

INA Newsletter

International Neurotoxicology Association

June 1997

volume 18(1)

President's Message:

Thanks to publishers and editors, namely Steven Gilbert, Lucio Costa and Joan Cranmer, the proceedings of INA-5 in Port Ludlow have been mailed recently and reached us just before leaving for Hungary. It is an impressive collection of good quality papers, and subsequent proceedings will be judged after this one. We are now approaching INA-6 in Szeged, and the scientific program, developed by Illes Desi and his team with the help of the scientific committee, looks very promising, again (see this newsletter). Several timely topics, such as polymorphisms in neurotoxicology (Costa), neuroimmunology and neurotoxicology (Walsh), to name just two out of five symposia, are on the agenda, and there is good reason to feel excited about the program. There is also good reason to feel excited about the opportunity to meet with colleagues from eastern and central Europe whom we had had little chance to discuss with in the past.

So much about science and discussions at INA-6. Although this is the core of society meetings, apart from social aspects, there is more to INA than science: this time I also wish to talk about INA as an organization. Longstanding members remember that INA was founded just a little bit more than a decade ago on the occasion of a NATO-workshop in Belgirate on the Lago Maggiore in Italy. Michael Csicsaky, the spiritus rector of this early beginning, will be with us in Szeged. In those early days INA was just a small group of friends working in nervous system toxicology, who wanted an informal network of communication to help each other solve problems in the everyday conduct of research in the field of neurotoxicology. Thus, informal spontaneity was a feature of INA, both in the early beginnings -and later on, as well.

Since then, after five successful meetings in Lunteren, Sitges, Salsomaggiore-Parma, Elsinore,

and Port Ludlow, INA has steadily grown into being a „real“ scientific society, and we will have to discuss at the business meeting in Szeged, if the membership wants to keep INA informal and loosely structured, or if a more professional structure might be more adequate for INA in its present more mature state of development. We have had those discussions before - and never changed anything. Let me give you two examples to illustrate the point: When helping Illes Desi to collect external support for INA-6 it turned out that we

I look forward to meeting with many of you soon.

Gerhard Winneke, President - INA

INA-6 programme:

Here is the full scientific programme of the Szeged meeting for advance information if you are going, and to show you what you will be missing if not!

Monday, 30 June 1997

09:00 OPENING CEREMONY

Speakers: Prof. Winneke, G., President of INA
Dr. Pintér, A., Representative of IUTOX
Prof. Dési, I., Head of the Local Organizing Committee
Prof. Fráter, L., Rector of the Albert Szent-Györgyi Medical Univ., Szeged

09:15 Opening Lectures. Chairman: Winneke, G.

09:15 O-1. *Holistic approach of neurotoxicology*
Szilárd, J.

09:35 O-2. *Contribution to neurotoxicity of arsenic in environmental settings*
Bencko, V.

09:55 O-3. *Neurotoxins and neurodegenerative disorders: parkinson's disease*
Vécsei, L., Dibó, Gy., Kiss, Cs.

10:15 Jacob-Hooisma-Memorial-Lecture

O-4. *The neurotoxicity of polychlorinated biphenyls*
Tilson, Hugh A., Kodavanti, Prasada R.S.

10:45 Break

11:00 WORKSHOP. Neurotoxicity of cadmium: a controversial issue.

Chairperson: Viaene, M.K.

11:00 Chairman's introduction

11:05 O-5. *Central and peripheral neurotoxic effects of cadmium in children and adults: a review of the literature.*

Viaene, M.K.

11:25 O-6. *Neurobehavioral alterations following experimental cadmium-exposure: direct or indirect neurotoxicity?*

Winneke, G.

11:45 O-7. *Experimental neurotoxicology of cadmium: lessons learned from in vitro studies*

Wiegand, H.

12:05 O-8. *Toxicokinetics and biochemistry of cadmium with special emphasis on the role of metallothionein*

Jin, T. Lu, Y., Nordberg, M.

12:25 O-9. *The effect of cadmium on the hippocampal activity in rats. Comparison with other toxic heavy metals*

Papp, A., Nagymajtényi, L., Dési, I.

12:35 final discussion

12:50 POSTER SESSION 1: Neurotoxicology of metals

14:00 Lunch

15:30 SYMPOSIUM: Molecular and cellular mechanisms of insecticide action.

Chairman: Narahashi, T.

15:30 Chairman's introduction

15:35 O-10. *Insecticides on gaba- and glycine-dependent chloride flux*

Sunol-Esquires, Cristina, Vale, Carmen, Rodriguez-Farré, Eduard

16:00 O-11. *Pyrazoline insecticides on calcium uptake in rat brain synaptosomes*

Nishimura, Keiichiro, Tada, Toshiji

16:25 O-12. *Ion channels as targets for insecticides*

Narahashi, Toshio

16:50 O-13. *Insect ionotropic receptors as targets for insecticides*

Sattelle, D.B., Rauch, J.J.

17:15 O-14. *Studies on the mechanism of the kdr-type pyrethroid resistance involving changes in the function of sodium channels*

Matsumura, F., Miyazaki, M., Ohyama, K., Dunlap, Debra Y.

