**Phenotyping Network Workshop, 24-28 March 2014, Montpellier**

The 3rd GRiSP Phenotyping Workshop will be held at CIRAD in Montpellier, France, on 24-28 March 2014. About two years, or four experimental seasons, into a global program of diverse phenomics researches on rice, we hope we can take stock of some exciting results and formulate a sharpened vision for the future. Both will be needed to achieve the extension of GRiSP (PRAY project) funding beyond 2014.

The Network aims at discovering and characterizing new genes and alleles in the genome of cultivated rice that will potentially help improving yield potential and adaptation to environmental constraints, including those related to changing climate. To achieve this goal, jointly agreed-on panels of genotypes representing the species’ existing genetic diversity are phenotyped in the field and controlled environments for multiple traits of interest, through a multi-partner consortium committed to sharing resources and results. The initial approach is based on genome-wide association studies (GWAS).

The workshop will bring together scientists from GRiSP centers including IRRI, CIAT, AfricaRice, IRD and CIRAD, as well as from other key partners from the rice world: NARS (e.g. from China and Brazil), universities (e.g. in the US and Australia) and private sector (e.g., Syngenta). A three-day program of scientific stock-taking and exploration of new directions will be followed by two days dedicated to GWAS methodology and technical strategy for the network. The presentations of two workshop sessions will be public whereas all other activities will be restricted to the ca. 35 invited participants.

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**Preliminary program for 24-28 March 2014**

Venue: CIRAD Lavalette Campus, Montpellier, France

Day 1 (am) – Salle 159 at CIRAD

* Registration 0830-0900
* Welcome note (Glaszmann, Caron or Barthelemy) 0900-0930
* Workshop objectives, program and expected outcomes (Pasuquin) 0930-1000

*Coffee break 1000-1030*

* Two years into the GRiSP Phenotyping Network: Status quo, future challenge (Dingkuhn) 1030-1100
* Keynote and discussion: Place of trait ontologies in phenomics (Elisabeth Arnaud) 1100-1200

*Lunch break 1200-1330*

**Day 1 (pm) – Amphi at CIRAD -- *Public***

* **Position paper and Introduction to plenary session 1 “Milestones” (Hei Leung) 1330-1400**
* **Field phenomics and GWAS for rice yield potential (Padolina, McNally, Dingkuhn,…) 1400-1430**
* **Phenomics and GWAS for rice thermal responses (Courtois, Audebert, Lafarge, Dingkuhn…) 1430-1500**

***Coffee break 1430-1500***

* **Phenology and spikelet fertility: multi-environment studies assisted by modeling (Dingkuhn, Sow, Raboin, Dusserre, Ahmadi,…) 1500-1530**
* **Phenomics and GWAS for sugar metabolism related traits (Luquet, Reboledo,…) 1530-1600**
* **Sensor-based HTP phenomics for rice canopies (Klassen, represented by Pasuquin) 1600-1630**
* **Reserve slot and general discussion 1630-1730**

**Day 2 (am) – Amphi at CIRAD -- *Public***

* **Introduction to plenary session 2 “Challenges” (NN) 0830-0845**
* **Keynote: Phenomics and association genetics from breeders’ perspective (Ahmadi/Courtois) 0845-0930**
* **Imagery based crop phenomics – update from HRPPC in Canberra (Sirault) 0930-1000**

***Coffee break 1000-1030***

* **Phenomics for chemical and biochemical traits (Stangoulis) 1030-1100**
* **Phenotyping, Ideotyping, Modelomics (Dingkuhn, Luquet,…) 1100-1130**
* **GWAS data pipeline at Cornell and experience with 700-k SNP chip (Greenberg, McNally, McCouch…) 1130-1200**
* **Wrap-up discussion and *Closing Remarks for public part of workshop* (NN) 1200-1230**

*Lunch break 1230-1400*

Day 2 (pm) – Salle 159 at CIRAD

**Network session 1 “partner reports – yield potential related”** 1400-1700

* Introduction (NN)
* 15-20 min each:
  + IRRI Los Banos + India,
  + PRRI,
  + AfricaRice-Senegal,
  + CIAT,
  + CAAS
* General discussion

*Dinner reception 1830+*

Day 3 (am) – Salle 159 at CIRAD

**Network session 2 “partner reports – stress adaptation related”** 0900-1200

* Introduction (NN)
* 15-20 min each:
  + Embrapa (drought),
  + AfricaRice (salinity),
  + IRRI (salinity & submergence),
  + IRRI/Syngenta (lodging),
  + IRRI (antioxidants, root water extraction potential),
  + CIRAD (cardinal T’s, root archi)
* General discussion

*Lunch break 1200-1330*

Day 3 (pm) – Salle 159 at CIRAD

**Network session 3 “Data management and sharing issues”** 1330-1530

* 15-min paper (NN)
* Group discussions
* Group reports

**Network session 4 “Future perspectives”** 1530-1730

* 15-min paper (Dingkuhn)
* Group discussions
* Group reports

Days 4 & 5” – Salle 159 at CIRAD

2-day special sessions on **GWAS: Theory, Methodology, Demonstration and discussion on GWAS strategy for Network**(Courtois, McNally, Greenberg)

(detailed program not yet available)