

Trace metal metabolism in plants



PLANTMETALS

Kick-off meeting



**- aimed at bringing together all members of the
COST Action CA 19116**



24 - 27 August 2021

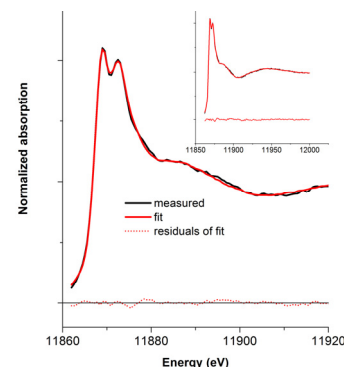
**Location: Biology centre of the Czech
Academy of Sciences,
Main lecture hall and campus**

Programme:

24 August

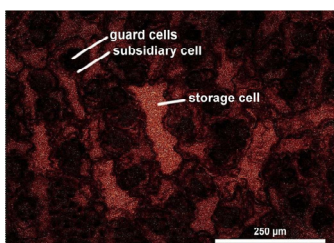
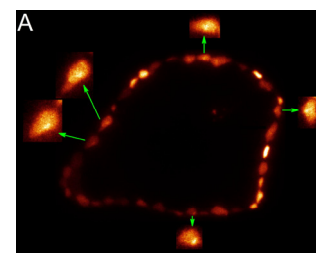
15:00 to 17:00: Registration

18:00-23:00: "Get together"- party (free for
all registered participants)



25 August

8:30-18:30 Lectures with 2x30min coffee
breaks and 2h lunch break
- free evening -



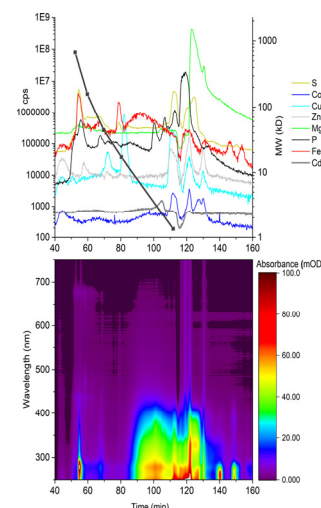
26 August

8:30-12:00: Poster viewing with coffee

12:00-14:00: Lunch break

14:00-18:00: Management committee
meeting (MC2)

