Chloroplast Signals (COSI)

Marie-Curie Initial Training Network (ITN)

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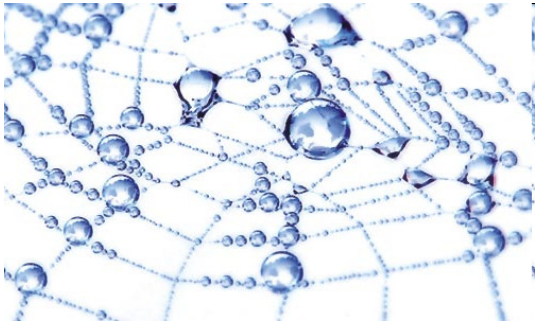
ITN COSI - von der Idee zur Realität

was braucht es von der Idee

zum Netzwerk?

(Projekt)



.... und weiter...

ITN COSI - von der Idee zur Realität

was braucht es von der Idee zum Projekt

- *wie kommt man zum Netzwerk?*
- *zeitliche Planung: Deadlines und Realitäten....*
- *konkrete Planung des Projekts*
- *kann das funktionieren ? (→ Budget)*
- *(Erfolgs-) Kontrolle: Milestones & Management*

ITN COSI - von der Idee zur Realität

was braucht es von der Idee

Forschung & Training !

- *viele wissenschaftlich exzellente Projekte scheitern am Training:* ► ***employability!***

ITN COSI - die Idee kurz Präsentiert

B 1. COSI – Legal Entity	Department	Person-in-charge
• Univ. of Vienna (**AT**)	Biochemistry	Markus Teige (MT)
• Univ. of Turku (**FIN**)	Biology	Eva-Mari Aro (EMA)
• Staz. Zool. Naples (**I**)	Cell Signalling	Angela Falciatore (AF) and Chris Bowler (CB)
• Univ. of Newcastle (**UK**)	School of Agriculture	Christine Foyer (CF)
• Jagiell. Univ. Krakow (**PL**)	Plant Physiology & Biochemistry	Halina Gabrys (HG)
• Gregor-Mendel Inst. (**AT**)	Plant Signalling	Claudia Jonak (CJ)
• LM-Univ. Munich (**DE**)	Biology I	Dario Leister (DL) and Ute Vothknecht (UV)
• Bayer BioScience Gent (**B**)	Crop Productivity	Michael Metzlaff (MM)
• Univ. of Paris (**FR**)	Plant Biotechnology	Graham Noctor (GN)
• Univ. of Geneva (**CH**)	Molecular Biology	Jean-D. Rochaix (JDR) and Michel Goldschmidt-Clermont (MGC)*

Main objectives of the COSI network

COSI integrates young researchers into a highly innovative **interdisciplinary approach** aiming at identification of regulatory networks governing chloroplast functions. The active participation of Bayer BioScience, a plant biotechnology centre within Bayer CropScience, as a full network partner will enable intersectorial **industry-academia** cooperation with the long term objective of **improving yield and stress robustness of crops**. COSI partners work on different aspects of photosynthesis in algae and higher plants, and on environmentally triggered signalling pathways. This novel combination of expertise is one of the major strengths of COSI, exposing involved researchers to **different "schools of thought"**. The **integrated systematic training program** of COSI is comprised of methodological and complementary skills workshops, accompanied by visits to partner laboratories and will boost the young researchers **employability**. The provided expert

EUROPEAN COMMISSION
Community research

ERA – researchers
Issues of Concern

- Need to increase the number of well-qualified researchers in Europe.
- Lack of recognition of research as a profession.
- Diminishing interest of young people for scientific studies.
- Need for diversification of skills and career development of researchers.
- Lack of training for career paths in different sectors, in particular the private sector.
- Persistent under-representation of women.

MARIE CURIE ACTIONS

EUROPEAN COMMISSION
Community research

Initial Training Networks

Stronger emphasis than before on:

- Scientific discipline-specific training & complementary skills training to improve employment in different sectors;
- A strong participation in the research training programme by enterprises, in particular SMEs;
- Working conditions (employment), transparency of recruitment processes, and career development, gender balance.

