

# WHAT IS NEW IN BISPHOSPHONATES?



Eighth and Valedictory Workshop  
on Bisphosphonates  
From the Laboratory to the Patient

Davos, Switzerland

March 22 (arrival) to 25 (departure), 2006

**PROGRAM****WEDNESDAY, MARCH 22, 2006****Afternoon**

- From 14.00 Registration  
Poster mounting
- 15.00–15.50 Coffee
- 15.50–16.00 **Herbert Fleisch, Switzerland:**  
Opening of the Workshop
- 16.00–16.30 **Herbert Fleisch, Switzerland:**  
«Bisphosphonates: From the Laboratory to the Patient – Retrospective of half a century»  
Lecture in honour of Dr. Gideon Rodan
- Introductory Course**
- 16.30–17.00 **Michael J. Rogers, U.K.:**  
«Structure-activity and mechanisms of action»
- 17.00–17.30 **Socrates E. Papapoulos, The Netherlands:**  
«Pharmacology, pharmacokinetics, toxicology and adverse events»
- 17.30–18.00 **Pierre D. Delmas, France:**  
«Use of bisphosphonates in osteoporosis»
- 18.00–18.15 Refreshments
- 18.15–18.45 **Eugene V. McCloskey, U.K.:**  
«Use of bisphosphonates in tumor bone disease»
- 18.45–19.15 **René Rizzoli, Switzerland:**  
«Use of bisphosphonates in other diseases»
- 19.15–20.00 **Francis H. Glorieux, Canada and Maria-Luisa Bianchi, Italy:**  
«Use of bisphosphonates in pediatrics»

**Evening**

Fireside discussions (ad hoc organization on request)

**THURSDAY, MARCH 23, 2006****Morning**

- 08.15–09.55 **Poster session preclinical**  
Posters 1–56
- 09.40–09.55 Coffee
- 10.00–11.00 **Symposium sponsored by F. Hoffmann-La Roche:**  
«Optimizing outcomes: experience with Bondronat® in metastatic bone pain»
- 11.00–12.10 **New insights into structure-activity relationships of bisphosphonates and molecular interactions with FPP synthase**
- 11.00–11.05 **Michael J. Rogers, U.K.:**  
«Introduction»
- 11.05–11.15 **Jean-Michel Rondeau, Switzerland:**  
«Structural basis of the high in vivo potency of N-BPs revealed by X-ray analysis of human FPPS»
- 11.15–11.25 **Kate Kavanagh, U.K.:**  
«Slow, tight-binding inhibition of farnesyl diphosphonate synthase by zoledronate and risedronate: crystal structures, ITC experiments, and kinetics»
- 11.25–11.35 **F. Hal Ebetino, USA:**  
«Structural learnings from a comparison of active and inactive nitrogen containing bisphosphonates co-crystallized in human farnesyl diphosphate synthase»
- 11.35–11.50 **3 selected oral presentations on structure-activity**
- 11.35–11.40 Poster number 12  
**Fraser P. Coxon, U.K.:**  
«Structure-activity relationships of bisphosphonate analogues»
- 11.40–11.45 Poster number 34  
**M.A. Lawson, U.K.:**  
«Refining the use of hydroxyapatite column chromatography to reveal differences in relative binding affinities of bisphosphonates»
- 11.45–11.50 Poster number 19  
**F. Hal Ebetino, USA:**  
«A computational model explains bisphosphonate binding affinity differences on hydroxyapatite»