19:00-23:00 Conference dinner in town



27 August

8:30-12:00: Workgroup planning
Lunch



Metals, Plants and People

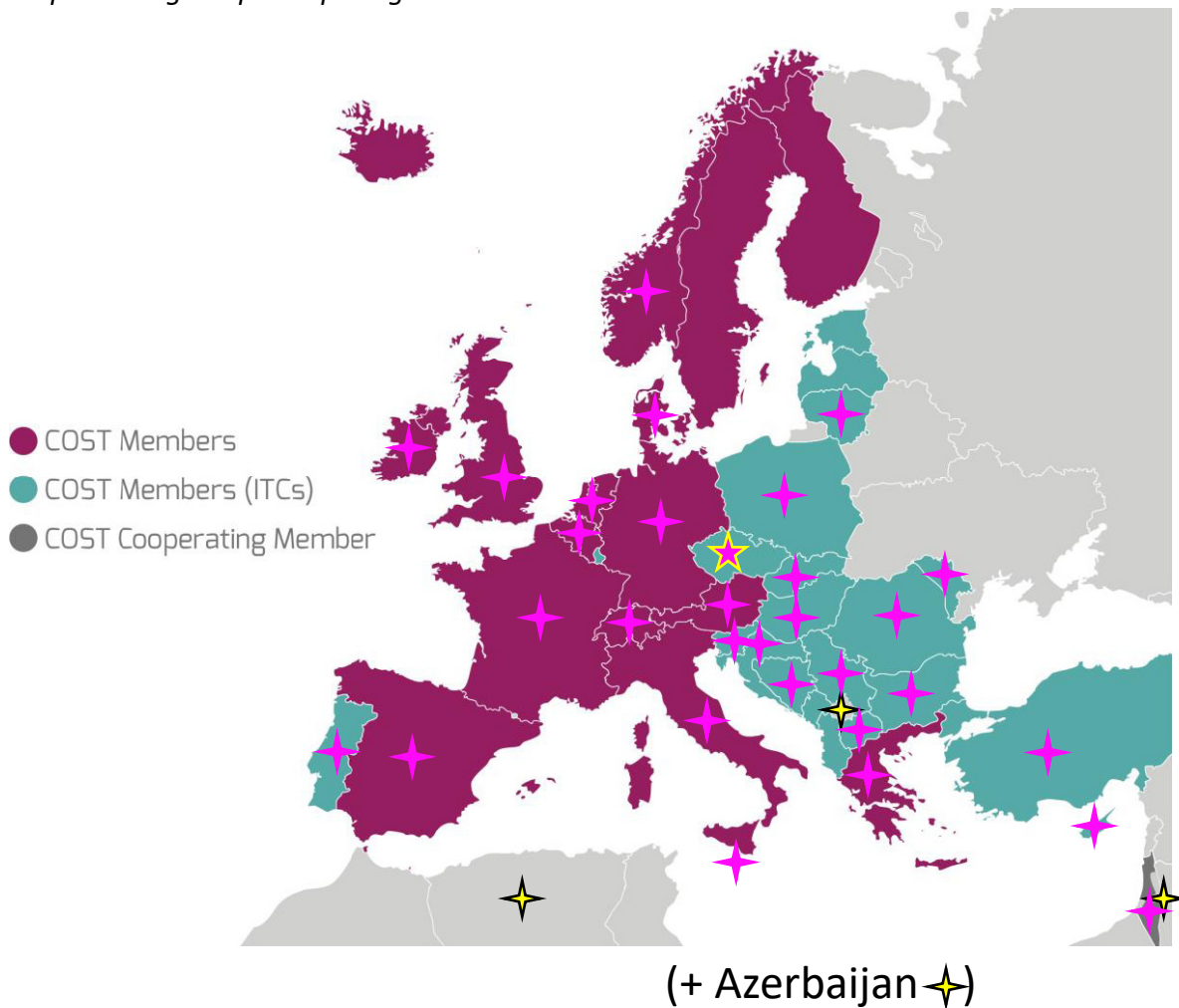
Detailed programme

24 August, 2021: Welcome

15:00 – 17:00 Registration, hanging up posters in the foyer of the conference centre

18:00 – 23:00 "Get together"- party at the BCAS Pavillion, with buffet, grill and drinks
– meant to bring all members of the COST Action together in an informal way, free for all registered participants (co-financing from KOROLID for those not covered by COST)

map showing the participating countries in this COST Action



25 August: Talks - meant to introduce the research of the WG leaders and main organisers and their vision of this COST Action

Time	Speaker, affiliation	Title
8:30-8:45	Prof. Libor Grubhoffer (director of the Bioloby Centre of the Czech Academy of Sciences = BCAS, České Budějovice, Czech Republic)	Welcome
8:45-9:15	Prof. Hendrik Küpper (BCAS, IPMB, Dept. of Plant Biophysics and Biochemistry, Czech Republic)	Introduction to the PLANTMETALS COST Action
9:15-9:45	Prof. Nathalie Verbruggen (Université Libre de Bruxelles, Faculté des Sciences, Laboratoire de Physiologie et de Génétique moléculaire des Plantes, Belgium)	<vice chair, ITC conference grant coordinator>
9:45-10:15	coffee break	
10:15-10:45	Prof. Sebastien Thomine <Sebastien.THOMINE@i2bc.paris-saclay.fr> Prof. Ana Assuncao <agla@plen.ku.dk>	<WG1 leader> <WG1 deputy leader>
10:45-11:00	NN	<WG1 talk selected from abstracts>
11:00-11:15	NN	<WG1 talk selected from abstracts>
11:15-11:45	Prof. Eva Freisinger <freisinger@chem.uzh.ch> Prof. Moshe Sagi <gizi@bgu.ac.il>	<WG2 leader> <WG2 deputy leader>
11:45-12:00	NN	<WG2 talk selected from abstracts>
12:00-12:15	NN	<WG2 talk selected from abstracts>
12:15-14:00	lunch break	
14:00-14:30	Dr. Manuel Gonzalez-Guerrero <manuel.gonzalez@upm.es> Dr. Marek Vaculik <marek.vaculik@uniba.sk>	<WG3 leader> <WG3 deputy leader>
14:30-14:45	NN	<WG3 talk selected from abstracts>
14:45-15:00	NN	<WG3 talk selected from abstracts>
15:00-15:30	Prof. Philip White <Philip.White@hutton.ac.uk> Dr. Valerie Bert <Valerie.BERT@ineris.fr>	<WG4 leader> <WG4 deputy leader>
15:30-15:45	NN	<WG4 talk selected from abstracts>
15:45-16:00	NN	<WG4 talk selected from abstracts>

