

The Aaronsohn-ITMI Conference

Tiberias, Sea of Galilee April 16 - 20, 2007

PROGRAM

Monday, April 16

11:00-17:00 *Pre –Conference Business Meetings*

11:00-12:30 *International Wheat Genome Sequencing Consortium
business meeting*

12:30-13:30 *Lunch*

13:30-15:00 *ITMI Business Meeting*

15:00-15:30 *Coffee break*

15:30-17:00 *International Barley Genome Sequencing Consortium
business meeting*

17:00-18:00 **Welcome, get together, registration, poster hanging**

18:00-19:40 **Session A: Opening Session**

Chair: **Tzion Fahima**

18:00 Opening Welcome

18:10 Mr. **Zohar Oved**, Tiberias Mayor, Greetings

18:20 A1 **Shaul Katz**, The Hebrew University of Jerusalem, Israel
On the wings of the brittle rachis: Aaron Aaronsohn from the rediscovery of wild wheat (“urweizen”) to his vision “for the progress of mankind”

19:00 A2 **Moshe Feldman**, Weizmann Institute, Israel
Facts and thoughts on the origin and evolution of wild emmer wheat

19:40 **End of Session**

19:40- 21:00 *Dinner*

21:00- 22:00 **Poster Viewing** (odd numbers)

Tuesday, April 17

08:00 **Bus departure to Beit Gavriel**

08:30-10:20 **Session B: Cereal Structural Genomics**

Chair: **Calvin Qualset**

08:30 B1 **Bikram Gill**, Kansas State University
Genetics and genomics of wheat domestication-driven evolution

09:00 B2 **Beat Keller**, University of Zurich
Evolutionary genomics in wheat and grass species with small genomes

09:30 B3 **Boulos Chalhoub**, URGV-INRA, France
Relationships between wheat species, based on comparative large-scale genomic sequencing and functional regulation

10:00 B4 **Geoffrey Fincher**, University of Adelaide, Australia
The (1,3;1,4)-beta-glucan synthase gene family in barley

10:20 **End of Session**

10:20-10:40 *Coffee Break*

10:40-12:40 **Session C: Mapping and Sequencing in the *Triticeae***

Chair: **Enrico Porceddu**

- 10:40 C1 **Catherine Feuillet**, INRA, France
Chromosome based strategies to decipher the structure and evolution of the hexaploid wheat genome: chromosome 3B, a case study
- 11:10 C2 **Andreas Graner**, Leibniz-Inst. of Plant Genetics, Germany
The International Barley Sequencing Consortium - a global effort towards one goal
- 11:40 C3 **Abraham Korol**, University of Haifa, Israel
A new approach for building physical maps in large and repetitive genomes
- 12:10 C4 **Robbie Waugh**, Scottish Crop Research Institute, UK
Genetics of transcript abundance variation in a barley reference mapping population

12:40 End of Session

12:40-14:00 Lunch at Beit Gavriel

14:00-16:00 Session D: Functional Genomics

Chair: **Adina Breiman**

- 14:00 D1 **Masahiro Yano**, National Inst. of Agrobiological Sci., Japan
Detection and molecular cloning of genes underlying quantitative phenotypic variations in rice
- 14:30 D2 **Jorge Dubcovsky**, University of California, USA
Interactions between photoperiod and vernalization in wheat and barley
- 15:00 D3 **Yasunari Ogihara**, Yokohama City University, Japan
Comprehensive analysis of expressed sequence tags in common wheat
- 15:20 D4 **Assaf Distelfeld**, University of California Davis, USA
Map-based cloning of *Gpc-B1* reveals a transcription factor associated with senescence & mineral remobilization in wheat
- 15:40 D5 **Khalil Kashkush**, Ben-Gurion University, Israel
Genome-wide analysis of cytosine methylation and transcription of retrotransposons in rice

