internationales Symposium der Werksärzte der chemischen Industrie

Postadresse: medichem, BASF Ärztliche Abteilung, D 6700 Ludwigshafen

Zur Gründung von Medichem

APRIL 1972

Zur Gründung von Medichem sagte der Leitende Werksarzt der Badischen Anilin- & Soda-Fabrik AG, Priv.-Doz. Dr. med. Alfred M. Thiess, in seiner Eröffnungsansprache anläßlich des Ersten Internationalen Symposiums der Werksärzte der chemischen Industrie in Ludwigshafen am 27. April 1972 sinngemäß:
Wegbereiter unserer heutigen Begegnung waren:
1866 Werksarzt-Pioniere der chemischen Industrie (BASF),
1890 erste Kontakte von Fabrikärzten Deutschlands untereinander,
1910 erste Begegnungen auf Fabrikärzte-Konferenzen,
1958 Beginn des regelmäßigen Erfahrungsaustausches deutscher und Schweizer Ärzte anläßlich der "Ständigen Konferenz der Werksärzte der chemischen Industrie" ...

In den letzten Jahren sind unsere chemischen Fabriken weltweit tätig geworden, und die Erfindung stets neuer Substanzen stellt auch uns Werksärzte ständig vor neue Aufgaben. Mit dieser technischen Entwicklung müssen wir Schritt halten, und es ist unsere Pflicht dafür zu sorgen, mögliche Gefährdungen frühzeitig zu erkennen und zu helfen, Gesundheitsschädigungen zu vermeiden. Ein umfassender internationaler Erfahrungsaustausch ist dafür wichtige Voraussetzung.

Diese Erwägungen haben uns in den vergangenen Jahren veranlaßt, mit ausländischen Kollegen Verbindung aufzunehmen und - ermutigt durch nur positive Gespräche - dieses "Erste Internationale Symposium der Werksärzte der chemischen Industrie" vorzubereiten.

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Regarding the founding of Medichem, BASF´s chief company physician Dr. Alfred Thiess in his opening speech at the First International Symposium of Chemical Company Physicians on 27th April 1972 in Ludwigshafen correspondingly stated:

Pioneering events leading to this present meeting were:
1890 First formal contacts between German company physicians
1910 First actual meetings in conferences for company physicians
1966 First company physician in the chemical industry (BASF)
1972 First International Symposium of Chemical Company Physicians
1985 Start of the “Permanent Meeting of Chemical Company Physicians” for German and Swiss physicians.

In recent years our companies have expanded globally, and the ongoing invention of new substances have become a constant challenge also for us, the company physicians. We must stay abreast with the technological progress, and it is our duty to identify possible health risks as early as possible to help avoid health damage. To this end, international exchange of experience is an important prerequisite.

These considerations have led us over the past years to establish relations to colleagues in foreign countries and to prepare – encouraged by unanimously positive resonance – this “First International Symposium of Chemical Company Physicians.”

As early as 1969 Thiess in an article in “Industrial Medicine and Surgery” had written:
“We believe that international cooperation in the field of occupational medicine and industrial hygiene could be considerably expanded. Occupational physicians have the same obligation to the workers under their care, irrespective of political or geographical boundaries. Their effectiveness in disease and accident prevention will increase, if it is based on the accumulated experience of many experts throughout the world.”

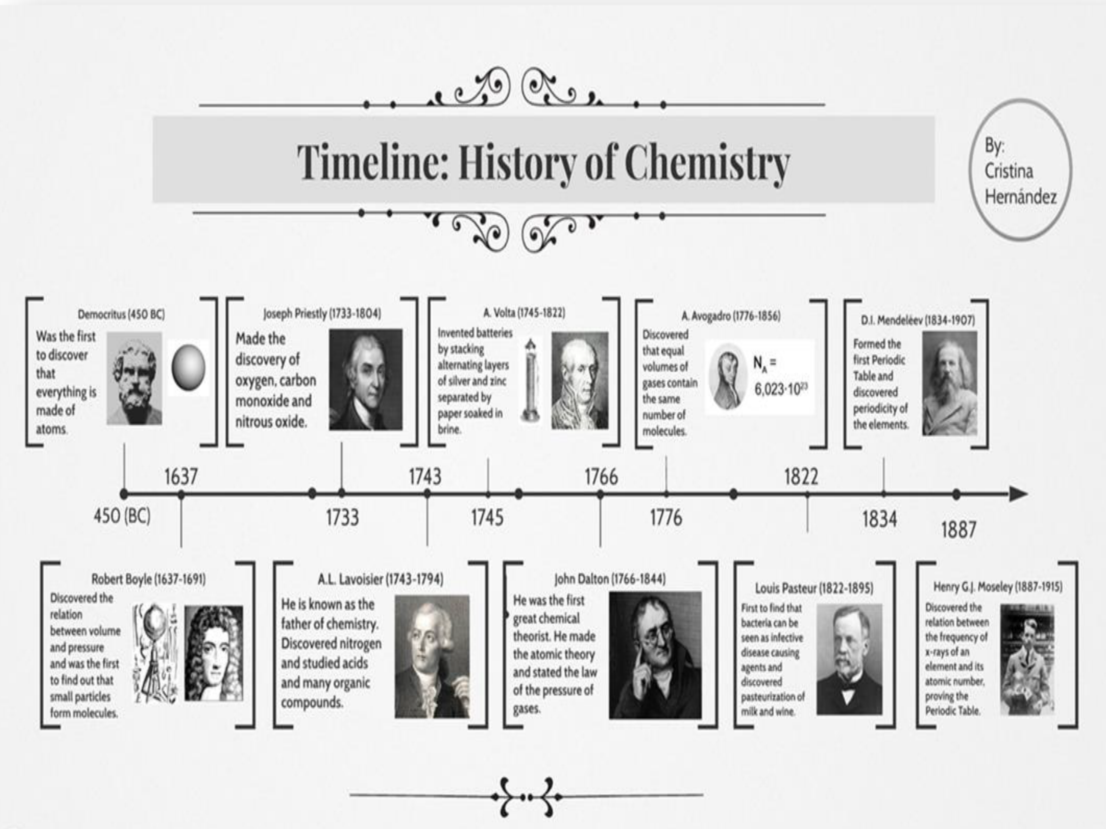
We named this present symposium “MED-I-CHEM” (put together from Medicine – International – Chemistry) and chose for our symbol a combination of the benzene ring with the rod of Asclepius. We have strived to create the basis for a successful future cooperation [the word “Arbeit” means “work”, but in the given context, “Zusammenarbeit” might have been the speaker´s intention], and it will depend on the commitment of every single one among us whether this symposium will be followed by more in the future.

The attention received for this First International Symposium of Chemical Company Physicians exceeded all expectations. 285 physicians from 22 countries attended and 63 excellent presentations were given. Nine [here it should say: “national and”] international organizations involved in occupational medicine had sent official delegates:
The World Health Organization (WHO)
The International Labour Office (ILO)
The Permanent International Commission for Occupational Medicine [later ICOH]
The International Association for Social Security (ISSA)
The Working Group on Occupational Diseases of the European Community and the four major German organizations

The German Society of Occupational Medicine
The “Deutsche Gesellschaft für Arbeitsschutz” [I believe is no longer existing]
The German Society for Social Medicine [today: DGSMP]
The Association of German Company Physicians [VdBW]

The Medichem Symposium Reports documents the course and scientific significance [here the German text says, “the scientific course and significance”, (which doesn´t make much sense] of this First International Symposium of Chemical Company Physicians. The main topics for presentation and discussion were:

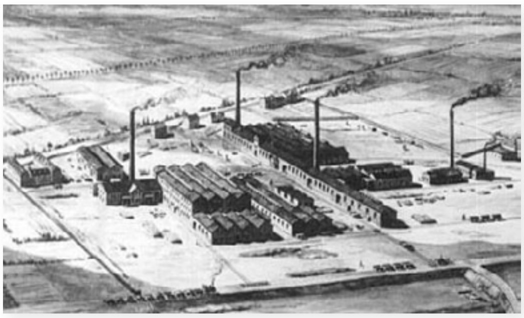
- Field studies on prevention in company settings
- Cross-company studies on occupational cancers, and
- Numerous toxicological topics.



CHEMICAL SECTOR

Medichem also expanded its remit from chemical industry to chemical sector.

History of the Chemical Sector



The factories of the German firm BASF, in 1866

Although chemicals were made and used throughout history, the birth of the heavy chemical industry (production of chemicals in large quantities for a variety of uses) coincided with the beginnings of the Industrial Revolution in general. One of the first chemicals to be produced in large amounts through industrial process was sulfuric acid. In 1736, the pharmacist Joshua Ward developed a process for its production that involved heating saltpetre and allowing the sulphur to oxidize and combine with water. It was the first practical production of sulphuric acid on a large scale. John Roebuck and Samuel Garbett were the first to establish a large-scale factory in Prestonpans in 1749, which used leaden condensing chambers for the manufacture of sulfuric acid.

The History of Chemistry

The Father of Chemistry Antoine Lavoisier wrote the book Elements of Chemistry (1787). He compiles the first complete (at that time) list of elements, discovered and named oxygen and hydrogen, helped develop the metric system, helped revise and standardize chemical nomenclature and discovered that matter retains its mass even when it changes forms.

The terms “chemical industry” and “chemical sector” are sometimes used interchangeably, but they can have slightly different meanings depending on the context. Here’s a general distinction between the two:

1. Chemical Industry: The chemical industry refers to the entire range of companies involved in the production, manufacturing, and distribution of chemicals and chemical products. This includes companies engaged in activities such as chemical synthesis, refining, formulation, and packaging. The chemical industry encompasses various subsectors, including petrochemicals, specialty chemicals, agrochemicals, pharmaceuticals, and more. It involves both the production of basic chemicals (e.g., ethylene, propylene) and the manufacturing of downstream products (e.g., plastics, fertilizers, pharmaceutical drugs).
2. Chemical Sector: The chemical sector is a broader term that encompasses not only the chemical industry but also other related industries and activities. It includes companies involved in the production, distribution, and use of chemicals, as well as industries that heavily rely on chemicals in their processes or products. For example, the chemical sector may include industries such as automotive, construction, agriculture, healthcare, electronics, and consumer goods, among others. These industries utilize chemicals either as raw materials or as components in their manufacturing processes.

