COST ACTION B22
DRUG DEVELOPMENT FOR PARASITIC DISEASES

COST B22 WG2: Drug Target Characterisation

Venue

Schloss Seggau

Graz

Austria

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DATE

27th-29th April 2007

Context and Rationale
It is planned that experts in the field of plant, bacterial, fungal and parasite vitamin and co-factor biosynthesis and acquisition will present their research. We anticipate that the meeting will thus provide both an overview of current knowledge and also deep insights into mechanisms that regulate the balance of these essential cellular components in a variety of organisms. The meeting will bring together expertise from a variety of research fields in order to allow the transfer of ideas between fields and the establishment of interdisciplinary collaborations. Further, it is hoped that this cross-disciplinary approach will improve our understanding of these vital metabolic processes and help to formulate new strategies for the development of novel antiprotozoal chemotherapies.

Participants: We will invite investigators who brought significant contributions to the field of vitamin and co-factor biosynthesis and acquisition over the last few years. We are also hoping to attract participants from several pharmaceutical companies. We expect approximately 30 to 40 people to attend the meeting. A provisional list of subject areas and possible participants is given below.

Timing and location
Arrival on the Thursday, sessions Friday, Saturday and Sunday morning; departure Sunday afternoon

Programme

Thursday, 26th April

15.00h – 18.00 Arrival
19.00h – 22.00 Dinner

Friday, 27th April

9:00 Opening of Meeting

9:15 – 11:00 Session I - Building blocks for vitamins and co-factors

9.15 – 10.00 N. Amrhein (Switzerland)– Shikimate pathway as drug target
10.00 – 10.30 C. Roberts (UK)- Shikimate pathway in apicomplexa
10.30 – 11.00 H. Jomaa (Germany)– Methylerythritol pathway in apicomplexa

11.00 – 11.20 Coffee break

11.20 – 13.00 Session II – Vitamin B_1 biosynthesis

11.20 – 11.55 S. Ealick (USA) – Structural analyses of thiamine biosynthesis
11.55 – 12.25 E. Schweingruber (Switzerland) – Thiamine biosynthesis from yeast to trypanosomes
12.25 – 12.55 I. Müller (Germany) – Thiamine biosynthesis in *P. falciparum*

13.00 – 14.00 Lunch break

14.00 – 15.45 Session III – Vitamin B_6 biosynthesis (Biology)

14.00 – 14.35 T. Fitzpatrick (Switzerland) – Vitamin B_6 biosynthesis in plants
14.35 – 15.10 B. Kappes (Germany) – Vitamin B_6 biosynthesis in *P. falciparum*
15.10 – 15.45 C. Wrenger (Germany) – Vitamin B_6 biosynthesis in apicomplexa

15.45 – 16.15 Coffee break

16.15 – 18.00 Session IV – Vitamin B6 biosynthesis (Biochemistry)

16.15 – 16.55 I. Tews (Germany) – Structural analyses of vitamin B_6 biosynthesis
16.55 – 17.25 T. Raschle (Switzerland) – Vitamin B_6 biosynthesis in *B. subtilis*
17.25 – 18.00 P. Macheroux (Austria) – Pdx1/Pdx2 protein – protein interactions
19.00 Dinner

Saturday, 28th April

9:00 – 11:00 Session V – Folate and Riboflavin biosynthesis

9.00 – 9.45 J. Hyde (UK) – Folate biosynthesis – a drug target against *Plasmodium*

9.45 – 10.20 Rodriguez-Lopez (Spain)– Dihydrofolate dehydrogenase in *Candida albicans*

10.20 – 10.55 E. Morgunova (Sweden)– Structural analyses of riboflavin biosynthesis in *Mycobacteria*

10.55 – 11.20 Coffee break

11.20 – 13.00 Session VI – Riboflavin (II)/Ascorbate/Retinol

11.20 – 12.00 M. Mack (Germany)– Riboflavin and Roseoflavin biosynthesis as drug targets

12.00 – 12.40 J. Kelly (UK)– Ascorbate biosynthesis in trypanosomes

12.40 – 13.10 W. Wernsdorfer (Austria) – Retinol has antimalarial activity

13.10 – 14.10 Lunch break

14.10 – 16.00 Session VII – Cofactor biosynthesis

14.10 – 14.55 C. Alban (France) – Biotin biosynthesis – an overview

14.55 – 15.30 F. Seeber (Germany) – Lipoic acid biosynthesis in *T. gondii*

15.30 – 16.00 S. Müller (UK) – Lipoic acid biosynthesis in *Plasmodium*

16.00 – 16.30 G. Coombs (UK) – Lipoic acid in *Leishmania*

16.30 – Discussion, coffee and refreshments,

19.00 Conference Dinner

Sunday, 29th April

9.30 – 12.00 Session VIII – Uptake mechanisms for vitamins and cofactors

9.30 – 10.15 J. Stolz (Germany) – Uptake of vitamins and cofactors in yeast

10.15 – 11.00 K. Saliba (Australia) – Pantothenate metabolism in *Plasmodium*

11.00 – 11.40 G. McConkey (UK) – Pantothenate metabolism in apicomplexa

11.40 – 12.30 Discussion and concluding remarks

12.30 - Lunch