16:00-16:30	coffee break	
16:30-17:00	Prof. Ute Kraemer <Ute.Kraemer@ruhr-uni-bochum.de> Prof. Alexander Lux <alexander.lux@uniba.sk>	<WG5 leader, Science communication officer> <WG5 deputy leader>
17:00-17:15	NN	<WG5 talk selected from abstracts, to be allocated to other WGs if none>
17:15-17:30	NN	<WG5 talk selected from abstracts, to be allocated to other WGs if none>
17:30-18:00	Dr. Martin Trtilek martin@psi.cz Prof. Mark Aarts <mark.aarts@wur.nl>	<WG6 leader> <WG6 deputy leader>
18:00-18:15	NN	<WG6 talk selected from abstracts, to be allocated to other WGs if none>
18:15-18:30	NN	<WG6 talk selected from abstracts, to be allocated to other WGs if none>

- free evening -

26 August Posters and MC meeting

Time	Target group	Activity
8:30-12:30	ALL members and supporters	Poster viewing with coffee and snacks – meant to show research and visions for the COST Action from ALL participants, incl. the speakers
12:30-14:30	ALL members and supporters	<i>lunch break</i> <i>afterwards: free afternoon for all non-MC participants</i>
14:30-16:00	MC members / substitutes	2 nd meeting of the management committee (1): Report of activities by the leaders of the Action: chair / STSM coordinator, vice chair / ITC conference grant coordinator, science communications officer, WG leaders incl. deputies
16:00-16:30	MC members / substitutes	<i>coffee break</i>
16:30-18:00	MC members / substitutes	2 nd meeting of the management committee (2): Discussion and decision of goals and budget of the second grant period
19:00-23:00		<i>Conference dinner in town</i> <sponsors will be needed to make it free, otherwise 18 € / person for cold+warm buffet included, drinks paid extra, feasible according to an exististing offer and with current COST budget in a nice restaurant in town>

27 August- Planning of future workgroup activities

Time	Target group	Activity
8:30-9:00	ALL members and supporters interested in this WG, others can view posters / meet individually	WG1 – Metal transport: Activity planning for GP2 <u>MoU description:</u> Pathways of TMs from the soil and through the plant. WG1 will identify the limiting factors in the uptake of plant physiologically active TMs from the rhizosphere and limit the uptake or the transfer to edible parts of toxic non-essential TMs WG1 will determine the chemical form (speciation) of TMs in each compartment. WG 1 will study crop plants and the use of hyperaccumulators and identify key nodes to improve/limit the uptake and accumulation of essential/non-essential TMs. WG1 will study interactions between TMs (antagonistic or synergistic effects). Leader: Prof. Sebastien Thomine <Sebastien.THOMINE@i2bc.paris-saclay.fr>, deputy leader: Prof. Ana Assuncao <agla@plen.ku.dk>
9:00-9:30	ALL members and supporters interested in this WG, others can view posters / meet individually	WG2 – Metalloproteins: Activity planning for GP2 <u>MoU description:</u> Metalloproteins important for TM homeostasis, metalloenzymes. WG2 will identify metalloproteins important for TM use efficiency. WG2 will study interaction of the proteins (other than transporters) with a TM: substrate affinity, regulation of activity, mechanism of function. Leader: Prof. Eva Freisinger <freisinger@chem.uzh.ch>, deputy leader: Prof. Moshe Sagi <gizi@bgu.ac.il>
9:30-10:00	ALL members and supporters interested in this WG, others can view posters / meet individually	WG3 – Environment: Activity planning for GP2 <u>MoU description:</u> Responses of plant TM metabolism to the environment. TM deficiency, TM toxicity, interactions with beneficial microorganisms and pathogens. WG3 will identify targets of both stress conditions and mechanisms, from the initial target to the whole- plant response. The initial targets can be lack or non-functional replacement of metal centres in metalloproteins, but also direct or indirect interactions with nucleic acids and metabolites. WG3 will reveal how beneficial microorganisms and pathogens interact with the metal metabolism of plants. Such interactions may, for example, involve changes in the uptake and intra-plant distribution of metals, enhanced or diminished expression or activity of metalloproteins. Leader: Dr. Manuel Gonzalez-Guerrero <manuel.gonzalez@upm.es>, deputy leader: Dr. Marek Vaculik <marek.vaculik@uniba.sk>
10:00-10:30		coffee break