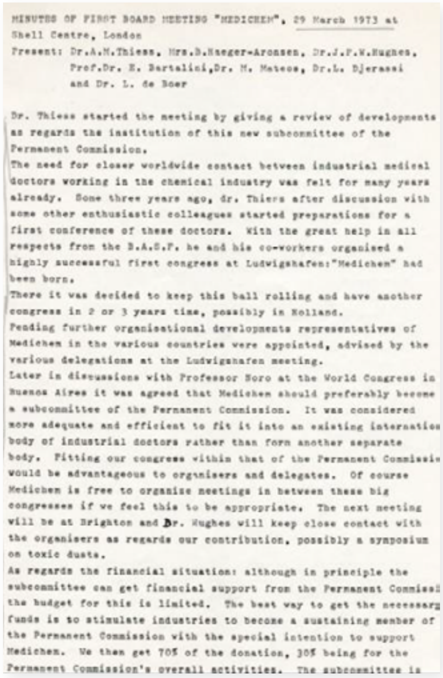
In summary, the chemical industry specifically refers to the companies involved in the production and distribution of chemicals and chemical products. On the other hand, the chemical sector is a broader term that encompasses the chemical industry as well as other industries that rely on or utilize chemicals in their operations.

Way forward

A strategic board meeting took place in 2023, with key outcomes to be shared at the upcoming General Assembly.

A few years on from 1972....Extracts from the MEDICHEM Alfred Thiess

Board meeting Minutes 29th March 1973



MINUTES OF FIRST BOARD MEETING "MEDICHEM", 29 March 1973 at Shell Centre, London

Present: Dr.A.M.Thiess, Mrs.B.Haeger-Aronsen, Dr.J.F.W.Hughes, Prof.Dr. E. Bartalini, Dr. M. Mateos, Dr.L. Djerassi and Dr. L. de Boer

Dr. Thiess started the meeting by giving a review of developments as regards the institution of this new subcommittee of the Permanent Commission.

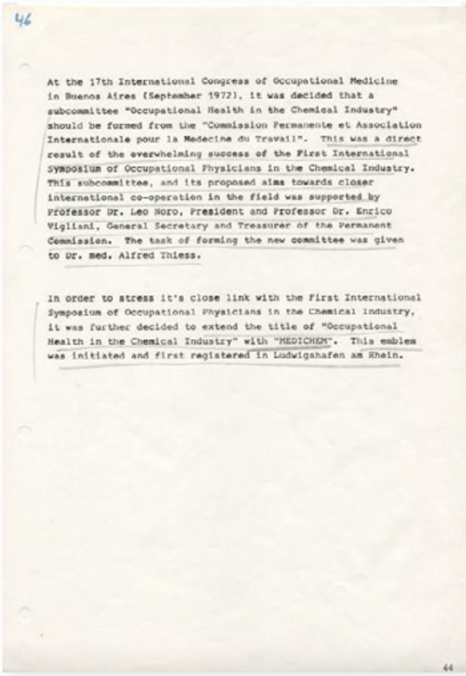
The need for closer worldwide contact between industrial medical doctors working in the chemical industry was felt for many years already. Some three years ago, dr. Thiers after discussion with some other enthusiastic colleagues started preparations for a first conference of these doctors. With the great help in all respects from the B.A.S.F. he and his co-workers organised a highly successful first congress at Ludwigshafen:"Medichem" had been born.

There it was decided to keep this ball rolling and have another congress in 2 or 3 years time, possibly in Holland.

Pending further organisational developments representatives of Medichem in the various countries were appointed, advised by the various delegations at the Ludwigshafen meeting.

Later in discussions with Professor Noro at the World Congress in Buenos Aires it was agreed that Medichem should preferably become a subcommittee of the Permanent Commission. It was considered more adequate and efficient to fit it into an existing internation body of industrial doctors rather than form another separate body. Fitting our congress within that of the Permanent Commissio would be advantageous to organisers and delegates. Of course Medichem is free to organise meetings in between these big congresses if we feel this to be appropriate. The next meeting will be at Brighton and Dr. Hughes will keep close contact with the organisers as regards our contribution, possibly a symposium on toxic dusts.

As regards the financial situation: although in principle the subcommittee can get financial support from the Permanent Commiss the budget for this is limited. The best way to get the necessary funds is to stimulate industries to become a sustaining member of the Permanent Commission with the special intention to support Medichem. We then get 70% of the donation, 30% being for the Permanent Commission's overall activities. The subcommittee is



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At the 17th International Congress of Occupational Medicine in Buenos Aires (September 1972), it was decided that a subcommittee "Occupational Health in the Chemical Industry" should be formed from the "Commission Permanente et Association Internationale pour la Medecine du Travail". This was a direct result of the overwhelming success of the First International Symposium of Occupational Physicians in the Chemical Industry. This subcommittee, and its proposed aims towards closer international co-operation in the field was supported by Professor Dr. Leo Noro, President and Professor Dr. Enrico Vigliani, General Secretary and Treasurer of the Permanent Commission. The task of forming the new committee was given to Dr. med. Alfred Thiess.

In order to stress it's close link with the First International Symposium of Occupational Physicians in the Chemical Industry, it was further decided to extend the title of "Occupational Health in the Chemical Industry" with "MEDICHEM". This emblem was initiated and first registered in Ludwigshafen am Rhein.

Sustainability

During Covid and a strategic planning session 2023 photos the Board and members discussed extensively a renewed strategic intent that led to a "statement of principles" to support the new strategic direction that will align to Sustainability and the UN SDG (United Nations Sustainable Development Goals).

"Statement of Principles Sustainability"

The 17 Sustainable Development Goals of the United Nations interconnect and are grounded on tangible physical and chemical principles as they are on social justice and human rights. Several of them relate to and apply to the use of chemicals, directly or indirectly. Medichem asserts that management and control of chemical exposure in the workplace and community, throughout their life cycle, are fundamental to achieving the Sustainable Development Goals. Medichem calls for a set of guiding principles for the chemical sector going forward. This approach will build on the collective knowledge, practice, and development by ICOH and Medichem, WHO and ILO, ICCA and Responsible Care, the UNSDGs and our members towards a sustainable chemical sector.

The chemical sector is critical to the modern world both in its economic importance and as an essential builder and provider of materials to the modern world. When the chemical sector is functioning as it should and is aligned with progress and social goals, it plays its proper role in building and enhancing the world in which we live and preserving its future. When it is not, its role may be destructive, damaging to health, and may undermine progress. Pollution, climate change, ecosystem damage, product safety, hazards to workers' health, and conflict arising from disrespect for community and cultural values are all dimensions of the common problem of failure to manage chemical production and use appropriately. In each of these domains, the chemical sector should be and can be a constructive and resourceful agent for positive change.

Sustainability and the Chemical Sector

Medichem calls for the recognition of fundamental principles of sustainability in research, design, operations, and management of chemicals:

1. Precaution. The precautionary principle is too often applied to small-scale risks and not major destabilizing risks, such as climate change. Medichem supports the adoption and refinement of the precautionary principle in balance with the need for technological progress, realizing that sustainable progress needs goals and limits.
2. Sustainability. The principles of sustainability are well known and recognized in the sector. Medichem calls for proactive research, design, and management to move the chemical sector with deliberate speed to the next step, that of regenerative technology (which leaves the environment and society not just unharmed but better than it was before).
3. The circular economy. The practical goal of a sustainable economy is to integrate production and end use and to minimize extraction and pollution throughout the life cycle of the product. Medichem calls for the design of products to facilitate reduction, recycling, refurbishing, reuse, and repair.
4. Continuous improvement. Chemical hazard regulation, occupational and environmental health and hazard mitigation, and pollution control are mostly achieved now through compliance with designated standards and guidelines, most of which were originally based on scientific evidence and judgment, but which inevitably still lag behind the state of advancing knowledge. Medichem calls for the adoption of the management principle of "continuous quality improvement" to apply to control of chemical hazards and exposure to the same extent that it is applied to process and product quality.

5. Green chemistry. The pathway to a chemical sector that has minimal or no impact on the environment and health but is both effective and sustainable socially, environmentally, and economically has been laid out in the principles of "green chemistry". Medichem urges all parties in the chemical sector to examine their inventories, processes, and products for opportunities to apply these principles and to seize these opportunities.
6. Social engagement. For many years now, the chemical sector has engaged communities in which it operates and reached out to educate and build trust, often with disappointing results. Medichem urges a thoroughgoing re-evaluation of the role of the sector as a constructive force in the material culture and roots in the community that require nurturing through trust, demonstrated responsibility, cultural respect, and equity among stakeholders, including employees and neighbors. To this effect we support both the footprint, handprint, and blueprint approach to environmental sustainability.

Medichem realizes that many enterprises within the sector are already doing much to further this agenda, and that movement in this direction will require concerted action beyond what Medichem can do as an individual organization. However, Medichem is also aware that time is limited because of the urgent challenges of the most pressing issues, including climate change. All deliberate speed is required but at the same time the response must be thoughtful and appropriate so that it does not lock in mistakes that cannot be easily undone later, as happened in the past.

Medichem believes that it is possible to achieve these goals but that there is no time to delay.

Sustainability Practical aspects in the Chemical Sector

Sustainability is a key consideration for multinational companies (MNCs) due to their global reach and impact on various social, economic, and environmental aspects. Here's how MNCs approach sustainability:

1. Corporate Social Responsibility (CSR): Many MNCs have established CSR programs that focus on sustainability. These programs involve initiatives to reduce environmental impact, promote social responsibility, and contribute to local communities. MNCs often invest in renewable energy, waste reduction, ethical sourcing, and community development projects.