16:00 End of session

16:00-16:20 Coffee break

16:20-18:00 Session E: Domestication: Genetic and Archaeological Insights

Chair: **Simcha Lev-Yadun**

- 16:20 E1 **Jan Dvorak**, University of California Davis, USA
Domestication & evolution of tetraploid & hexaploid wheats
- 16:50 E2 **Avi Gopher**, Tel Aviv University, Israel
The Neolithic Revolution in the Levant
- 17:20 E3 **Mordechai Kislev**, Bar-Ilan University, Israel
Reconstructing the ear morphology of ancient small-grain wheat (*T. turgidum ssp. parvicoccum*) and macaroni wheat
- 17:40 E4 **Shahal Abbo**, The Hebrew University of Jerusalem, Israel
Comparative study of Near Eastern cereals & legume crops

18:00 End of Session -- Bus departure to Gai Beach Hotel

19:00-20:30 Dinner

20:30-21:30 Poster Viewing (even numbers)

Wednesday, April 18

08:30-09:40 Session F: In Situ and Ex Situ Conservation of Wheat and Barley

Chair: **Rivka Hadas**

- 08:30 F1 **Didi Kaplan**, Nature and Parks Authority, Israel
A designated nature reserve for *in-situ* conservation of wild emmer wheat (*Triticum dicoccoides*) in northern Israel
- 09:00 F2 **Yehoshua Anikster**, Tel Aviv University, Israel
Hidden resistance and latent susceptibility to fungal diseases in a natural wild emmer population in Ammiad
- 09:20 F3 **Zvi Peleg**, The Hebrew University of Jerusalem, Israel
Genetic diversity in wild emmer wheat across natural aridity gradient and priorities for conservation

09:40 End of session

09:40-10:00 Coffee break

10:00-19:00 Field trip 1: In the footsteps of wild cereals & visit of archaeological sites

- 10:00 Departure from Gai Beach Hotel
- 10:30 Kfar Nahum (Capharnaum) -Ancient Jewish and Christian village (<http://en.wikipedia.org/wiki/Capharnaum>)
- 12:00 Ammiad Nature Reserve - *In-situ* conservation of wild emmer wheat in the center of distribution of wild wheat in Israel, in the sub-Mediterranean region
- 13:30 **Lunch**
- 16:00 Yehudia – Natural populations of wild emmer wheat, oat and barley in an open oak park forest.
- 17:00 Har Shipon (Rye Mountain) - The Southern distribution of the wild perennial rye, *Secale montanum*, the progenitor of domesticated rye.
- 19:00 Return to Gai Beach Hotel

19:00-20:30 Dinner

Thursday, April 19

08:30-10:20 Session G: Genome Evolution in Grasses

Chair: **Rudy Appels**

- 08:30 G1 **Alan Schulman**, MTT & University of Helsinki, Finland Junkyard wars: retrotransposons, hyper-parasitism, and genome evolution in the *Triticeae*
- 09:00 G2 **Eduard D. Akhunov**, University of California Davis, USA
Mechanisms and rates of acireductone deoxygenase gene family evolution provide insights into the evolution of large plant genomes
- 09:20 G3 **Alexander Belyayev**, University of Haifa, Israel
The dynamics of transposable elements in time: impact on marginal populations of *Aegilops speltoides*
- 09:40 G4 **Taihachi Kawahara**, Kyoto University, Japan
Phylogenetic relationships among diploid *Aegilops-Triticum* species based on sequence data of chloroplast DNA
- 10:00 G5 **Elena A. Salina**, Institute of Cytology and Genetics, Russia
Genome reorganization during evolution of diploid & polyploid species of *Triticum* and *Aegilops* studied by micro- and macrosatellites