27 August continued

10:30-11:00	ALL members and supporters interested in this WG, others can view posters / meet individually	<p>WG4 – Agronomy: Activity planning for GP2</p> <p><i>MoU description:</i> Agronomic aspects of TM homeostasis. WG4 aims to conduct studies to contribute to better nutritional quality of food crops by using targeted fertilisation and agricultural management also in consideration of the new EU regulation on fertilisers, and to characterise crop plant response to low and excess application of TMs by employing physiological assays and analytical tools, which will be developed in WG1-3. WG4 will evaluate how micronutrient fertilisers are absorbed (after foliar vs. soil application, added in organic or mineral forms), how microorganisms and fungi can be used to improve plant TM nutrition (through a better use of soil metals), how TMs are transported within crop plants and how their localisation and speciation changes in this process. Finally, workshops / symposia will be organised for farmers associations and industrial stakeholders dealing with targeted breeding, fertilisation and micronutrient foliar fertiliser production. This will be done in the last year of the Action, to facilitate the transfer of the knowledge gained from the COST Action to the stakeholders.</p> <p>Leader: Prof. Philip White <Philip.White@hutton.ac.uk>, deputy leader: Dr. Valerie Bert <Valerie.BERT@ineris.fr></p>
11:00-11:30	ALL members and supporters interested in this WG, others can view posters / meet individually	<p>WG5 – Dissemination: Activity planning for GP2</p> <p><i>MoU description:</i> Dissemination. WG5 will be focused on how to best target the results from this Action to the different stakeholders. WG5 will be responsible for preparing the press releases to news outlets, update the Action's social media accounts, and support the efforts at the national front. Moreover, WG5 will organise training sessions on writing skills to target research journals, farmer bulletins, and press releases. In addition, WG5 will coordinate any joint project by groups within the consortium to maximise group interactions, avoid overlaps and redundancy of research efforts, and increase success rates.</p> <p>Leader: Prof. Ute Kraemer <Ute.Kraemer@ruhr-uni-bochum.de>, deputy leader: Prof. Alexander Lux <alexander.lux@uniba.sk></p>
11:30-12:00	ALL members and supporters interested in this WG, others can view posters / meet individually	<p>WG6 – IPP: Activity planning for GP2</p> <p><i>MoU description:</i> Intellectual property protection. It is expected that a number of the results obtained within the PLANTMETALS Action will have an impact on the private sector. WG6 will coordinate all the IP protection efforts, promoting them whenever possible in collaboration with the universities involved – (which usually have their own IP department). In addition, to maximise this output, WG6 will organise a training session on IP protection for the younger participants and promote meetings with the private sector to ensure the exploitation of the key results of the Action.</p> <p>Leader: Dr. Martin Trtilek <martin@psi.cz>, deputy leader: Prof. Mark Aarts <mark.aarts@wur.nl></p>
12:00-12_30		Concluding remarks, farewell
12:30-14:30	ALL members and supporters	<p><i>lunch break</i></p> <p><i>afterwards: poster de-mounting, departure or self-organised activities</i></p>

27 August continued

14:30-	interested members and supporters	<possible addition, to be discussed: activities of sponsors, e.g. plant phenotypic workshop offered by Photon Systems Instruments ?>

List of Posters

Every participant (also those giving a talk!) need to present a poster. Those who want to be considered for selection as oral presentation furthermore need to submit an abstract. Selection of speakers will then be done by the WG leaders and their deputies with the aim of achieving a good balance between quality and all types of equality (countries, genders, age groups).

List of the Action's members who are invited to participate:

<https://plantmetals.eu/plantmetals-members.html>

Venue

The meeting will be hosted at our Biology Centre (BC) of the Czech Academy of Sciences (CAS) in České Budějovice, Czech Republic.

The Biology Centre is located at the western part of the joined campus of the Czech Academy of Sciences and the University of South Bohemia.

The lectures will take place in the main lecture hall of the BC; poster and workgroup meeting spaces will be in front of the main lecture hall and neighbouring rooms. For the welcome party and the daily lunches we will also use the campus facilities as shown on the map provided in the invitation and at the end of this programme. In the BC campus, there is public high-speed (10Gbit/s) WiFi accessible via the international “eduroam” system – please obtain credentials for eduroam from your local employer (if offered). For those who don’t have eduroam, we will provide access to the Wifi temporarily during the conference days.