2. Supply Chain Management: MNCs recognize the importance of sustainable supply chains. They work towards ensuring that their suppliers adhere to ethical and sustainable practices, such as fair labour conditions, responsible sourcing, and environmental stewardship. This includes conducting audits, providing training, and setting standards for suppliers' sustainability performance.
3. Environmental Footprint Reduction: MNCs strive to reduce their environmental impact by implementing sustainable practices within their operations. This can include minimizing energy consumption, reducing greenhouse gas emissions, optimizing water usage, and implementing waste management strategies. Some MNCs also set targets for carbon neutrality or zero waste.
4. Stakeholder Engagement: MNCs engage with various stakeholders, including employees, customers, local communities, NGOs, and governments, to address sustainability concerns. They may collaborate with stakeholders to develop sustainable solutions, seek feedback on their practices, and incorporate stakeholder expectations into their sustainability strategies.
5. Reporting and Transparency: MNCs increasingly publish sustainability reports to communicate their environmental and social performance. These reports provide transparency about the company's sustainability goals, progress, and challenges. MNCs may also participate in sustainability rankings and certifications to demonstrate their commitment to sustainability.
6. Innovation and Research: MNCs invest in research and development to develop innovative products and technologies that contribute to sustainability. They may invest in renewable energy, sustainable materials, and eco-friendly manufacturing processes. MNCs also collaborate with academic institutions and startups to foster innovation in sustainability.
7. Collaboration and Partnerships: MNCs recognize the need for collaboration to address sustainability challenges. They often collaborate with other companies, NGOs, governments, and international organizations to share best practices, develop industry standards, and work towards common sustainability goals.
8. United Nations Global Compact: Many MNCs are signatories to the United Nations Global Compact, a voluntary initiative that encourages businesses to adopt sustainable and socially responsible policies and practices. The Global Compact's ten principles cover areas such as human rights, labour, environment, and anti-corruption.

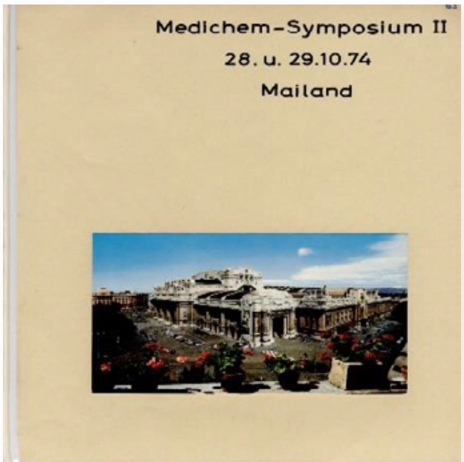
While progress has been made, there is still room for improvement. MNCs continue to face challenges in balancing profitability with sustainability goals and ensuring consistent implementation of sustainability practices across their global operations. However, many MNCs recognize sustainability as a long-term business imperative and are actively working towards integrating it into their strategies and operations.

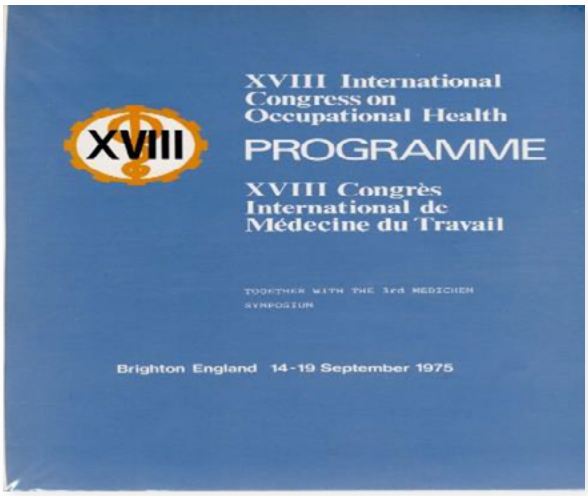
Sustainability Globally

Sustainability efforts should prioritize underserved populations to ensure social equity and address the unique challenges they face. Here are some key considerations for promoting sustainability among underserved populations:

1. Access to Basic Needs: Sustainability initiatives should focus on ensuring that underserved populations have access to basic needs such as clean water, sanitation, nutritious food, healthcare, and education. These initiatives can include providing affordable and sustainable solutions, improving infrastructure, and addressing inequalities in access to essential services.
2. Poverty Alleviation: Sustainability efforts should aim to reduce poverty and promote economic opportunities for underserved populations. This can be achieved through inclusive business models, microfinance programs, vocational training, and job creation initiatives that prioritize sustainable industries.
3. Energy Access: Access to reliable and affordable energy is crucial for underserved populations. Sustainable energy solutions, such as off-grid solar systems or clean cooking technologies, can improve their quality of life, reduce health risks, and promote economic development.
4. Climate Resilience: Underserved populations are often more vulnerable to the impacts of climate change. Sustainability initiatives should address their specific needs and build resilience in areas such as disaster preparedness, climate adaptation, and access to climate information and early warning systems.
5. Community Engagement and Empowerment: Involving underserved populations in decision-making processes and empowering them to participate in sustainability initiatives is essential. This can be achieved through capacity-building programs, community-led projects, and partnerships that prioritize local knowledge, culture, and aspirations.

6. Education and Awareness: Promoting sustainability education and awareness among underserved populations is crucial for long-term behaviour change and empowerment. This can involve providing environmental education, training on sustainable practices, and raising awareness about the importance of sustainable lifestyles and consumption patterns.
7. Social Inclusion and Equity: Sustainability initiatives should address social inequalities and promote inclusivity. This includes considering gender equality, indigenous rights, minority rights, and the needs of marginalized populations. Efforts should ensure that underserved populations have equal opportunities to benefit from sustainability initiatives and participate in decision-making processes.
8. Partnerships and Collaboration: Collaboration between governments, NGOs, businesses, and local communities is essential for addressing the sustainability challenges faced by underserved populations. Partnerships can leverage resources, expertise, and networks to develop tailored solutions, share best practices, and scale up successful initiatives.





Sustainability Practical aspects in the Chemical Sector

By prioritizing underserved populations in sustainability efforts, we can work towards a more inclusive and equitable world where everyone can thrive in a sustainable future.

When it comes to sustainability, there are several practical aspects that individuals and organizations can consider promoting environmentally friendly practices. Here are some key practical aspects of sustainability:

1. Energy Conservation: Implementing energy conservation measures is crucial for sustainability. This can include using energy-efficient appliances, LED lighting, and optimizing heating, ventilation, and air conditioning (HVAC) systems. Additionally, renewable energy sources like solar panels or wind turbines can be explored to reduce reliance on fossil fuels.
2. Waste Reduction and Recycling: Implementing waste reduction strategies, such as recycling programs and composting, can significantly reduce the amount of waste sent to landfills. Organizations can also encourage employees to minimize paper usage, promote electronic communication, and prioritize reusable materials and packaging.
3. Water Conservation: Conserving water is essential for sustainability. Installing water-efficient fixtures like low-flow toilets and faucets, using drip irrigation systems, and collecting rainwater for outdoor use are effective ways to reduce water consumption. Additionally, educating individuals about water-saving practices, such as shorter showers and fixing leaks promptly, can make a significant impact.
4. Sustainable Transportation: Encouraging sustainable transportation options can help reduce carbon emissions. Organizations can promote carpooling, cycling, or walking to work by providing incentives like preferred parking or bike racks. Offering telecommuting options or flexible work hours can also reduce commuting-related emissions.
5. Sustainable Procurement: Choosing sustainable and eco-friendly products and services is important for sustainability. Organizations can prioritize suppliers and vendors that adhere to sustainable practices, such as using environmentally friendly materials, reducing packaging waste, and implementing fair labour practices.
6. Responsible Resource Management: Responsible resource management entails using resources efficiently and minimizing waste. This can involve implementing efficient production processes, optimizing supply chains, and reducing water and energy consumption. Organizations can also explore circular economy principles, such as reusing and repurposing materials, to minimize waste generation.

7. Education and Awareness: Raising awareness and educating individuals about sustainability practices is crucial. Organizations can conduct training sessions, workshops, or awareness campaigns to promote sustainable behaviours and provide guidance on practical steps individuals can take to reduce their environmental impact.
8. Collaboration and Partnerships: Collaboration and partnerships play a vital role in sustainability efforts. Organizations can collaborate with suppliers, customers, and other stakeholders to identify and implement sustainable practices together. Sharing best practices, knowledge, and resources can lead to collective action and greater impact.
9. Continuous Improvement: Sustainability is an ongoing process, and continuous improvement is essential. Regularly assessing and monitoring sustainability initiatives, setting goals, and measuring progress can help identify areas for improvement and ensure long-term sustainability practices.

By considering these practical aspects of sustainability, individuals and organizations can contribute to a greener and more sustainable future. It's important to tailor sustainability efforts to specific contexts and continuously adapt practices to align with evolving environmental priorities and technologies.

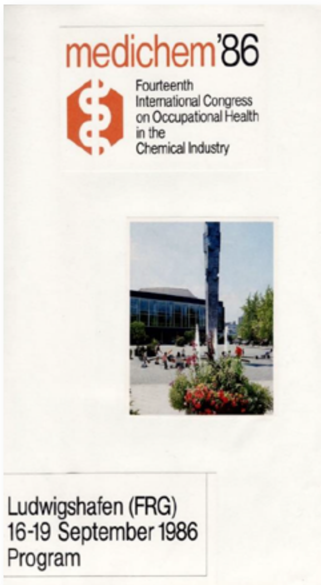
The way forward debate

Sustainability and Artificial Intelligence (AI) can intersect in various ways to address environmental, social, and economic challenges. Here are some key areas where sustainability and AI converge:

1. Energy Efficiency: AI can be used to optimize energy consumption in various sectors, such as buildings, transportation, and manufacturing. Machine learning algorithms can analyse large datasets to identify patterns, optimize energy usage, and reduce waste. This can lead to energy savings, lower greenhouse gas emissions, and increased resource efficiency.
2. Renewable Energy Integration: AI can help improve the integration of renewable energy sources into the power grid. AI algorithms can forecast energy demand, manage energy storage systems, and optimize energy generation and distribution. This enables a smoother transition to renewable energy and reduces reliance on fossil fuels.
3. Smart Cities: AI technologies can enhance the sustainability of cities by optimizing transportation systems, managing waste and water resources, and improving energy efficiency in buildings. AI-powered sensors, data analytics, and predictive algorithms can enable more efficient resource allocation, reduce emissions, and enhance the overall quality of life in urban areas.
4. Sustainable Agriculture: AI can support sustainable farming practices by analyzing data from sensors, drones, and satellites to optimize irrigation, reduce chemical use, and improve crop yields. AI-powered systems can also help monitor soil conditions, manage pests, and promote precision agriculture techniques, leading to more sustainable and efficient farming.
5. Conservation and Biodiversity: AI can assist in monitoring and protecting ecosystems and biodiversity. Machine learning algorithms can analyze satellite imagery, acoustic data, and other sources to track wildlife populations, detect deforestation, identify illegal activities, and support conservation efforts. This can aid in preserving ecosystems and biodiversity hotspots.
6. Circular Economy: AI can play a role in advancing the circular economy by enabling better waste management, recycling, and resource recovery. AI algorithms can help identify recyclable materials, optimize waste sorting processes, and improve the efficiency of recycling operations. This supports the transition from a linear "take-make-dispose" model to a more sustainable circular model.