10:20 End of session

10:20-10:40 Coffee break

10:40-12:50 Session H: Biotic and Abiotic Stress

Chair: **Pierre Sourdille**

- 10:40 H1 **Peter Langridge**, Australian Centre for Plant Functional Genomics, Australia
Strategies for improving abiotic stress tolerance
- 11:10 H2 **Yehoshua Saranga**, The Hebrew University, Israel
Drought resistance in wild emmer wheat – genetics, physiology and ecology
- 11:30 H3 **Evans S. Lagudah**, CSIRO, Australia
Molecular genetic characterisation of the multi-pathogenic adult plant disease resistance locus, *Lr46/Yr29/Ltn2*, in wheat
- 11:50 H4 **Hikmet Budak**, Sabanci University, Turkey
Identification and quantification of differentially expressed genes induced by Cd exposure in durum wheat
- 12:10 H5 **Roberto Tuberosa**, University of Bologna, Italy
Genomics approaches to enhance water-use efficiency and tolerance to drought in Mediterranean crops
- 12:30 H6 **Ismail Cakmak**, Sabanci University, Turkey
Role of wild wheats in improving zinc deficiency tolerance and increasing grain zinc concentration of cultivated wheat

12:50 End of session

12:50-14:10 Lunch

14:10-15:40 Session I: Biodiversity: Characterization & Utilization

Chair: **Sergei Volis**

- 14:10 I1 **Dani Zamir**, The Hebrew University of Jerusalem, Israel
Improving plant breeding using exotic genetic libraries
- 14:40 I2 **Susanne Dreisigacker**, CIMMYT, Mexico
Genome-wide linkage disequilibrium and association mapping using CIMMYT wheat trials
- 15:00 I3 **Francois Balfourier**, INRA, France
Establishment and evaluation of a world wide bread wheat core collection with molecular markers and agronomic traits
- 15:20 I4 **Karl Schmid**, Leibniz-Institute of Plant Genetics, Germany
Population genetic analysis of DNA sequence polymorphism in wild barley *Hordeum spontaneum* accessions from the Evolution Canyon and other localities in Israel

15:40 End of session

15:40-16:00 Coffee break

16:00-17:20 Session J: Gene Transfer from Wild Relatives to Crops

Chair: **Jacques David**

- 16:00 J1 **Carla Ceoloni**, University of Tuscia, Italy
Fine wheat-alien chromosome manipulations: engineered durum wheats with single and multiple introgressions enhancing the crop value
- 16:20 J2 **Eitan Millet**, Tel Aviv University, Israel
Obstacles and advancement in gene transfer from Sharon goat grass into wheat
- 16:40 J3 **Alberto Cenci**, INRA, France
Interspecific genetic fluxes in the evolution of *Triticeae*
- 17:00 J4 **Hermann Buerstmayr**, University of Natural Resources and Applied Life Sciences, Austria
Molecular mapping of resistance to Fusarium head blight in a back-cross derived population *T.dicccoides* x *T.durum*

17:20 End of session

17:20-17:30 Stretching break

17:30-18:40 Session K: Closing Session

Chair: **Avraham Levy**

17:30 K1 **Eviatar Nevo**, University of Haifa, Israel
Ecological genomics of wild cereals in their center of origin and diversity in the Fertile Crescent

18:00 K2 **Ran Aaronsohn**, The Hebrew University, Israel
In the footsteps of Aaron Aaronsohn: local sites, Levantine landscape and early globalization

18:30 Concluding comments

18:40 End of session

19:30-21:00 *Gala Dinner*
21:00-22:00 *Happy Hour*

Friday, April 20

Until 08:00 Checkout

08:30 Field trip 2

08:30 Departure from Gai Beach Hotel

10:00 Evolution Canyon - Mount Carmel, natural population of *Hordeum spontaneum*

11:30 Aaronsohn House and Museum, Zichron Yaakov

13:00 Lunch

13:30-15:00 Visit of Ramat Hanadiv Gardens: *Aegilops speltoides* natural population, demonstration plots of wild and cultivated cereals, visit of the gardens

17:00 Tel Aviv drop

18:00 Ben Gurion Airport drop