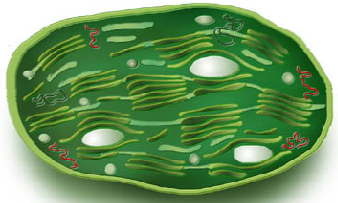
MARIE CURIE ACTIONS

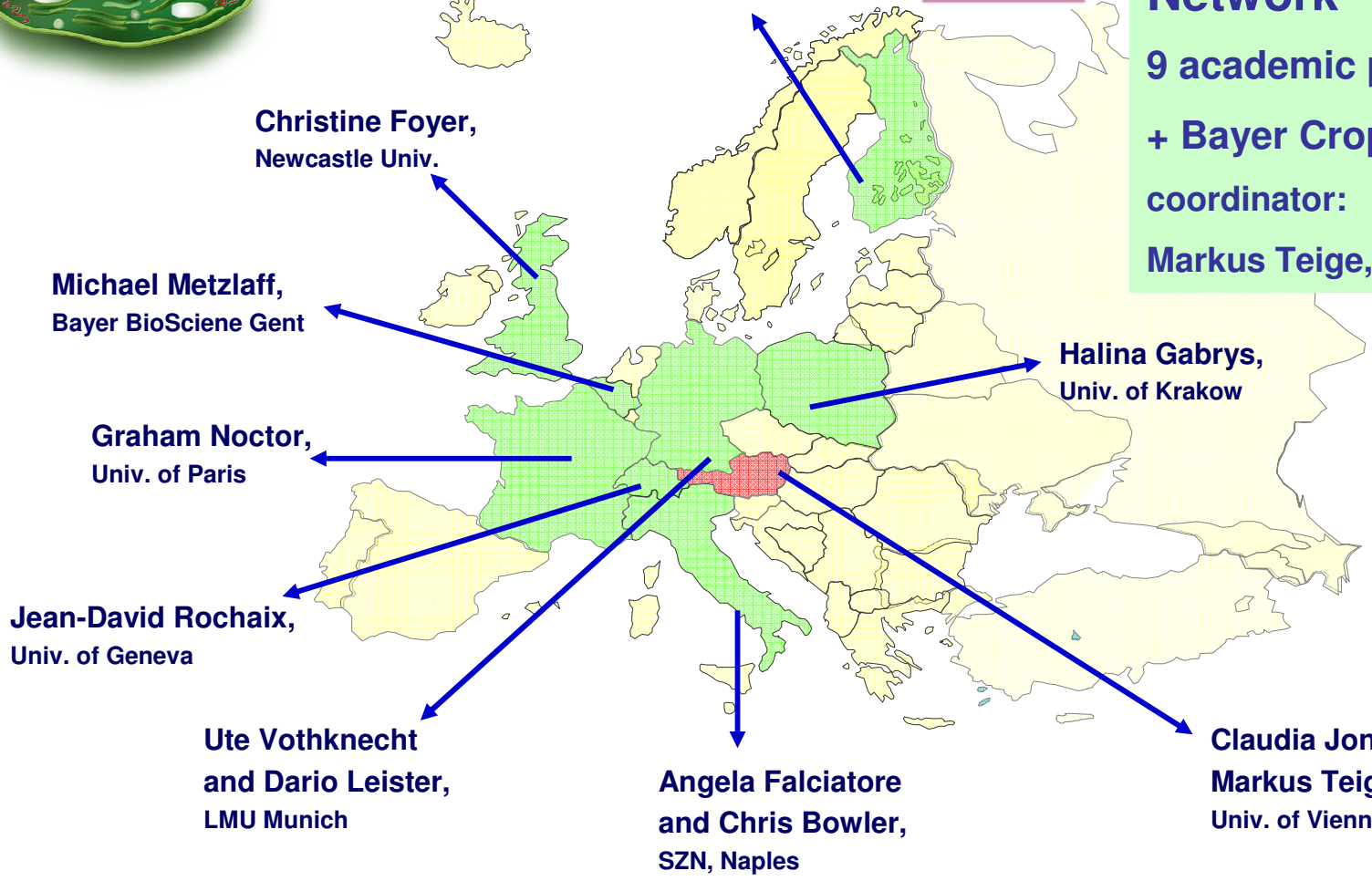
ITN COSI - Netzwerk, wie komm ich dazu?