7. Climate Modelling and Prediction: AI can enhance climate modelling and prediction capabilities, helping to understand and address the impacts of climate change. Machine learning algorithms can analyse climate data, predict extreme weather events, and support climate resilience planning. This can aid in developing effective mitigation and adaptation strategies.

It is important to note that while AI has the potential to contribute to sustainability, it also poses challenges and risks. These include energy consumption by AI systems, data privacy concerns, algorithmic biases, and potential job displacement. It is crucial to develop and deploy AI technologies in a responsible and ethical manner, considering their broader social and environmental impacts.



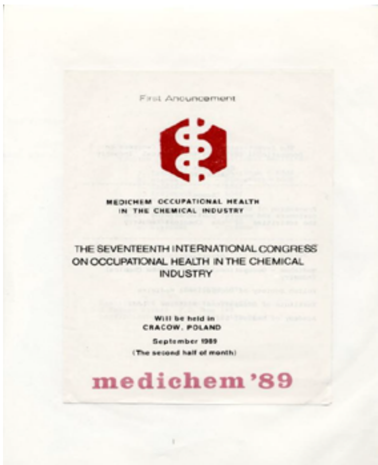
Individual and Social Responsibility

When it comes to sustainability, there are several practical aspects that individuals and organizations can consider promoting, environmentally friendly practices. Here are some key practical aspects of sustainability:

1. Energy Conservation: Implementing energy conservation measures is crucial for sustainability. This can include using energy-efficient appliances, LED lighting, and optimizing heating, ventilation, and air conditioning (HVAC) systems. Additionally, renewable energy sources like solar panels or wind turbines can be explored to reduce reliance on fossil fuels.
2. Waste Reduction and Recycling: Implementing waste reduction strategies, such as recycling programs and composting, can significantly reduce the amount of waste sent to landfills. Organizations can also encourage employees to minimize paper usage, promote electronic communication, and prioritize reusable materials and packaging.
3. Water Conservation: Conserving water is essential for sustainability. Installing water-efficient fixtures like low-flow toilets and faucets, using drip irrigation systems, and collecting rainwater for outdoor use are effective ways to reduce water consumption. Additionally, educating individuals about water-saving practices, such as shorter showers and fixing leaks promptly, can make a significant impact.
4. Sustainable Transportation: Encouraging sustainable transportation options can help reduce carbon emissions. Organizations can promote carpooling, cycling, or walking to work by providing incentives like preferred parking or bike racks. Offering telecommuting options or flexible work hours can also reduce commuting-related emissions.
5. Sustainable Procurement: Choosing sustainable and eco-friendly products and services is important for sustainability. Organizations can prioritize suppliers and vendors that adhere to sustainable practices, such as using environmentally friendly materials, reducing packaging waste, and implementing fair labour practices.
6. Responsible Resource Management: Responsible resource management entails using resources efficiently and minimizing waste. This can involve implementing efficient production processes, optimizing supply chains, and reducing water and energy consumption. Organizations can also explore circular economy principles, such as reusing and repurposing materials, to minimize waste generation.

7. Education and Awareness: Raising awareness and educating individuals about sustainability practices is crucial. Organizations can conduct training sessions, workshops, or awareness campaigns to promote sustainable behaviours and provide guidance on practical steps individuals can take to reduce their environmental impact.
8. Collaboration and Partnerships: Collaboration and partnerships play a vital role in sustainability efforts. Organizations can collaborate with suppliers, customers, and other stakeholders to identify and implement sustainable practices together. Sharing best practices, knowledge, and resources can lead to collective action and greater impact.
9. Continuous Improvement: Sustainability is an ongoing process, and continuous improvement is essential. Regularly assessing and monitoring sustainability initiatives, setting goals, and measuring progress can help identify areas for improvement and ensure long-term sustainability practices.

By considering these practical aspects of sustainability, individuals and organizations can contribute to a greener and more sustainable future. It's important to tailor sustainability efforts to specific contexts and continuously adapt practices to align with evolving environmental priorities and technologies.



First Anouncement

MEDICHEM OCCUPATIONAL HEALTH IN THE CHEMICAL INDUSTRY

THE SEVENTEENTH INTERNATIONAL CONGRESS ON OCCUPATIONAL HEALTH IN THE CHEMICAL INDUSTRY

Will be held in
CRACOW, POLAND

September 1989
(The second half of month)

medichem '89

Sustainability

Is indeed the way forward for a more resilient and equitable future.
Here's why:

1. Environmental Stewardship: Sustainability ensures the responsible use of natural resources, protection of ecosystems, and reduction of pollution and waste. By adopting sustainable practices, we can mitigate climate change, preserve biodiversity, and safeguard the planet for future generations.
2. Social Equity: Sustainability promotes social equity by addressing inequalities and ensuring the well-being of all people, regardless of their background or location. It aims to provide access to basic needs, such as clean water, sanitation, healthcare, education, and affordable energy, while promoting inclusive and participatory decision-making processes.
3. Economic Prosperity: Sustainable practices can drive economic growth and prosperity. They foster innovation, create new industries and jobs, and enhance productivity and efficiency. Transitioning to a sustainable economy can lead to long-term economic stability, reduce resource dependency, and open new market opportunities.
4. Resilience and Adaptation: Sustainability helps us build resilience to global challenges like climate change, natural disasters, and resource scarcity. By adopting sustainable practices and investing in resilient infrastructure, we can better adapt to changes and minimize the impacts on communities and economies.
5. Public Health and Well-being: Sustainable practices prioritize public health and well-being by reducing exposure to harmful substances, improving air and water quality, promoting active lifestyles, and ensuring access to nutritious food. This leads to healthier communities and fewer healthcare costs.
6. Responsible Consumption and Production: Sustainability encourages responsible consumption and production patterns, emphasizing the need to minimize waste, promote recycling and reuse, and shift towards a circular economy. This reduces resource depletion, minimizes environmental impact, and reduces the strain on ecosystems.
7. Global Collaboration: Sustainability requires global collaboration and collective action. It calls for partnerships between governments, businesses, civil society, and individuals to work together towards common goals. By collaborating, sharing knowledge, and pooling resources, we can tackle complex sustainability challenges more effectively.

8. Long-term Thinking: Sustainability encourages a long-term perspective in decision-making and planning. It recognizes the interconnectedness of social, environmental, and economic systems and encourages us to consider the impacts of our actions on future generations.

As we face pressing global challenges, such as climate change, biodiversity loss, and social inequality, embracing sustainability is crucial. It offers a pathway towards a more inclusive, prosperous, and resilient future for all, while preserving the planet's resources and ensuring a high quality of life for present and future generations.

Sustainability and the reality of exposure

Chemical-related occupational diseases are a significant concern in many industries. Research in this area aims to understand the health effects of exposure to hazardous chemicals in the workplace and develop strategies to prevent and mitigate these diseases.

Some key areas of research related to chemical-related occupational diseases include:

1. Exposure assessment: Research focuses on assessing and quantifying exposure levels to hazardous chemicals in various occupational settings. This involves monitoring and measuring chemical concentrations in the air, water, and soil, as well as evaluating exposure routes and patterns.
2. Health effects: Studies investigate the health effects of chemical exposures, such as respiratory diseases, skin disorders, cancer, neurological disorders, and reproductive issues. Research examines the mechanisms of toxicity and the relationship between exposure levels and health outcomes.
3. Prevention and control measures: Research aims to develop effective strategies to prevent occupational diseases related to chemical exposures. This includes evaluating engineering controls, personal protective equipment, workplace practices, and regulatory policies to minimize exposure risks.
4. Risk assessment and management: Research focuses on assessing the risks associated with specific chemicals or chemical classes and developing risk management strategies. This involves identifying hazardous substances, evaluating exposure scenarios, and implementing control measures to reduce risks.

5. Occupational health surveillance: Research aims to establish comprehensive surveillance systems to monitor and track occupational diseases related to chemical exposures. This includes collecting and analysing data on disease prevalence, identifying high-risk occupations or industries, and evaluating the effectiveness of prevention measures.

In terms of sustainability, organizations play a crucial role in ensuring the well-being of their employees while minimizing environmental impacts. Sustainable practices in the context of chemical-related occupational diseases include:

1. Hazard identification and substitution: Organizations can identify hazardous chemicals used in their operations and seek safer alternatives. This promotes the use of less toxic substances, reducing the risk of occupational diseases.
2. Engineering controls and ventilation: Employers can implement engineering controls, such as effective ventilation systems, to minimize chemical exposures in the workplace. Proper ventilation helps maintain air quality and reduces the concentration of hazardous substances.
3. Training and education: Organizations can provide comprehensive training and education programs to employees about the potential risks associated with chemical exposures. This includes proper handling, storage, and disposal of chemicals, as well as the use of personal protective equipment.
4. Occupational health programs: Organizations can establish occupational health programs that include regular health assessments, medical surveillance, and monitoring of employees exposed to hazardous chemicals. These programs help identify early signs of occupational diseases and allow for timely intervention.
5. Compliance with regulations: Organizations must comply with relevant occupational health and safety regulations and standards to ensure the protection of workers and the environment. This includes proper labelling, storage, and disposal of chemicals, as well as maintaining appropriate record-keeping systems.

By integrating research findings into occupational health and safety practices and adopting sustainable measures, organizations can protect the health and well-being of their employees while promoting a healthier and more environmentally conscious work environment.

Chemical exposure and surveillance

Chemical exposure refers to the contact or interaction between chemicals and living organisms, including humans and the environment. It can occur through various routes such as inhalation, ingestion, or direct contact with the skin.

Environmental and human surveillance are two approaches used to monitor and assess the impact of chemical exposure.

Environmental surveillance involves monitoring the presence and levels of chemicals in air, water, soil, and other environmental media. This can be done through the collection and analysis of samples from these sources. Environmental surveillance helps identify potential sources of chemical exposure, assess the distribution and transport of chemicals in the environment, and evaluate their potential risks to ecosystems and human health.

