Biodesert
European project 245746
FP7-Capacities-RegPot 2009-2

anpr
Agence Nationale de la Promotion de la Recherche Scientifique

UNIVERSITÀ DEGLI STUDI DI MILANO

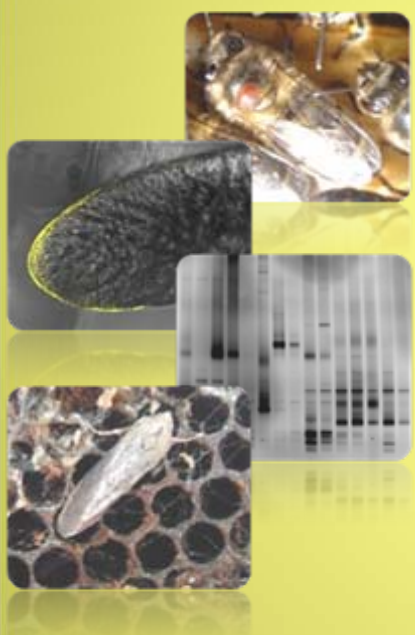
University of Ioannina

1st BIODESERT Workshop

Insect-Microbe Symbiosis

December 13-15th, 2011

Hotel du PARC
Tunis, Tunisie



Organized by

Laboratory of Microorganisms & Active Biomolecules
Faculty of Science of Tunis
University of Tunis El Manar

LMBA

Program

- Conferences and practical laboratory work

Conference workshop objectives

- Type of microbial symbionts and nature of the symbiotic relationship.
- Overview of the symbiont diversity in agriculture insect pests and economically useful insects.
- Molecular markers for identification and exploration biodiversity amongst insect symbionts.
- Emerging symbiont-based strategies for the control of insects and insect-transmitted diseases.

Practical laboratory work objectives

- Bacterial diversity analyses and molecular identification (ITS followed by 16S sequencing).
- Total DNA extraction and analysis of microbial diversity by DGGE.
- Application of RT-PCR for quantification of bacterial symbionts (*Wolbachia*).
- In situ observation of symbionts using different coloration methods (DAPI, FISH,…).

In collaboration with

the Higher Institute for Biotechnology of Sidi Thabet (ISBST)
www.isbst.rnu.tn/events.html

Sidi Thabet

Free Registration
The number of participants is limited to 30

Contact: Laboratory of Microorganisms & Active Biomolecules, FST.
☎/🖷: 00216 70 860 553. e-mail: biodesertworkshop2011@gmail.com

With the support of

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BIODESERT
"Biotechnology from Desert microbial extremophiles for supporting agriculture research potential in Tunisia and Southern Europe"

EU Project N. **245746** – FP7 Supporting Action – CSA-SA

Laboratory Microorganisms & Active Biomolecules, Faculty of Sciences of Tunis

University of Tunis El Manar

Program of the 1st BIODESERT workshop

INSECT-MICROBE SYMBIOSIS

Tunis - December 13 – 15th 2011

Hotel du Parc, Tunis
&
Higher Institute for Biotechnology of Sidi Thabet, University of Manouba

Monday December 12th. Arrival day

Transport will be assured for participants from airport to the hotels

Tuesday December 13th, Workshop day 1: at the hotel

Dec. 13th / Morning

08h30-09h00: Registration

09h00-09h30: **Ameur Cherif** and **Abdellatif Boudabous**: Welcoming the participants and presentation of the Workshop objectives

Daniele Daffonchio: Presentation of the Biodesert Project and dissemination activities

***Session 1:* Overview of the symbiont diversity in agriculture insect pests and economically useful insects**

09h30-10h15. Conference 1: **Kostas Bourtzis**, University of Ioannina, Greece
"Insect-*Wolbachia* Symbiosis: from fundamental research to pest and disease control"

10h30-11h00: Coffee break

11h00-11h30: Conference 2: **Daniele Daffonchio**, University of Milan, Italy
"Acetic acid bacteria, an emerging group of symbionts of sugar-feeding arthropods"

11h40-12h10: Conference 3: **Elena Gonella**, University of Turin, Italy
"Microbial symbioses in *Auchenorrhyncha* vectors of phytoplasmas to grapevine"

12h20-12h50: Conference 4: **Mohamed Aziz Darghouth**, ENMV, University of Manouba, Tunisia

"Potential implication of microbial symbionts in the control of tick-borne diseases: case of piroplamids in livestock"

13h00-14h00: Lunch

Dec. 13th / Afternoon

***Session 2:* Type of microbial symbionts and nature of the symbiotic relationship**

14h30-15h15. Conference 5: **Abdelaziz Heddi,** INRA/INSA University Claude Bernard, Lyon I, France
"Antimicrobial Peptides Selectively Target Insect Endosymbionts and Restrain their Survival to the Bacteriocyte Cells"

15h30-16h00. Conference 6: **Noura Raddadi**, University of Bologna, Italy
"*Candidatus Liberibacter europaeus*, a novel microorganism associated with *Cacopsylla spp*.: a symbiont, a potential pathogen or an endophyte?"