Suchen und finden Sie hier den Traumpartner fürs ~~Leben~~ **richtige Netzwerk**

- *wenn möglich mit wenigen, guten Bekannten starten*
- *größer wird es schneller, als einem lieb ist*
- *6-8 Partner ideal, niemals >10!*
- *strikte Auswahl, auch einmal Nein sagen können*
- *Expertise entscheidend*
  - *was wird gebraucht?*
  - *auf welchem Gebiet fehlt jemand?*
  - *komplementär, interdisziplinär?*
- *Gender balance, geografische Distribution...*

Chloroplast Signals (COSI)





Initial Training Network – ITN

9 academic partners

+ Bayer Crop Science

coordinator:

Markus Teige, Vienna

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zeitliche Planung:

.....Deadlines und Realitäten....

- ***früh genug planen, gleich Deadlines festlegen...***
- ***offizielle Stellen (direkt) kontaktieren...***
  Letters of support, Daten für Registrierung...
- ***Deadlines für die Partner setzen***
  .... und Templates liefern
- ***wer ist bei den Partnern für was verantwortlich***
  bes. wichtig bei Admin später im Projekt!
- ***elektronische Versionen früh hochladen und***
  überschreiben
- ***Geduld, wenn's nicht beim 1. Mal klappt***
  COSI: 1. Vers. 2005, 2. Vers. 2007

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konkrete Planung des Projekts:

....wenn möglich, ganz konkret....

- ***exakte Planung hilft doppelt:***
  - ***überzeugt die Gutachter im Antrag***
  - ***erleichtert spätere Umsetzung***

- ***aber mit realistischen Zielen***
  - ► ***Milestones & Deliverables***
- ***daran werden Sie später gemessen!***

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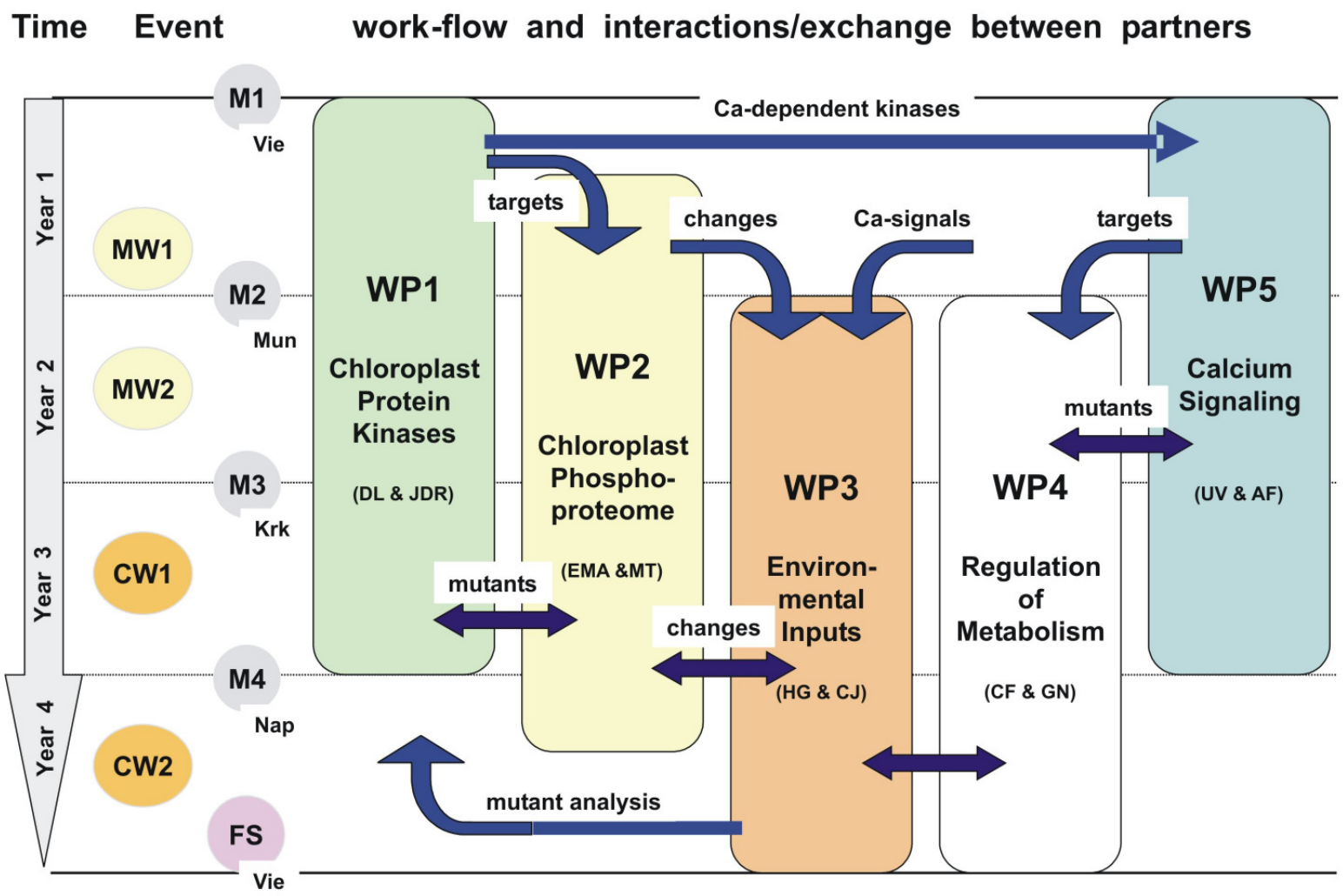