Human surveillance, on the other hand, focuses on monitoring the levels of chemicals in the human body. This can be done through biomonitoring, which involves analysing biological samples such as blood, urine, or hair to measure the concentrations of specific chemicals or their metabolites. Human surveillance helps assess the extent of exposure to chemicals, identify populations at higher risk, and evaluate the effectiveness of exposure reduction strategies.

Both environmental and human surveillance play crucial roles in understanding the impacts of chemical exposure. They provide valuable information for risk assessment, policymaking, and the development of strategies to minimize or prevent adverse health and environmental effects associated with chemical exposure.

MEDICHEM Congresses 1972–1984

1972	Ludwigshafen: "Preventive measures in the chemical industry"
1974	Milan: "Chromosome aberrations due to chemical substances" and "The VC problem"
1975	Brighton: "Methods of investigation into occupational cancer"
1976	Haifa: "Recent advances in industrial toxicology" "Neurotoxicity" "Seveso"
1977	San Francisco: "Epidemiological risk studies"
1978	Dubrovnik: "Current occupational health problems in the chemical industry"
1979	Gera: "Surveillance of chemical workers by epidemiological methods" "Industrial medical assessment of jobs in the chemical industry" "Current occupational health problems in the chemical industry"
1980	Tokyo: "Mutagenicity, Carcinogenicity, Genetic effects, Metabolism and Toxicity of industrial chemicals
1981	Cairo: "Pulmonary problems – allergic and immunological problems" "Data bank" "Biological monitoring"
1982	Paris: "Epidemiology and medical-legal responsibilities" "Cancers – Metals" "Solvents – Dust" "Definite Products"
1983	Calgary: "Occupational health and toxicological problems in the petroleum, gas, and petro-chemical industries" "Emergencies in the chemical industry: assessment and intervention" "Applications of computer technology in occupational health" "Current occupational health problems in the chemical industry"
1984	Dublin: "Mixed exposure and multiple factor inter-action in the chemical industry" "Assessment of reproduction hazards in the workplace" "Current critical health problems in occupational health in the chemical industry"

Crisis Communication

Interactive seminar

The COVID-19 pandemic presents many challenges for communication, including mixed messages, conspiracy theories, poor use of digital engagement, confused outreach strategies and political polarization. With social media trolls in ascendance misinformation spreads quickly and widely at unprecedented levels. Poor communication has caused mistrust in governmental, business and health authorities, and the rejection of proven preventative measures. This is not a new phenomenon with misinformation about health, risk, and science persisting in the risk communication environment. This interactive seminar provides insights into the phenomenon of misinformation based on evidence from around the world with a specific focus on business response efforts and prevents strategies and techniques to combat its effects. The content does not focus solely on any specific country, organization or community and is specifically designed to be interactive and to foster dialogue. Case studies have been inserted into the presentation to make the content more to encourage audience participation.

Introduction to the seminar. Based on prior needs assessments an instructional design approach will be used that includes:

- A scenario-driven, highly interactive participant approach
- An intense focus on the COVID-19 Pandemic
- An additional focus on core crisis and risk communication techniques that include those highlighted in existing U.S. CDC Crisis and Emergency Risk Communication (CERC) Program
- Skills-building approaches highlighting business, community, and national outreach initiatives.

Overview

- The interactive seminar format is designed to engage participants in realistic decision-making scenarios, providing an expanded view of what it is like to:
- Apply crisis communication essentials – Understanding key concepts for effective health-related crisis risk communication, dealing with outrage and apathy, understand what works and what doesn't.
- Identify stakeholders, business partners and community - Choosing the right partners at the right time for the right purpose.

- Apply persuasion and behaviour change techniques – Understanding the importance of key elements of behaviour change theory to engage target audiences and develop actionable messages and results.
- Apply new tools and strategies of digital media - Leveraging new communication tools and strategies.

At the end of the seminar participants will be able to:
To provide our community of practice a risk communication foundation for handling future disease outbreaks and public health threats and understand the underlying risk communication principles and effective practices utilized by business, government, community and public health organizations.

Crisis communication is a critical aspect of managing and responding to crises effectively. Here are some practical aspects to consider when developing a crisis communication strategy:

1. Preparedness: Be proactive and develop a crisis communication plan before a crisis occurs. Identify potential risks and scenarios, establish a crisis communication team, define roles and responsibilities, and outline communication protocols and channels.
2. Clear and Timely Communication: Communicate clear, accurate, and timely information to stakeholders during a crisis. Provide updates regularly, addressing concerns and questions promptly. Ensure consistency in messaging across different communication channels.
3. Stakeholder Analysis: Identify and prioritize key stakeholders who may be impacted by the crisis. Understand their needs, concerns, and communication preferences. Tailor messages and channels to effectively reach and engage different stakeholder groups.
4. Spokesperson and Media Relations: Designate a spokesperson or team of spokespersons who are trained in crisis communication. They should be able to deliver consistent and empathetic messages to the media and handle interviews effectively. Establish relationships with media outlets to facilitate information dissemination.
5. Transparency and Authenticity: Be transparent and honest in your communication. Acknowledge mistakes or shortcomings, if any, and provide regular updates on progress. Authenticity builds trust and credibility, which are crucial during a crisis.

6. Two-Way Communication: Enable two-way communication channels to listen to stakeholders' concerns, address questions, and gather feedback. This can include hotlines, social media platforms, email, or dedicated communication channels. Actively monitor and respond to messages and comments in a timely manner.
7. Social Media Management: social media can be a powerful tool during a crisis, but it also requires careful management. Monitor social media platforms for mentions, rumours, and misinformation related to the crisis. Respond promptly, correct inaccuracies, and provide updates to ensure accurate information is shared.
8. Internal Communication: Effective internal communication is essential during a crisis. Keep employees informed about the situation, actions being taken, and their role in the response. Provide them with the necessary resources and support. Internal communication helps maintain morale, alignment, and coordination within the organization.
9. Training and Simulation Exercises: Regularly train and educate the crisis communication team on best practices, communication techniques, and media relations. Conduct simulation exercises to test the crisis communication plan and identify areas for improvement.
10. Evaluation and Learning: After the crisis, evaluate the effectiveness of your crisis communication efforts. Identify lessons learned and areas for improvement. Update the crisis communication plan based on these insights to enhance preparedness for future crises.

Remember, effective crisis communication is not a one-size-fits-all approach. It should be tailored to the specific crisis, stakeholders, and organizational context. By being prepared, transparent, and responsive, organizations can navigate crises more effectively and maintain trust and credibility with stakeholders.

Crisis Communication - business continuity and health effect

Crisis and Chemicals

Chemicals can play a significant role in both causing and mitigating various crises. Here are a few examples:

1. Environmental Crises: Certain chemicals, such as hazardous substances and pollutants, can contribute to environmental crises. Chemical spills, improper disposal, and industrial pollution can contaminate water sources, soil, and air, leading to ecological damage, loss of biodiversity, and environmental degradation.

2. Health Crises: Chemicals can also pose risks to human health, causing health crises. Exposure to toxic chemicals in workplaces, homes, or through contaminated food and water can lead to acute or chronic health problems, including respiratory issues, cancer, developmental disorders, and hormonal imbalances.
3. Climate Crisis: Certain chemicals, such as greenhouse gases, contribute to the climate crisis by trapping heat in the atmosphere and causing global warming. For example, the release of carbon dioxide from the burning of fossil fuels and the emission of other potent greenhouse gases, such as methane and nitrous oxide, contribute to climate change and its associated impacts.
4. Chemical Disasters: Industrial accidents and chemical disasters can result in immediate crises, such as explosions, fires, and toxic releases. These incidents can cause significant loss of life, injuries, displacement of communities, and long-term environmental and health consequences.

On the other hand, chemicals can also play a role in mitigating crises:

1. Clean Technologies: Chemical innovations can drive the development of clean technologies and renewable energy sources. For example, advancements in battery technology and energy storage systems are crucial for transitioning to a low-carbon economy and mitigating the climate crisis.
2. Water Treatment: Chemicals are used in water treatment processes to purify and disinfect water, making it safe for consumption. This helps address water-related crises, such as waterborne diseases and water scarcity.
3. Disaster Response: Chemicals are essential in emergency response situations. They are used for decontamination, hazardous material management, and medical treatment during chemical accidents or natural disasters.
4. Sustainable Agriculture: Chemicals, such as fertilizers and pesticides, can be used responsibly in agriculture to increase crop yields, improve food security, and reduce the environmental impact of farming practices. However, it is important to ensure their safe and judicious use to minimize negative effects on ecosystems and human health.

To address the negative impacts of chemicals and prevent crises, it is crucial to prioritize responsible chemical management, promote the use of safer alternatives, improve chemical regulations and standards, and enhance transparency and information sharing about chemical hazards. Additionally, fostering sustainable practices, promoting circular economy principles, and encouraging the adoption of green chemistry can help minimize the negative impacts of chemicals and contribute to a more sustainable future.

ICOH Scientific Committee OH CI

ICOH stands for the International Commission on Occupational Health. It is an international professional organization that promotes occupational health and safety worldwide. ICOH brings together experts and professionals from various disciplines, including medicine, epidemiology, toxicology, and engineering, to collaborate and exchange knowledge on occupational health issues.

ICOH aims to advance research, education, and practice in occupational health, with a focus on preventing work-related diseases and promoting the health and well-being of workers. The organization organizes scientific conferences, publishes journals and reports, and provides a platform for networking and collaboration among occupational health professionals globally.

Overall, ICOH plays a crucial role in promoting and improving occupational health worldwide by fostering research, education, and collaboration among professionals in the field.

ICOH also contributes to the development of policies and guidelines related to occupational health and safety, working closely with international organizations such as the World Health Organization (WHO) and the International Labour Organization (ILO).


MEDICHEM
NEWSLETTER
July 1995
Message from the Chairman


MEDICHEM
NEWSLETTER
Feb. 2000
Y2K Membership Contributions are Due Now
Every Member Recruits One New Member

MEDICHEM

NEWSLETTER

June 2001

Medichem 2001 Chairman's and Board Elections

In the envelope containing this Newsletter, Medichem Members will receive the ballot form for this year's Chairman's and Board Elections. It is a pleasure to announce that for once, there are more experts who have submitted their candidacies than we have vacancies. This indicates a high interest in Medichem and I am very happy about this.