16h10-16h40. Conference 7: **Imène Ouzari**, IRESA/University of Carthage, Tunisia
"Microbial symbionts in the desert ant Cataglyphis"

16h50-17h10: Coffee break

Session 3: Molecular markers for identifying and exploring biodiversity amongst insect symbionts

17h10-17h40. Conference 8: **George Tsiamis**, University of Ioannina, Greece
"DNA Microarrays and SymBioKosmos"

17h50-18h20. Conference 9: **Jacques Mahillon**, Catholic University of Louvain, Belgium
"Insight into the ecology of *Bacillus thuringiensis*"

18h30-19h00. Conference 10: **Elena Crotti**, University of Milan, Italy
"Unravelling the ecology of acetic acid bacterial symbionts within their insect hosts"

20h30. dinner

Wednesday December 14th, Workshop day 2

Dec. 14th / Morning at the hotel:

***Session 4:* Emerging symbiont-based strategies for the control of insects and insect-transmitted diseases.**

08h30-09h30: Conference 11: **Ravi Durvasula,** University of New Mexico School of Medicine, USA
"Paratransgenic Approaches to Arthropod-borne Diseases"

Conference 12: **Adam Forshaw,** University of New Mexico School of Medicine, USA
"Paratransgenic Approaches to Arthropod-borne Diseases, Act 2"

09h45-10h15: Conference 13: **Ben Halima Kamel Monia**, IRESA/University of Sousse, Tunisia
"Biological control in agricultural: situation and perspectives"

10h30-11h00: Coffee break

11h00-11h40: Conference 14: **Tom Miller**, University of California, Riverside, USA
"BIOLOCUST: Biotechnology for contorl of desert locust"

11h50-12h20: Conference 15: **Matteo Montagna**, University of Milan, Italy
"Symbionts, within symbionts within parasites: the case of Midichloria mitochondrii"

12h30-13h00: Conference 16: **Ameur Cherif**, University of Manouba, Tunisia
"Symbiotic control of honeybee pathogens"

13h10-13h30: General Discussion – Closing of the conference session

13h30-14h30: Lunch

14h30-15h00: Transport of the participants to the ISBST (Institut Supérieur de Biotechnologie de Sidi Thabet).

Dec. 14th / Afternoon session at the ISBST

15h-18h00. Afternoon session: Practical in the laboratory of ISBST.

15h-16h00:

Group 1: Assessment of insect microbial community diversity (Bee) using cultivation independent approach: DGGE (Amel Guesmi and Hanene Cherif, University of Tunis El Manar).

Group 2: Assessment of insect microbial community diversity (Bee) using cultivation dependent approach (Chadlia Hamdi and Jihène Essanaa, University of Tunis El Manar).

16h00-16h30: Coffee Break

16h30-18h00:

Group 1: Assessment of insect microbial community diversity (Bee) using cultivation dependent approach (Chadlia Hamdi and Jihène Essana, University of Tunis El Manar)

Group 2: Assessment of insect microbial community diversity (Bee) using cultivation independent approach: DGGE (Amel Guesmi and Hanene Cherif, University of Tunis El Manar)

18h00-18h30. Discussion

18h30-19h00: Transport of the participants to their hotels

20h00.Dinner

Thursday December 15th, Workshop day 3 at the ISBST

08h30-09h00: Transport of the participants to the ISBST. Practical in the laboratory of ISBST

9h00-10h45:

Group 1: Application of Quantitative Real-Time PCR. (Imène Fhoula, Khaoula Abdi, University of Tunis El Manar)

Group 2: Insect tissue morphological staining (DAPI) with fluorescence in situ hybridization (FISH) (Ant, Scorpion, Aquatic bettle). (Khaled Elmnasri, Hanene Cherif, University of Tunis El Manar)

10h45-11h15: Coffee Break

11h15-13h00:

Group 1: Insect tissue morphological staining (DAPI) with fluorescence in situ hybridization (FISH) (Ant, Scorpion, Aquatic bettle). (Khaled Elmnasri, Hanene Cherif, University of Tunis El Manar)

Group 2: Application of Quantitative Real-Time PCR. (Imène Fhoula, Khaoula Abdi, University of Tunis El Manar)

13h00- 14h00: Lunch

14h00- 18h00: Afternoon session: Practical in the laboratory of ISBST

14h00- 16h00

Conference: Real Time PCR: Technology and Applications. Walid Essid, Chef de produits. Roche Molecular Diagnostics, Roche Applied Science. Tunisia.