GPS

DD – decimal degrees: 48.9783207 N, 14.4477556 E

DMS – degrees, minutes, seconds: N 48° 58' 41.955' E 14° 26' 51.92"

International travel

České Budějovice is a large regional town (about 95 000 inhabitants) and the capital of the Region of South Bohemia (Jihocesky kraj). It is easy to reach by ground transportation as described in several variants below.

Train

From most neighbour countries, the most convenient and cheapest way of reaching České Budějovice is by train, using the European high-speed railway system until Prague main station (Praha hlavní nádraží = Praha hl. n.) or Linz and then a direct train from these stations to České Budějovice (which is in the middle of the train line connecting Prague to Linz). Travel times vary from the Express trains that take around 2 hours to the regular trains that take about 3 hours. Furthermore, the Express trains have onboard highspeed WiFi and offer some snacks and drinks while they cost the same as the regular trains.

Flying

Prague Airport Vaclav Havel (PRG).

Most airlines fly to Prague, although not always are direct flights available at suitable times.

From the airport, there are regular Airport Express Bus connections to Prague main railway station (60 CZK per person, please have cash ready!). Make sure you go to the Prague main train station (Hlavní nádraží); Prague has four larger railway stations and several smaller stations. Travelling time by bus is about 35-40 minutes; a taxi is usually not much quicker but much more expensive. Trains for České Budějovice leave quite regularly.

Beware, the last express train to České Budějovice leaves at 21:58. Travel times vary from the Express trains that take around 2 hours to the regular trains that take about 3 hours. Furthermore, the Express trains have onboard highspeed WiFi and offer some snacks and drinks while they cost the same as the regular trains.

Alternatively, the RegioJet busses also stop regularly at the airport, and they connect directly to RegioJet busses to České Budějovice railroad station. It takes 45 minutes to the Prague RegioJet hub, then a 45 min wait, followed by a 2:15 journey to České Budějovice. Most of these busses have on-board WiFi, WC, and individual screens for films etc. The last RegioJet bus leaves the airport at 17:30. You have to reserve tickets in advance.

Although Prague Airport (PRG) seems the most logical choice, nearby airports include the Austrian airports of Linz (LNZ, 90 km) and Vienna (VIE, 215 km). Both have regular rail connections to České Budějovice. We would not recommend Brno Turany Airport (BRQ), because connections to České Budějovice are slow.

Private car

When travelling with several people and not too far a distance, time- and money-wise a shared car can be an interesting alternative. České Budějovice is easy to reach, although coming from Austria or Bavaria the last section in the Czech Republic will be mainly good quality national roads ("highways") with only short sections of motorways. Coming from the north, there are mostly motorways, but beware of traffic jams in particular around Prague.

Travel restrictions caused by the COVID-19 pandemic

At the time of writing this programme, still various travel restrictions related to the COVID-19 pandemic are in place. Please inform yourself regularly and well ahead of the travel at the embassy of your country about the current rules for travelling to Czechia – which tests are required before travel and whether quarantine is required. If you are already at least two weeks past a full, certified vaccination against COVID-19, you can freely enter Czechia without test or quarantine.

Visa

If you are from within the EU, no visa is needed. If you are from outside the EU, you might need a visa. Please check this with the Czech Embassy in your country. You have to do this early; this process normally cost time and you might need original confirmation of participation from us. In addition, still ongoing COVID restrictions might make this process even longer.

Accommodation

Neither the University nor the Academy has suitable on-campus accommodation. However, there are numerous possibilities nearby and in the town. The best is to check with booking.com or similar online booking

websites. If you prefer smaller “bed and breakfast” pensions, which are usually not listed in booking.com and similar websites, you can find them on www.mapy.cz by typing in Ceske Budejovice and then zooming in using the “+” button on the upper right corner until close to the maximal zoom level. You will see that with each zoom level more of the accommodation symbols appearing – there are very many of those in town, usually they are good (sometimes excellent) quality and inexpensive. www.mapy.cz always displays the webpages or phone number of these pensions when you click on them - not all but many of the owners speak English or German! We recommend to book as soon as possible, because on Thursday August 26 the very popular national agricultural exhibition “The providing Earth” starts, and popular accommodation will be booked out soon.