Dear Members, please show your personal interest in Medichem by casting your vote, either by fax or mail.

To be valid, the ballot form must reach the Secretary no later than July 31st, 2001. Only Medichem members in good standing may vote. Forms coming from anonymous voters have to be considered void. **It goes without saying that the names of those voting will only be used to identify voters as members in good standing and will be known to no-one other than the Secretary.**

I would like to thank you already now for your kind co-operation.

This year's election procedure needs further explanation. According to the Medichem Constitution, Noel Humphry has to step down after two 3-year terms. We are therefore electing a new Chair. For this election, two candidates have been nominated:

Dr. Stephen Borron, George Washington University, Washington, DC and Université de Paris XIII, Paris, France and

Prof. Oswald Jahn, Dept. of Occupational Medicine, U. of Vienna, Austria

Both candidates are highly qualified experts.

As far as the Board elections go, the following six Board Members arrive at the end of their terms of office in September 2001: Leo Miksche, Kalle Ahlberg, Teo Popov, Hugo Rüdiger, Abed Bin Onn and Andreas Flückiger. Board members can be re-elected without restriction of terms.

Leo Miksche and Kalle Ahlberg as well as recently also Hugo Rüdiger have announced that they would no longer be available as candidates. Andreas Flückiger will step down as Secretary, but if re-elected would accept to remain on the Board and if necessary also keep the Treasury. The old Board presently has two unoccupied seats. This leaves the Board with a total of eight seats that can be filled.

For these eight seats, the Secretary has received nominations for nine candidates.

(continued on page 2)

MEDICHEM

NEWSLETTER

November 2005

Change of Secretariat

On the occasion of the recent General Assembly in Goa/India, I handed over the office as Medichem Secretary to Robert Winker from Austria (see also minutes from the GA in this issue of the Newsletter). The Medichem Board had in its preceding meeting unanimously confirmed Robert's appointment. It had taken some time for me to reluctantly realize that my various other obligations did not leave me enough time to invest as much energy as I would have liked and as you, the members, deserve. I want to thank the many members who, on many occasions, encouraged and supported me, and I ask you to continue to support my successor likewise. I also thank Robert for his commitment to step in, and my Board colleagues who have co-opted me to further serve on the Board until the regular end of my mandate in 2007.

Dr. Michael Nasterlack
(Ludwigshafen, Germany)

Introduction of the new Secretary

I am a Doctor for Occupational Medicine, currently working at the Medical University of Vienna. I attended 5 years of my medical specialization training at the Medical University of Vienna and additionally one year at the Finish Institute of Occupational Medicine in Helsinki (Finland).

I have been conducting research on issues relating orthostatic intolerance and on autonomic dysfunction. One of my latest projects was recently reported in the Hypertension Journal, official publication of the American Heart Association (April 2005 Edition).

I am also teaching graduate and undergraduate courses in Occupational Medicine at the Medical University of Vienna.

I know that the expectations of the Medichem-members concerning the new Secretary are very high, because Michael has done such a great job. I would like to take the opportunity to thank him once again for his great contribution and I will try to do my best to satisfy the expectations.

Dr. Robert Winker
(Vienna, Austria)

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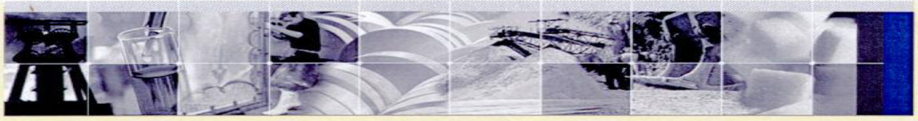


Dear Colleague,

In the name of our Organizing Committee we warmly invite you to participate at **the** 2011 International Occupational Health Event - **Medichem 2011 in Heidelberg!** With an **A-List of brilliant speakers** we intend to provide scientific excellence - hopefully enriched by **your** contribution!

Exchange of knowledge on cutting-edge developments between science and practice within the different **topics of the MEDICHEM 2011** **Theme: Occupational Health in a Changing World** - this is what we will be offering you from **2 - 5 June 2011.**

Thomas Köhler, Dr. Maren Beth-Hübner, Prof. Dr. Alfred Thiess

Please **visit our website, register early** and **send in your abstract!**

In addition, it is our goal - and we personally will put all our best efforts into achieving it - that **all participants**, including the **exhibitors and sponsors**, will not only benefit from a productive and profitable congress but also enjoy a few memorable days in Heidelberg in the early summer of 2011.

For our **retired colleagues** we offer a **reduced fee**. **Register now for reduced prices!**

In pursuit of this goal we offer an **all-inclusive conference package** and an **attractive social programme** as well as a **comfortable congress venue** with **on-site accomodation**, situated on the banks of the Neckar River, in our famous old and romantic **University City of Heidelberg**, Germany.

We are certain this information will have kindled your interest in attending this major event.

We are greatly looking forward to welcoming you personally at the 39th MEDICHEM-Congress 2011 in Heidelberg, Germany for an unconventional as well as socially enjoyable meeting.

Heidelberg, October 25th, 2010

Thomas Köhler
(Managing Director BG RCI)

Dr. med. Maren Beth-Hübner
(Chair of the Organizing Committee MEDICHEM 2011)

Prof. Dr. med. Alfred Thiess
(Founder & Honorary President of MEDICHEM)

BG RCI
Berufsgenossenschaft Rohstoffe und chemische Industrie

Medichem

You're receiving this email because you are either a MEDICHEM-Member or the chair of the congress, Dr. Maren Beth-Huebner, BG RCI, Heidelberg, Germany, thought you might be interested to attend the MEDICHEM 2011 Congress.

To unsubscribe from her list of potentially interested persons, please **click here** (medichem2011@bgrci.de).

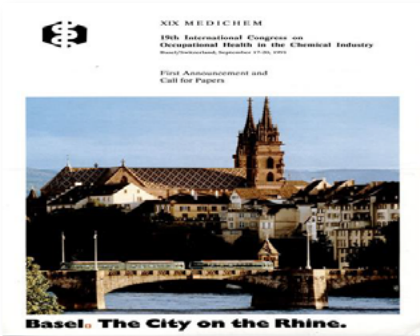
http://www.medichem2011.org/files/10000062/Newsletter.htm 12.11.2010

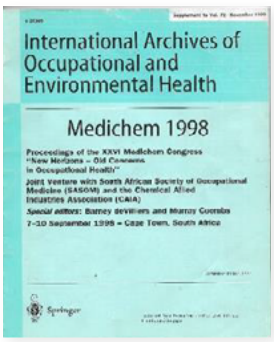
ICOH 2012 venue moved to Cancun, Mexico

Based on the concerns of several ICOH members and travel advices issued by some Government Institutions regarding security issues in the Monterrey area in Mexico, and in consideration of the analysis made by the ICOH Officers and the National Organizing Committee, ICOH Board decided during the meeting held on February 2, 2011 in Milan, to move the congress venue to the city of Cancun, Mexico.

The dates and the scientific programme will remain the same.

All the relevant information are online on ICOH 2012 Congress website.





OEM in the context of Sustainability in the Chemical sector

The chemical sector has a significant impact on sustainability due to its role in manufacturing, resource consumption, waste generation, and potential environmental and human health risks. However, there are efforts within the industry to promote sustainability and mitigate these impacts. Here are some key aspects to consider regarding sustainability in the chemical sector:

1. Green Chemistry: Green chemistry focuses on the design and development of chemical products and processes that are environmentally friendly, economically viable, and socially responsible. It aims to minimize the use and generation of hazardous substances, reduce energy consumption, and promote the use of renewable resources.
2. Resource Efficiency: The chemical industry can contribute to sustainability by improving resource efficiency. This involves minimizing resource consumption, optimizing production processes, and reducing waste generation. Adopting cleaner production methods, recycling, and reusing materials, and implementing circular economy principles can help minimize the environmental impact of the sector.
3. Renewable Feedstocks: Shifting towards the use of renewable feedstocks, such as biomass or bio-based materials, can reduce the reliance on fossil fuels and decrease the carbon footprint of chemical production. Utilizing renewable feedstocks also offers opportunities to develop more sustainable and biodegradable products.
4. Hazardous Chemical Management: Proper management of hazardous chemicals is crucial for sustainability. This includes implementing robust safety protocols, minimizing emissions and releases of hazardous substances, and ensuring responsible handling, storage, and disposal of chemicals to protect human health and the environment.
5. Product Stewardship: Implementing product stewardship practices involves considering the entire lifecycle of a chemical product, from its design and manufacturing to its use and disposal. This approach focuses on minimizing the environmental and health impacts of products throughout their lifecycle, including reducing waste, promoting recycling, and improving product safety.
6. Environmental Regulations and Compliance: Governments and regulatory bodies play a crucial role in promoting sustainability in the chemical sector. Enforcing and updating environmental regulations, setting emission limits, and requiring transparency in reporting can help drive sustainable practices and hold companies accountable for their environmental impacts.

7. Collaboration and Partnerships: Collaboration between stakeholders, including chemical companies, government agencies, NGOs, and consumers, is essential for advancing sustainability in the chemical sector. Partnerships can foster knowledge sharing, innovation, and the development of sustainable technologies and practices.
8. Research and Innovation: Investing in research and development can lead to the discovery of new technologies and processes that reduce the environmental impact of chemical production. Innovation in areas such as green solvents, sustainable catalysts, and energy-efficient processes can contribute to a more sustainable chemical sector.

It's important to note that sustainability efforts in the chemical sector are ongoing and evolving. Companies are increasingly recognizing the need to incorporate sustainability into their operations and are working towards reducing their environmental footprint while maintaining economic viability. The adoption of sustainable practices and technologies in the chemical sector is a crucial step towards a more sustainable future.