11.50–12.10	General discussion	18.00–18.10	Poster number 23 <b>Jürg A. Gasser, Switzerland:</b> «Inhibition of FPP-synthase in osteoblasts may explain the blunting of the bone anabolic response to PTH observed after chronic exposure of rats to bisphosphonates»
12.10–12.30	<b>2 selected oral presentations</b>	18.10–18.20	Refreshments
12.10–12.20	Poster number 8 <b>Philippe Clézardin, France:</b> «Continuous or repeated intermittent low-dose therapy with zoledronic acid induces a sustained inhibition of tumor cell trafficking to bone <i>in vivo</i> »	18.30–20.00	<b>Anti-tumour effects of bisphosphonates</b>
12.20–12.30	Poster number 9 <b>Philippe Clézardin, France:</b> «The direct antitumor activity of bisphosphonates <i>in vivo</i> depends on their bone mineral affinity»	18.30–18.50	<b>Philippe Clézardin, France:</b> «Direct anti-tumour effects <i>in vitro</i> »
12.30–16.00	Free time (Posters can be viewed)	18.50–19.10	<b>Peter Croucher, U.K.:</b> « <i>In vivo</i> effects in animal models»
<b>Afternoon</b>		19.10–19.30	<b>Enrico Giraud, Italy:</b> «Anti-angiogenic effects»
15.30–15.55	Coffee	19.30–19.50	<b>Robert E. Coleman, U.K.:</b> «Is there evidence of anti-tumour effects in patients?»
16.00–17.30	<b>Symposium sponsored by The Alliance for Better Bone Health (P&amp;G Pharmaceuticals and sanofi aventis)</b> «Differences in Bisphosphonates – From Bench to Bedside»	19.50–20.00	Discussion
17.30–18.10	<b>4 selected oral presentations</b>	<b>Evening</b>	
17.30–17.40	Poster number 11 <b>Fraser P. Coxon, U.K.:</b> «Resorbing osteoclasts increase the availability of mineral-bound bisphosphonates to non-resorbing cells»	Fireside discussions (ad hoc organization on request)	
17.40–17.50	Poster number 14 <b>Julie C. Crockett, U.K.:</b> «Cytosolic entry of bisphosphonates into macrophages and osteoclasts requires fluid-phase endocytosis and endosomal acidification»		
17.50–18.00	Poster number 49 <b>Wolfgang Jahnke, Switzerland:</b> «X-ray and 2D NMR analyses of the binding of nitrogen-containing bisphosphonate drugs to human FPPS»		

**FRIDAY, MARCH 24, 2006**

**Morning**

- 08.15–09.55 **Poster session clinical**  
Posters 57–112
- 09.40–09.55 Coffee
- 10.00–11.30 **Symposium sponsored by Novartis**  
«The current and future role of zoledronic acid in preserving bone health in cancer patients»
- 11.30–12.35 **Bisphosphonates and the immune system**
- 11.30–11.55 **Jean-Jacques Fournié, France:**  
«Activation of human  $\gamma$ , $\delta$ -T lymphocytes in cancer immunotherapy»
- 11.55–12.20 **Volker Kunzmann, Germany:**  
« $\gamma$ , $\delta$ -T cells and bisphosphonates»
- 12.20–12.35 **Keith Thompson, U.K.:**  
«The acute phase response»
- 12.35–16.00 Free time (Posters can be viewed)

**Afternoon**

- 15.30–15.55 Coffee
- 16.00–16.25 **Jean-Jacques Body, Belgium:**  
«Bisphosphonates in prostate cancer»
- 16.25–16.50 **Mary L. Bouxsein, USA:**  
«Bisphosphonates and bone quality»
- 16.50–17.15 **Ana O. Hoff, USA:**  
«Bisphosphonates and osteonecrosis of the jaw»
- 17.15–18.15 **6 selected oral presentations**
- 17.15–17.25 Poster number 45  
**Anke J. Roelofs, U.K.:**  
«Prevention of breast cancer cell adhesion to bone *in vitro* by bisphosphonates is mediated by their inhibitory effect on protein prenylation»
- 17.25–17.35 Poster number 22  
**Robyn Fuchs, USA:**  
«Trabecular bone turnover is re-established sooner in ovariectomized rats after withdrawal of treatment with risedronate vs alendronate»

- 17.35–17.45 Poster number 66  
**Bengt Bergström, USA:**  
«Intravenous and oral ibandronate have better safety and tolerability profiles than zoledronic acid: Evidence from comparative phase III trials»
- 17.45–17.55 Poster number 70  
**Janet E. Brown, U.K.:**  
«For how long can a single infusion of zoledronic acid suppress bone resorption in patients with cancer treatment induced bone loss (CTIBL)»
- 17.55–18.05 Poster number 85  
**Burkhard Krempien, Germany:**  
«BP-associated avascular necrosis (AN) of the jaws: histological findings»
- 18.05–18.15 Poster number 112  
**Nelson Watts, USA:**  
«Risedronate demonstrates fracture efficacy in postmenopausal women whether there is a BMD gain or loss during treatment»
- 18.15–18.30 Refreshments

- 18.30–19.15 **Debate**  
«How long should we treat osteoporosis?»  
Chairman: Nelson B. Watts, USA
- 19.15–20.00 **Valedictory Lecture**  
**Graham Russell, U.K.:**  
«The bisphosphonates tomorrow»
- 20.00 **Herbert Fleisch, Switzerland:**  
Closure of the Workshop

**Evening**

- From 22.00 After Dinner Farewell Gathering

**FOR FURTHER INFORMATION,  
PLEASE CONTACT**

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