Local travel

Walking

The BC is about 2 km from the historical centre of the town, to the main square it is 2.3 km on foot (36 min according to mapy.cz) via the shortest route or 2.8km (43 min) via a more scenic route along the “Stromovka” park.

Alternatively, you can use the local public transport; several lines regularly pass the BC (stopping point University):

Autobus and Trolleybus

These two lines are going from the railway station to the western outskirts, passing the university stop. You can join this bus just a short walk to outside the historic center ring. The main connection is Line 3 to Máj, Antonína Barcala (to Nadrazi if going to town). This goes very frequently from early morning until late evening. Alternatively, or additionally depending on the location of your accommodation, you can also take lines 7, 15, or 45 and some long-distance buses to/from BC. Your accommodation provider can give you more information on this, or you can search for connections on <https://www.seznam.cz/jizdnirady/>.

For coming to BC from town, private cars are NOT recommended due to limited parking space.

Registration and abstract submission

Every participant (also those giving a talk!) need to present a poster. Those who want to be considered for selection as oral presentation furthermore need to submit an abstract. Selection of speakers will then be done by the WG leaders and their deputies with the aim of achieving a good balance between quality and all types of equality (countries, genders, age groups).

Please register online by following this link:

https://docs.google.com/forms/d/e/1FAIpQLSczAIiWiADaD0_fITcvYZvUWkyB8e4_NTN2QpuorM4cHx2ncA/viewform?hl=en

For submitting abstracts to be considered for **oral presentation**, you need to complete registration **before 24th of June**,

for presenting only a **poster** registration is possible until **24th of July** – at that timepoint we have to finalise arrangements with caterers etc. so that also cancellations should be avoided after that date.

Editorial

Organiser of the minisymposium:

Prof. Hendrik Küpper,

Chair, GH scientific representative and STSM / of the COST Action PLANTMETALS

E-Mail: Hendrik.Kuepper@umbr.cas.cz

Host Organisation:

Biology Center of the Czech Academy of Sciences,

Institute of Plant Molecular Biology,

Department of Plant Biophysics & Biochemistry;

Branišovská 31/1160

370 05 České Budějovice

Czech Republic

Local organizing team:

All members of the Department of Plant Biophysics & Biochemistry,

Institute of Plant Molecular Biology, Biology Centre, Czech Academy of Sciences -