The United Nations Sustainable Development Goals (SDGs) are a set of 17 global goals adopted by UN member states in 2015 as part of the 2030 Agenda for Sustainable Development. The SDGs aim to address social, economic, and environmental challenges and guide countries towards a more sustainable and equitable future. Here are the 17 SDGs:

1. No Poverty: End poverty in all its forms and ensure social protection for all.
2. Zero Hunger: End hunger, achieve food security, improve nutrition, and promote sustainable agriculture.
3. Good Health and Well-being: Ensure healthy lives and promote well-being for all at all ages.
4. Quality Education: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.
5. Gender Equality: Achieve gender equality and empower all women and girls.
6. Clean Water and Sanitation: Ensure availability and sustainable management of water and sanitation for all.
7. Affordable and Clean Energy: Ensure access to affordable, reliable, sustainable, and modern energy for all.
8. Decent Work and Economic Growth: Promote sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all.

9. Industry, Innovation, and Infrastructure: Build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation.
10. Reduced Inequalities: Reduce inequality within and among countries.
11. Sustainable Cities and Communities: Make cities and human settlements inclusive, safe, resilient, and sustainable.
12. Responsible Consumption and Production: Ensure sustainable consumption and production patterns.
13. Climate Action: Take urgent action to combat climate change and its impacts.
14. Life Below Water: Conserve and sustainably use the oceans, seas, and marine resources for sustainable development.
15. Life on Land: Protect, restore, and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt and reverse land degradation, and halt biodiversity loss.
16. Peace, Justice, and Strong Institutions: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all, and build effective, accountable, and inclusive institutions at all levels.
17. Partnerships for the Goals: Strengthen the means of implementation and revitalize the global partnership for sustainable development.

The SDGs are interconnected and aim to address the most pressing global challenges. They provide a framework for governments, organizations, and individuals to work together towards a more sustainable and inclusive future for all.

The United Nations Sustainable Development Goals (SDGs) include several targets and indicators related to the chemical sector. Here are some key SDGs and targets that specifically relate to the chemical sector:

1. Goal 3: Good Health and Well-being
    - Target 3.9: By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water, and soil pollution and contamination.
2. Goal 6: Clean Water and Sanitation
    - Target 6.3: By 2030, improve water quality by reducing pollution, eliminating dumping, and minimizing the release of hazardous chemicals and materials.
3. Goal 9: Industry, Innovation, and Infrastructure
    - Target 9.4: By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of

clean and environmentally sound technologies and industrial processes.

- Target 9.5: Enhance scientific research, upgrade technological capabilities of industrial sectors, and encourage innovation, including by increasing the number of research and development workers per million people and public and private research and development spending.

4. Goal 12: Responsible Consumption and Production
   - Target 12.4: By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water, and soil to minimize their adverse impacts on human health and the environment.
   - Target 12.5: By 2030, substantially reduce waste generation through prevention, reduction, recycling, and reuse.
5. Goal 14: Life Below Water
   - Target 14.1: By 2025, prevent and significantly reduce marine pollution of all kinds, particularly from land-based activities, including marine debris and nutrient pollution.
6. Goal 15: Life on Land
   - Target 15.9: By 2020, integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies, and accounts.

These targets highlight the importance of managing hazardous chemicals, reducing pollution and waste generation, adopting clean technologies, and promoting sustainable practices within the chemical sector. The SDGs provide a framework for the industry to align its efforts with global sustainability goals and contribute to a more sustainable and environmentally friendly future.

ANNEXTURES

ANNEX 2 – PICTORIAL HISTORY OF MEDICHEM

Please request link and or download on USB.

ANNEX 3 – ABSTRACTS RECEIVED AT TIME OF PRINTING

Please request link and or download on USB.

We wish to celebrate and respectfully thank our honorary members for their input and commitment to our organization.

HONORARY Members

Dr Donald Cook
Dr John Harrington
Dr Noel Humphry
Dr Renzo Matiussi
Dr Robert McCunney
Dr Mikhail Mikhav
Dr Michael Nasterlack
Dr Erwin Radek
Dr Bryan Sanderson
Dr Marko Saric
Dr David Williams
Dr Andreas Zober
Dr Maren Beth-Hubner
Prof Tee L. Guidotti


SASOM – MEDICHEM
JOINT CONGRESS 2019
SASOM
MEDICHEM
Approximately 110 participants (including invited speakers, delegates and exhibitors) attended the Congress, representing 25 countries
Prof. Daan Kocks, SASOM Chair (left), and Dr Murray Coombs, MEDICHEM President (right), opened the Joint Congress and welcomed participants. SASOM and MEDICHEM collaborated in this first joint venture to bring together international professional networks to share their expertise
African diaspora representation at the Congress (L-R) Dr Paloma Maripiha – occupational medicine registrar at the University of KwaZulu-Natal (Mozambique); Dr Custódio Muianga – occupational hygienist and environmental health scientist (Mozambique/USA); Mr Peter-John 'Jakes' Jacobs – occupational hygienist, President of the International Occupational Hygiene Association (IOHA) 2018-2019 and Southern African Institute for Occupational Hygiene (SAIOH) Council member (South Africa); Prof. Janvier Gasana – Associate Professor, Department of Environmental and Occupational Health, Kuwait University (Rwanda/Kuwait); Ms Paulina Mutolo and Ms Flávia Saide – inspectors from the Ministry of Labour, Work and Social Security (Mozambique)


IAOH
International
CONCLAVE
on Occupational Health
ICOH
OCCUCON
2020
INTERNATIONAL CONCLAVE ON OCCUPATIONAL HEALTH - 2020
Incorporating ICOH Scientific Program
70th National Conference of IAOH
OCCUCON 2020
And 68th Annual Conference of IAOH
Organised by IAOH Mumbai Branch
Jan 28th to Feb 1st 2020 I Nehru Centre Mumbai
Theme: "Healthy Worker: Key to Productivity and Sustainability"

medichem OCCUPATIONAL AND ENVIRONMENTAL HEALTH IN THE PRODUCTION AND USE OF CHEMICALS

Founder and Honourary President: Prof. Dr. Alfred M. Thiess (Germany)

MEDICHEM is affiliated to the International Commission on Occupational Health. The MEDICHEM Board acts as the ICOH Scientific Committee on Occupational Health in the Chemical Industry

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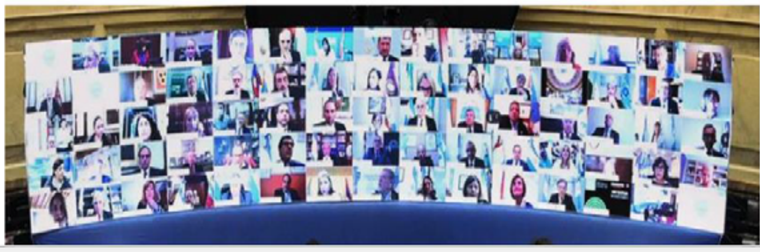
Dr Ashish Mishra (India)

MEDICHEM 2022 FIRST ONLINE CONGRESS



Abstracts

(Abstracts as received by date of printing)

Title:

Lowering Occupational Exposure Limits (OELs) for Benzene: Impact on Exposure and Health Risk Assessment

Peter J. Boogaard, Division of Toxicology, Wageningen University & Research

Keywords: benzene, occupational exposure, limit value, biomarker, biomonitoring

Abstract: (Your abstract must use Normal style and must fit in this box. Your abstract should not exceed 2000 words)

Historically, benzene has been widely used in a large variety of applications. OELs were set for benzene as early as 1946 when it was found to be acutely toxic, causing central nervous system depression at high exposures. The first OEL was set at 100 ppm, but this value was soon lowered when it was discovered that chronic exposure to benzene could cause haematotoxicity. After confirmation that benzene is a human carcinogen causing acute myeloid leukaemia and possibly other blood malignancies, OELs were further lowered to 1 ppm in the EU and the USA.

Although the industrial application of benzene as solvent is almost completely discontinued, it is still used as feedstock to produce other materials, such as styrene. Occupational exposure to benzene may also occur since it is present in crude oil, natural gas condensate and a variety of petroleum products and because benzene can be formed in combustion of organic material.

In the past few years, lower OELs for benzene have been proposed or already established to protect workers from benzene-induced cancer. In The Netherlands a health based OEL of 0.2 ppm was proposed in 2014 and adopted in 2017, which was the first OEL for which it was thought that the risk of cancer due to exposures below this level would be negligible. The Risk Assessment Committee (RAC) of the European Chemicals Agency (ECHA) proposed an even lower OEL of 50 ppb in 2018. Therefore, the OEL will be lowered stepwise from 1 ppm to 0.5 ppm in 2024 and to 0.2 ppm in 2026. Finally, an international expert group evaluated 77 genotoxicity studies and 36 haematological studies performed in workers exposed to benzene. All studies were scored for study quality and the lowest and no-adverse effect concentrations were derived for the highest quality studies and subsequently assessed as being

“more certain” or “less certain”. Finally, sensitivity analyses were conducted to assess whether alternative “high quality” constructs affected conclusions. Overall, the expert panel agreed upon an OEL of 0.25 ppm below which there would be no residual cancer risk.

Low and intermittent exposures are notoriously difficult to measure by (personal) air monitoring methods. In addition, the skin is an important potential route of exposure and relatively more important at lower OELs. Consequently, human biomonitoring – which integrates all exposure routes – is routinely applied to control the overall exposure to benzene. Over the years, several potential biomarkers have been proposed and investigated. For compliance check of exposure control at OEL values of 0.05 to 0.25 ppm, urinary S-phenyl mercapturic acid (S-PMA), urinary benzene, and blood benzene are feasible biomarkers. From these, S-PMA appears to be the most promising biomarker but proper validation of biomarker levels corresponding to airborne benzene concentrations below 0.25ppm are urgently needed

Title:
Assessment of exposure to BTX among gasoline station workers by using the occupational health risk matrix model, hazard index and haematological alterations
Presenter/author: Dr. Sunisa Chaiklieng
Department of Environmental Health, Occupational Health and Safety, Faculty of Public Health, Khon Kaen University, Khon Kaen, Thailand, email: csunis@kku.ac.th

Background:
Workers at gasoline stations are a group at risk of benzene, toluene, and xylene (BTX) exposure in Thailand. Occupational health risk assessment is an important tool used in decision making in health surveillance programs carried out among workers exposed to hazardous chemicals. Exposure assessment and awareness of adverse effects are promoted by various methods depending on the ability and the policy of the organization. Health screening and early detection of haematological alterations are important in preventing adverse health effects and cancer from long-term exposure to benzene which initiated a high risk of cancer among gasoline station workers.