17:35 final discussion

Department

17:50 Break

18:00 POSTER SESSION 2: Neuronal effects. Neurotoxicology of drugs and natural

19:30 Dinner

20:30 EVENING DISCUSSION GROUP.

The organophosphorus issue: Complaints and potential mechanisms.

Leader: Krinke, G.J., Novartis Crop Protection ASG, Basle, Switzerland

Tuesday, 1 July 1997

09:00 SYMPOSIUM: Pesticide neurotoxicity: Research from Eastern/Central Europe.

Chairman: Dési, I.

09:00 Chairman's introduction

09:05 O-15. *The problem of delayed neurotoxicity of organophosphorus pesticides (experimental investigation)*

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Kagan, Y.S.
09:25 discussion
09:30 O-16. *Experimental model studies of pesticide exposure*
Dési, I., Nagymajtényi, L., Schulz, H., Papp, A.
09:50 discussion
09:55 O-17. *Long-term neurotoxicity of chlorphenvinphos, an organophosphorous pesticide. Data from behavioural and electrophysiological studies on rats and rabbits*
Gralewicz, S., Socko, Renata
10:15 discussion
10:20 O-18. *Organophosphorous pesticides exposure and behavioral changes*
Hinkova, Liliana, Vergieva, T.
10:40 discussion

10:50 Break

11:10 ORAL PRESENTATIONS: Pesticide effects. Chairman: Kagan, Y.S.

11:10 O-19b. *A critical review of hazard identification of organophosphorous pesticides*
Brown, I., Classen, W., Ivens, I.A., Krinke, G.J., Rieth, J., Rozenboom, W., Skripsky, Th.
11:35 O-20. *Developmental neurotoxic effects of environmental pollutants (heavy metals + organophosphates) in animal experiments*
Nagymajtényi, L., Schulz, H., Papp, A., Dési, I.
11:50 O-21. *Effect of a pesticide (deltamethrine) on the intestinal nervous system and liver of balaton lake fish*
Láng, G., Kufcsák, O., Ferenczi, J., Nemcsók, J., Knyihár-Csillik, E., Csillik, B.
12:15 O-22. *Behavioral effects of occupational exposure to organophosphorous pesticides in female greenhouse planting workers*
Bazylewicz-Walczak, Barbara
12:30 O-23. *Epidemiological evidence for increased leukaemia risk from pesticide use in the indoor environment*
Csicsaky, M., Butte, W., Walker, G., Greiser, E., Hoffmann, W., Hostrup, O.

12:50 POSTER SESSION 3: Pesticide neurotoxicology. Human exposure.

14:00 Lunch

15:30 SYMPOSIUM: Role of genetic polymorphism in neurotoxicity.
Chairman: Costa, L. G.
15:30 Chairman's introduction
15:35 O-24. *Genetic polymorphisms in parkinson's disease*
Checkoway, H., Costa-Mallen, P., Farin, F.M., Costa, L.G.

16:00 O-25. *Polymorphism of apolipoprotein e and alzheimer's disease*
Müller, W.E., Eckert, G.P., Eckert, A., Hartmann, H.
16:25 O-26. *ALAD polymorphism and lead neurotoxicity*
Kelsey, K.T., Schwartz, B.S., Lee, Byung-Kook
16:50 O-27. *Genetically determined variability of resistance to organophosphorus insecticides and nerve agents: the human pon1 polymorphism*
Furlong, C.E., Li, W.-F., Costa, L.G., Richter, R.J., Shih, D., Lulis, A.J.

17:20 Break

17:40 POSTER SESSION 4: Neurotoxicology of PCBs and organic solvents.

Miscellaneous topics.

19:00 SOCCER GAME

21:00 Dinner

Wednesday, 2 July 1997

9:00 A WHOLE-DAY EXCURSION (national memorial park, open-air ethnographic museum, farm show centre)

Thursday, 3 July 1997

09:00 SYMPOSIUM: Metallothionein toxicity.
Chairman: Aschner, M.
09:00 Chairman's introduction
09:05 O-28. *Metallothioneins as potential neuroprotectants*
Aschner, M.
09:30 O-29. *MTF-1-independent transcriptional activation of mouse metallothionein I promoter by cadmium in human neuroblastoma cells*
Johnson, J.A., Moehlenkamp, J.D., Chu, Wai H., Bittel, D., Andrews, Glen K.
09:55 O-30. *Regulation of brain metallothioneins*
Hidalgo, J.
10:20 O-31. *The effect of trimethyltin on acetylcholine release in the guinea-pig trachea*
Aas, P., Pagenhart, A., Eriksen, S., Kolderup, J., Fonnum, F.

10:40 Break

11:00 ORAL PRESENTATIONS: Miscellaneous topics.

Chairperson: Cory-Slechta, D.A.

11:00 O-32. *Evidence from a population-based study of neurobehavioral deficits in us persian gulf veterans with unexplained symptoms*

Anger, W.K., Storzbach, D., Binder, L.M., Campbell, K.A., Rohlman, Diane S., McCauley, Linda, Kovera, C.A., Davis, Kelly L.