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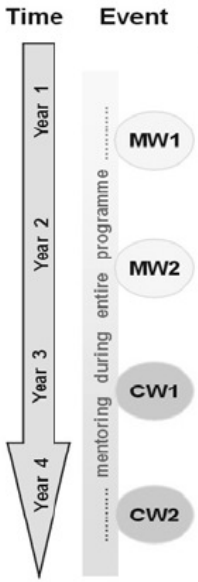
konkrete Planung des Projekts:

....wenn möglich, ganz konkret....

Workshops – Methods and complementary skills provided by the COSI training programme displayed in the timeframe of the entire projects as shown in figure 1.



Title	Content	Organizer
Functional Genomics & Bio-Imaging	Functional analysis of genomes, prediction of sub-cellular localisation, transformation and microscopy techniques to study subcellular localisation	LMU, DL and UV
Mass Spectrometry & Phosphoproteomics	Introduction to techniques, applications, and strategies for use and samples preparation	UTU, EMA & UNIVIE, MT
Career planning	Presentation skills, CV writing and interview techniques, training in publication- and grant writing, and project management.	GMI Vienna, CJ
Industry relevant skills	Commercial exploitation of results, intellectual property rights, legal requirements, stewardship and regulatory aspects of GMOs	Bayer Bio Science, MM

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konkrete Planung des Projekts:

....wenn möglich, ganz konkret....

Time	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
9	Lecture: Principles of functional genomics	Analysis PCR results	RT-PCT In silico expression profiling	Lecture by Leica application specialist	Lecture by UV and HG on application and pitfalls	Analysis of protoplasts
10						
11						
12	*lunch*	*lunch*	*lunch*	*lunch*	*lunch*	*lunch*
13	Internet search Primer design	Lecture: Practical aspects and pitfalls	Written test	Transformation with particle delivery gun	Preparation of protoplasts Immuno-histology	GFP-plants compartment specific dyes
14						
15						
	coffee	*coffee*	*coffee*	*coffee*	*coffee*	*coffee*
16	DNA isolation PCR	Lecture: Expression profiling and RT-PCT	General discussion	Preparation of thin sections	Transformation of protoplasts	Final discussion
17						

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konkrete Planung des Projekts:

....wenn möglich, ganz konkret....

Table 4. Schedule and timetable of deliverables and milestones

Milestones	ESR	ER	Year 1				Year 2				Year 3				Year 4			
			0	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45
Work package 1																		
M1 Localization of cpPKs confirmed	1, 2, 7, 8																	
M2 Kinase interactors identified	7	1																
M3 Ko lines confirmed	1, 2, 3, 8																	
M4 specific cpPK-regulation defined	1, 8, 10	1, 3																
Work package 2																		
M5 Differential phosphorylation patterns in chloroplast	1, 2, 3, 6, 8, 9	1, 3																
M6 Identification of substrates of cpPK	2, 3, 7	1																
M7 Impact of cpPK on phosphoproteome	2, 3, 7	3																
Work package 3																		
M8 Identification of Ca and phospho-signals in chloroplast movement	4, 6, 9	2																
M9 Environmental impact on chloroplast phosphoproteome	6, 9, 7, 10	2, 3																
M10 Characterization of diatom photoreceptors	3, 4																	
M11 Cryptochrome-mediated control of photosynthetic apparatus	4																	
Work package 4																		
M12 Redox regulation of cpPKs	2, 5, 7, 11	1																
M13 Impact of cpPK on metabolome	7, 10																	
M14 phospho-regulation of enzymatic activity by ROS determined	5, 11																	
Work package 5																		
M15 Aequorin transgenic plants generated	6	2																
M16 Environmental impact on chloroplast calcium fluxes measured	3, 6, 9	2																
M17 Action spectra of calcium changes in diatoms and plants	3, 9																	
M18 Effects of calcium on phosphoproteome assessed	9	3																