Problem and methods:

This investigation assessed the risks arising from BTX exposure by applying occupational health risk matrix models according to the principles of the biomarker applied biomatrix, the BTX concentrations risk matrix and hazardous exposure index (HI) in the hazardous areas. The opportunity levels of BTX exposure obtained by multiplying the frequency of exposure by one of the levels of BTX exposure markers, i.e., the tt-muconic acid and hippuric acid biomarkers of benzene and toluene exposure, respectively and the inhaled BTX concentrations of the occupational risk assessment at gasoline stations. The hazard exposure index (HI) was calculated as the summary hazard quotient of BTX exposure in the hazardous area at gasoline stations. The severity, which was calculated by multiplying the final scores of risks by the opportunity level, was based on the adverse symptoms that workers experienced due to benzene, toluene, and xylene toxicity. Air benzene, toluene, xylene concentrations in the hazardous area at gasoline stations and urinary tt-muconic acid and hippuric acid were monitored among 235 gasoline station workers. The checklist of 10 elements regarding risk factors contributing to BTX exposure and fire possibility in the hazardous area was used for collecting occupational safety performance data from 47 gasoline stations and the adverse effects of symptoms experienced by their workers were surveyed. To identify biomarkers using haematological and hepatological endpoints that are indicative of adverse health effects due to benzene exposure, additional blood samples were tested among 158 refueling service gasoline workers and 34 cashiers.

Results and conclusion:

The occupational risk assessment models indicated a potential health risk higher than the acceptable level for 82.79% and 60.26% of gasoline workers, according to the biomatrix and the BTX risk matrix models, respectively. The risk assessment indicated five stations reached an unacceptable hazard index values of workers exposure to BTX ($HI>1$), which correlated with the numbers of gasoline dispensers and daily gasoline sold. The hazard index values from co-exposure to BTX among the refueling workers were found to have a statistical significance. There was a significant linear relationship between the risk levels indicated by the risk matrix models of exposure assessment to benzene. The risk level of the biomarker of exposure to benzene (tt-muconic acid) was significantly correlated with the haematological alterations, i.e., eosinophil ($r=0.595$, $p\text{-value}<0.001$). The biochemical enzymes of workers, which included SGOT and SGPT, were modestly elevated above normal,

particularly in male workers. The correlation between the biological marker, and the haematological or biochemical parameters, which were Hb, Hct, and blood creatinine, was significant.

These findings show that an alternative of risk assessment can be provided to enterprise owners using the occupational risk matrix application tools in the risk management and health surveillance program of their workers exposed to BTX based on different profiles of exposure. Moreover, the current study suggests that early detection of this exposure may be possible by analysing biomarkers of effects through regular health surveillance of workers exposed to BTX for haematological abnormalities. It is also useful for making policy decisions on health screening among other similar workers exposed to hazardous chemicals in their working environments.

Keywords: benzene, toluene, biomatrix, occupational risk assessment, adverse effects, health surveillance

Medichem

Basic Principles

The three following paragraphs summarise the principles of ethics on which is based the International Code of Ethics for Occupational Health Professionals prepared by the International Commission on Occupational Health (ICOH).

Occupational health practice must be performed according to the highest professional standards and ethical principles. Occupational health professionals must serve the health and social wellbeing of the workers individually and collectively. They also contribute to environmental and community health.

The obligations of occupational health professionals include protecting the life and the health of the worker, respecting human dignity and promoting the highest ethical principles in occupational health policies and programmes. Integrity in professional conduct, impartiality and the protection of the confidentiality of health data and of the privacy of workers are part of these obligations.

Occupational health professionals are experts who must enjoy full professional independence in the execution of their functions. They must acquire and maintain the competence necessary for their duties and require conditions which allow them to carry out their tasks according to good practice and professional ethics.

SASOM

Title: Effects of occupational exposure to Lead on Psychiatric Disorders in Workers

Mehrzad Ebrahemzadih1, Hamzeh Salehzadeh2

1. Department of Occupational Health Engineering, School of Health, Neyshabur University of Medical Sciences
2. Researcher, Kurdistan University of Medical Sciences

Keywords: Blood lead level, Psychiatric disorders, Quality of life, Occupational exposure

Abstract: (Your abstract must use Normal style and must fit in this box. Your abstract should not exceed 2000 words)

Introduction: The aim of this study was to determine the effect of exposure to lead contaminants on the psychiatric disorders and quality of life in employees of various occupations in Sanandaj city, Iran, where there is lead in the workplace.

Methods: The present study was a descriptive-analytical study done on employees of different occupations (including non-exposed people, gas station, welding, and painting) in Sanandaj, Iran. 64 people were considered as the non-exposed group, and 124 were selected as the exposed group. To obtain blood sample from the employees, about 7 ml of the blood of each person in the heparin tubes was collected by a sterile disposable syringe, and then, transferred to the laboratory. Blood lead levels were measured by the atomic absorption spectrophotometer apparatus AA6800. A psychiatric disorders' questionnaire (-90Checklist Symptom 90-Scl) was used to assess the psychiatric disorders. The questionnaire contained 90 questions for evaluating the mental symptoms, and the results were reported by the interviewee. In this study, a 36-item quality of life questionnaire (SF-36) with a total of 36 questions in 8 health domains including physical function, physical role, physical pain, general health, energy and vitality, social functioning, emotional-mental problems, and mental health was used. After collecting the data, the obtained information was entered to the SPSS software version 20.

Results: The age range of the subjects was between 25 and 50 years old. All the subjects were male, and 43% of the exposed group and 37% of the non-exposed group had higher education than diploma. In the present study, the average blood lead level in non-exposed groups, gas station workers, welder, battery plant workers, mechanics, printing and duplication and painter was 0.00 µg/dl, 14.75, 37.4375 µg/dl, 63.3500 µg/dl, 49.6000 µg/dl, 35.6167 µg/dl, 20.3167 µg/dl, 49.3833 µg/dl, respectively.

The highest blood lead level was observed for welding staff with an average of 63.3500 mu g/dl, and the lowest blood lead level belonged to the subjects without exposure to lead with an average of 14.7500 mu g/dl. Thus, the lead level of non-exposed individuals, gas station workers, mechanics and printing industry were so high that it requires individual management, including clinical measures. Moreover, the highest level of quality of life and the lowest levels of psychiatric disorders were found in non-exposed people, and the lowest level of quality of life and the highest psychiatric disorders were in welding staff.

Discussion: Considering the high level of blood lead in comparison with the threshold limit, and a significant relationship between the disorders and blood lead level, as well as high psychological problems and low quality of life in staff exposed to lead, reducing blood lead levels by decreasing the amount of lead in chemicals used by various industries, through the replacement of lower toxicity materials, as well as the use of personal protective equipment such as chemical masks is essential.

Title:
EVOLUTION OF AN INDUSTRIAL PHYSICIAN FROM A DEVELOPING ECONOMY

Authors & affiliations and keywords: Dr. Shyam Pingle, Senior OH Specialist and Adjunct Professor, Indian Institute of Public Health Gandhinagar

Keywords: INDUSTRIAL PHYSICIAN, DEVELOPING COUNTRY, CHEMICAL INDUSTRY,

Abstract: (Your abstract must use Normal style and must fit in this box. Your abstract should not exceed 2000 words)

India contributes a staggering 25% of global working population, thanks to its young demographics. Indian industry has grown and evolved over last 40 years which coincided with my career as an Industrial Physician and later as an academician in occupational health (OH).

The infamous 'Bhopal Gas Disaster' in December 1984 which claimed more than 25000 lives due to leakage of Methyl Isocyanate gas, led to major changes in the legislations and statutory requirements for the industry in general and chemical industry in particular. This led to focus on regular medical surveillance.

The economic crisis in 1991, led to liberalisation and attracted foreign investment. The global corporations also brought their health, safety and environment standards in India giving a boost to further development of workplace exposure monitoring of employees aided by technology adaptation. Establishment and expansion of service industry in India also coincided with proactive 'Workplace Wellness' initiatives to retain talent and promote employee health and productivity.

Major evolution is now expected with imminent changes in legislation to cover non -hazardous industries and workplaces in the ambit of law.

Indian Association of Occupational Health played a major role in professional collaboration through national conferences and regular local meetings of OH physicians.

Thus, the specialty of OH has transitioned from welfare and statutory requirements to support productivity and ensure longer workability of employees. However, India still faces lack of awareness and enforcement in the small and medium enterprises. It also has a paradox of best and weakest in OH given huge informal sector and immature employee unions. Capacity building in occupational health is major challenge along with lack of OH data.

My presentation will share, stages of my evolution as industrial physician and relevant practical case studies from Indian workplaces over last four decades along with professional collaboration among chemical industry physicians.

CONGRESSES

2026 OHSWA (34th) Medichem Joint Congress, Bangkok Thailand

2025 Abu Dhabi, UAE

2024 Marrakech, Morocco (ICOH)

2023 Dresden, Germany: 50th year

2022 First Online congress

2021 Melbourne (ICOH), Australia

2020 India Occupational Health Association Joint Congress (OCCUCON)

2019 South Africa (SASOM-Medichem Joint Congress)

2018 Dublin, Ireland (ICOH)

2017 Vienna, Austria

2016 Basel, Switzerland

2015 Seoul (ICOH), Korea

2012 Cancun (ICOH), Mexico

2011 Heidelberg, Germany

2010 Taipei, Taiwan

2009 Cape Town (ICOH), South Africa

2008 Amsterdam, Netherlands

2007 Querétaro, Mexico

2006 Milano (ICOH), Italy

2005 Goa, India

2004 Paris, France

2003 Iguassú Falls (ICOH), Brasil

2002 Baltimore, USA

2001 Prague, Czech Republic

2000 Singapore (ICOH), Singapore

1999 Vienna, Austria

1998 Cape Town, South Africa

1997 Varna, Bulgaria

1996 Stockholm (ICOH), Sweden

1995 Boston, USA

1994 Melbourne, Australia

1993 Nice (ICOH), France

1992 London, United Kingdom

1991 Basel, Switzerland

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1989 Kraków, Poland

1988 Helsinki, Finland

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1986 Ludwigshafen, Germany

1985 Salvador de Bahia, Brasil

1984 Dublin (ICOH), Ireland

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1975 Brighton (ICOH), United Kingdom

1974 Milano, Italy

1972 Ludwigshafen, Germany

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