Project manager: Drs. Robert Dulfer <robert.dulfer@umbr.cas.cz >

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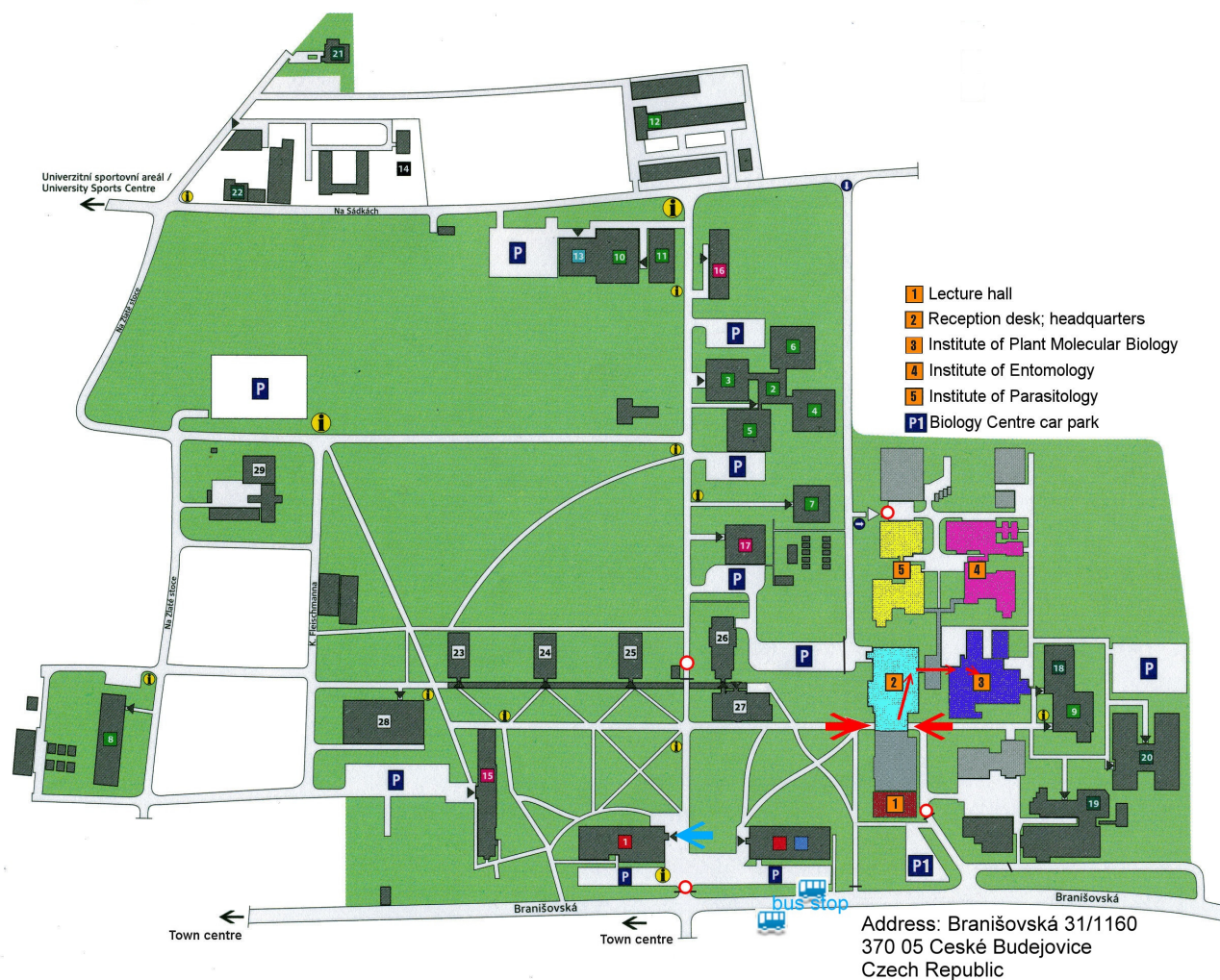
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***This conference is financially supported by the COST Association, grant
CA 19116 "Trace metal metabolism in plants - PLANTMETALS"***

- ➔ Main entrance ➔ way to KOROLID minisymposium lecture hall and poster area on 18+19 Aug
➔ Registration and get together party on Thu 17 Aug



- Rektorát / Rector's Office**
1 Akademická knihovna / Academic Library
Filozofická fakulta / Faculty of Philosophy
Zemědělská fakulta / Faculty of Agriculture
2 ZF – budova A, studijní oddělení / Building A, Student Affairs Office
3 ZF – budova B, katedry / Building B, Departments
4 ZF – budova C, centrum agroekologie / Building C, Centre for Agroecology
5 ZF – budova D, centrum zpracování produktů / Building D, Centre for Agricultural Product Processing
6 ZF – budova E, centrum hodnocení kvality / Building E, Quality Control Centre
7 ZF – budova M, batcentrum, učebny / Building M, BAT Centre, Classrooms
8 ZF – budova K 200, učebny / Building K 200, Classrooms
9 ZF – biologické centrum, učebny / Biology Centre, Classrooms
10 ZF – učebny, laboratoře / Classrooms, Laboratories
11 ZF – budova údržby / Service Building
12 ZF – sklady / Stock Rooms
Fakulta rybářství a ochrany vod / Faculty of Fisheries and Protection of Waters
13 FROV – ústav akvakultury, ředitelství, učebny / Department of Aquaculture, Directorate, Classrooms
14 Školní zemědělský podnik / Agricultural School Farm
Biologické centrum AV ČR / Biology Centre AS CR
Ekonomická fakulta / Faculty of Economics
15 EF – budova A / Building A
16 EF – budova C / Building C
17 EF – budova F / Building F
Přírodovědecká fakulta / Faculty of Science
18 PŘF – budova A / Building A
19 PŘF – budova B – Blažkův pavilon / Building B – Blazek Building
20 PŘF – budova C / Building C
21 PŘF – botanická vila / Department of Botany
22 PŘF – centrum polární ekologie / Centre for Polar Ecology
23 Kolej K1 / Dormitory K1
24 Kolej K2 / Dormitory K2
25 Kolej K3 / Dormitory K3
26 Kolej K4 / Dormitory K4
27 Aula, hostel / Auditorium, Hostel
28 Menza / University Canteen
29 Vědeckotechnický park / Science and Technology Park



EUROPEAN UNION
European Structural and Investment Funds
Operational Programme Research,
Development and Education