16h00- 16h30: Coffee Break

16h30-18h00:

Phylogenetic Analysis: Analysis of Results (DGGE, PCR ITS and sequencing of 16S). (Amel Guesmi, Chadlia Hamdi and Jihène Essanaa, Faculty of Sciences of Tunis)

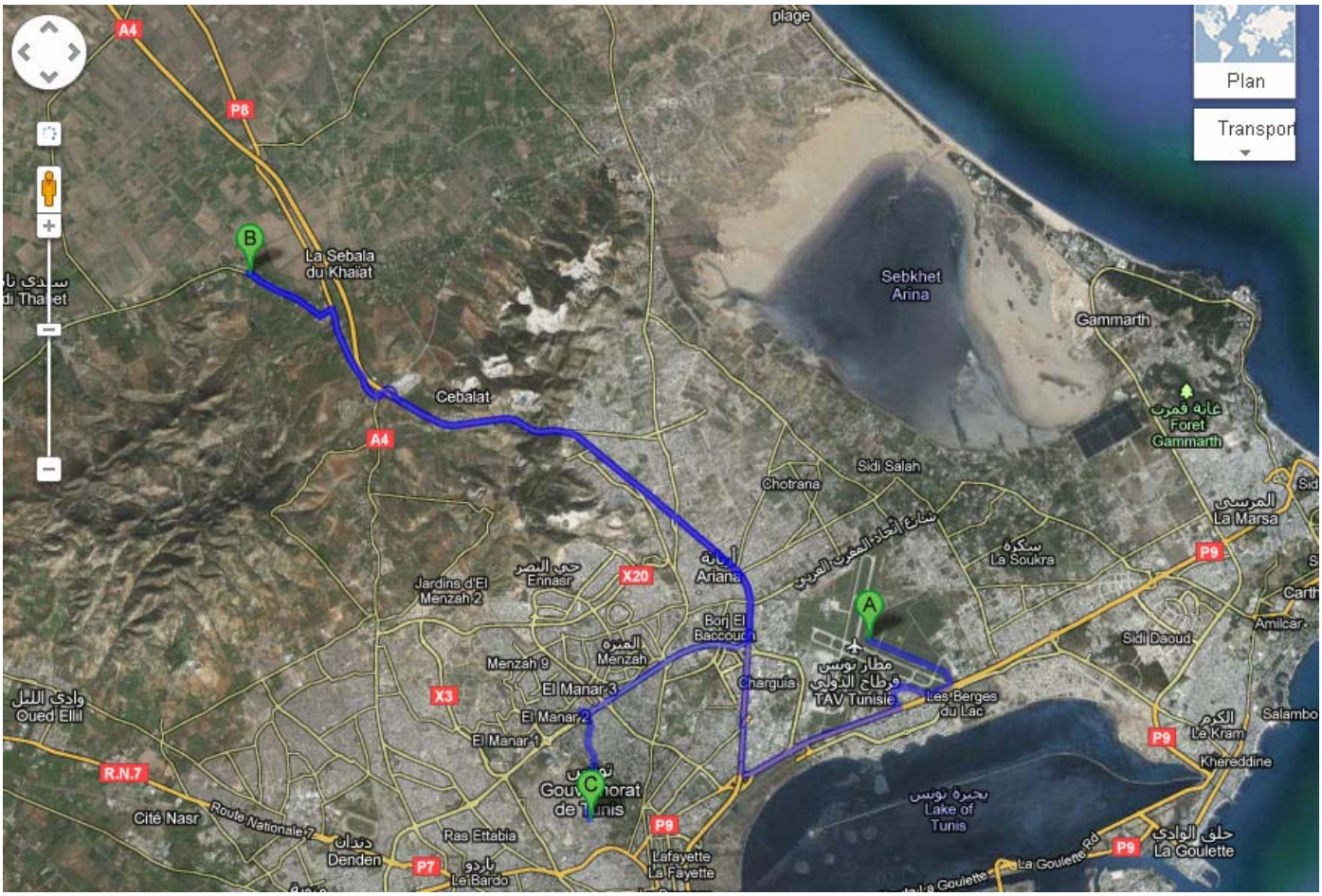
18h00- 18h30. General Discussion and closing the practical

18h30- 19h00: Transport of the participants to their hotels

20h00. Dinner

Location and venue of the workshop

A- Airport of Tunis Carthage
B- Higher Institute for Biotechnology of Sidi Thabet (Practical sessions)
C- Hotel le PARC (Conference sessions)



You can magnify or precise the exact location by clicking on this Google Earth link:

http://maps.google.fr/maps?saddr=A%C3%A9roport+Tunis-Carthage,+Tunisie&daddr=36.916386,+10.085490+to:Hotel+du+Parc,+Tunis,+Tunisie&hl=fr&ie=UTF8&ll=36.855999,10.198402&spn=0.194768,0.308647&sll=36.87359,10.16803&sspn=0.194723,0.308647&geocode=FadNMgIdAA2cACGbgbUA0YgkkA%3BFaJMMwIdcuSZAA%3BFTjQMQId8B6bACFwhoK64vUFpQ&vpsrc=6&mra=ls&t=h&z=12