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kann das auch funktionieren?

....das Budget und Ressourcen....

- ***exakte Planung ist ohne Budget nicht möglich***
  - ***was kosten welche Kurse, Vortragende, Meetings...***
  - ***wie soll das finanziert werden***
- ***Festlegen finanzieller Spielregeln wird spätestens beim Konsortialvertrag erfolgen müssen***
- ***zeigen Sie den Gutachtern auch hier schon, dass Sie sich einig sind und das vorher besprochen haben***
- ***auf stattgefundenes Meeting hinweisen***

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Sie brauchen auch eine

Management-Struktur

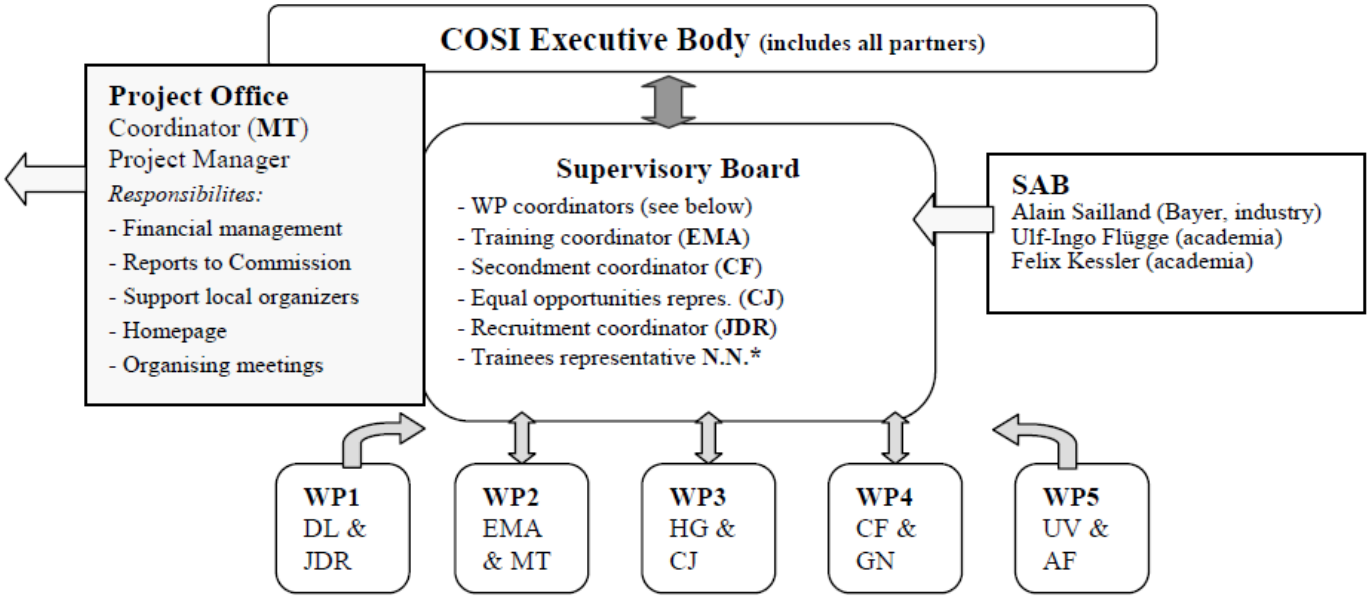

Figure 3. Management structure of COSI showing distribution of tasks and responsibilities. *The trainees representative will be elected at every regular network meeting for a year. The Scientific advisory board (SAB) will give feedback on research and training activities.

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