11:15 O-33. *Developmental neurotoxicity study: evaluation of behavioural methods with methylazoxymethanol as positive control agent*
Hass, U., Lund, S.P., Simonsen, L.

11:30 O-34. *Interventions during individual development of rats affect the behaviour in adulthood: a three-generation study*

Schulz, H., Nagymajtényi, L., Dési, I.

11:45 O-35. *Learning and memory deficits induced by prenatal aluminium exposure in rat pups*

Lehotzky, Kornélia, Gonda, Zsuzsanna, Tátrai, Erzsébet

12:00 O-36. *Effects of low level lead exposure during different periods of brain development on nr1 mrna expression in rat hippocampus*

Stoltenburg-Didinger, G., Peters, B.

15:45 O-42. *Neurotoxicity associated with eating fish from the St-Lawrence river*

Mergler, Donna, Bélanger, S., Larribe, F., Panisset, M., Bowler, R., Lebel, J., Hudnell, K.

16:05 final discussion

16:15 Break

16:30 DEBATE: Is understanding of mechanism in neurotoxicology an academic luxury or needed for practical decision-making?

Leader: Ray, D.

O-43. *For the motion* Ladefoged, O.

O-44. *Against The Motion* Mattsson, J.L.

18:00 INA GENERAL MEETING

19:30 CONFERENCE DINNER

Friday, 4 July 1997

09:00 SYMPOSIUM: Mechanisms of neuronal cell death. Chairman: Savolainen, K.M.

09:00 Chairman's introduction

09:05 O-45. *The role of oxidative stress on cholinergic and glutamatergic induced excitotoxicity*

Savolainen, K.M., Loikkanen, J., Naarala, J.

09:30 O-46. *Neurotoxicity of ammonia and of glutamate: molecular mechanisms and prevention*

Felipo, V., Hermenegildo, C., Montoliu, C., Llansola, M., Minana, M.D.

09:55 O-47. *Mechanisms of prion(sc)- and HIV-1 GP120 induced neuronal cell death*

Schröder, H.C., Perovic, S., Ushijima, H., Müller, W.E.G.

10:25 Break

11:00 ORAL PRESENTATIONS: Miscellaneous topics. Chairman: Lotti, M.

10:50 O-48. *Nitric oxide synthase as a molecular target for neurotoxicants*

Desaiah, D.

11:05 O-49. *Biochemical mechanisms underlying toxicity of excitatory amino acid L-β-oxalylaminoalanine present in lathyrus sativus*

Ravindranath, V., Sriram, K.

11:20 O-50. *PCB levels in brain tissue from nine stillborns of varying gestational age in relation to levels in liver and adipose tissue*

Lanting, Caren I., Boersma, E.R.

11:35 O-51. *Neurofilament metabolism and 2,5-hexanedione*

Heijink, Elisabeth, Scholten, S.W., Wolterman, R.W., Bolhuis, P.A., de Wolff, F.A

12:00 CLOSING CEREMONY

Speakers: Prof. Savolainen, K.M. President of IUTOX

Prof. Winneke, G., President of INA

Prof. Dési, I., Head of the Local Organizing Committee

12:30 LUNCH

INA-7 - what to expect?

The seventh INA meeting will be held in the United Kingdom in 1999. This will be the first time that the UK has hosted an INA meeting, and we hope to make a success of the event. Certainly it is guaranteed to be our last chance this millennium! I think that there are several things that go together to make a good meeting. These are:

The right number of people - not too many to get to know, not too few to generate ideas. Fortunately previous INA meetings have had about 200-250 persons, which is a good number.

The right mix of people - not too many senior persons, not too many inexperienced ones. In order to ensure this it is important to keep costs down to a level that Ph.D. and postdoctoral workers can afford, and to run a good scientific programme.

The right location - good facilities and not too many outside distractions, but somewhere interesting to go on the day out. Leicester has a self contained student campus set in the University Botanic Gardens, with lecture and seminar rooms and a comfortable bar with an all night drinks license. Rooms have en-suite bathrooms. Leicester is 80 minutes by rail from London and 50 minutes from Birmingham, so travel will not be too difficult. The University also has an experienced conference organising and travel service.

Why Leicester? Well Leicester is home to my Institute, the UK Medical Research Council Toxicology Unit, a centre for mechanistic neurotoxicology since 1947. What else is special about Leicester? Well Leicester has top cricket, rugby football and soccer teams; was home to actor Richard Attenborough, playwright Joe Orton, travel agent Thomas Cook, and the first British parliament. The ancient British city was held by King Lear, of Shakespeare's play; the Romans called it *Ratae Coritanorum*; and now it is home to the largest non-white population in Britain, which amongst other things gives us an unrivaled choice of places to eat. It also has the rather negative virtue in that it is in the centre of the country, which makes it a very good base from which to travel elsewhere should you tire of us! More information about Leicester is to be found at the We site : @@@@ @@@@

The INA-7 meeting will be held on July 4-10 1999. Please reserve these dates in your diary.

David Ray (email: der2@le.ac.uk)

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