

NEWSLETTER: Highlights CBSG2012 July 2010 – Jan 2011

The Centre for BioSystems Genomics 2012 is a public – private partnership in the life sciences with responsibility to carry out an integrated programme of innovative genomics research to the future benefit of industry and society. Next to its own fundamental and applied research activities however, CBSG2012 does much, much more. We take a central or supporting role in a wide range of additional community-related activities, many of which are focused on enthusing school children for plant science and broadening undergraduate education. In this short document we give an overview of some of the main scientific and societal highlights from the last 6 months. These emphasize the wider impact of our activities and illustrate the added value of having a large, multi-partner, coordinated and properly-embedded research initiative. This not only helps enhance interaction at both fundamental and applied levels but also helps create a positive image and focal point for plant genomics research to the wider community.

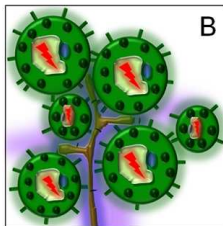
Robert Hall
Managing Director, CBSG2012

2 of the 4 new NGI Booster grants for CSBG!



NGI recently brought out an open call for proposals for a number of NGI Booster grants aimed to establish new Public Private Partner research initiatives. Grants of 1M€ were available to build PPPs which should grow into larger collaborations on a national and/or international scale. CBSG directors Angenent and Hall coordinated a proposal on a novel approach to generating new knowledge on the molecular factors determining crop yield. CBSG also initiated a strategic collaboration with the NGI Kluyver Centre for Industrial Fermentation to submit a joint proposal on green-white biotechnology where plant enzymes from pathways leading to fine chemicals are introduced into tailor-made microbial production systems. Both proposals were accepted for funding! Once Consortium Agreements have been formalised these programmes can begin and will run until December, 2013.

CBSG publishes 4 times in Science in 2010!



At the end of 2010 CBSG scientists published another 2 articles in Science making a record of 4 times within one year! One paper described the results of a major international initiative involving 2 CBSG research groups to sequence the genome of a downy mildew species which is a major plant pathogen. Results reveal novel insights into genomic modifications related to the evolution of pathogenicity. In the other paper, two CBSG Directors were invited to join forces and write an opinion paper on how flower fertilization and fungal infection may have important molecular commonalities.



In addition, CBSG scientists also had 2010 papers in Cell and Nature Reviews Genetics giving us a total of 6 papers in journals with an Impact Factor of >25 last year.

Sjef Smeekens and Berend Snel awarded prestigious TOP-GO grant from NWO



Prof Smeekens and Berend Snel (UU) were recently awarded a grant of 750,000€ to work together on novel and innovative approaches to improving crop productivity. This research will focus on the sugar-signalling and the importance and regulation of sugar – controlled plant growth. The chosen approach will have a strong evolutionary / systems biology component.

Robert Hall elected as President of the International Metabolomics Society



Robert Hall, Managing Director of CBSG has been elected President of the International Metabolomics Society. This Society, with ca 1000 members, is dedicated to advancing the development and use of metabolomics in all areas of biological research and stimulating international collaboration. Recent activities have involved e.g. the establishment of the *Metabolomics* journal, the organisation of annual conferences and workshops and the initiation of Standard Operating Practices for uniformity in experimentation. Robert will hold this post for the next 2 years.

CBSG 2010 Workshops great success!



As part of our knowledge transfer and valorisation programme, CBSG organised 2 workshops at the end of 2010. The first 'Mining the tomato genome' was a practical hands-on workshop was open to everyone but was primarily focused on our private partners to help them start to exploit the recently available tomato genome sequence. The workshop was over-subscribed and entails that we shall organise a second in 2011. CBSG also organised an Advanced Technology workshop to inform our partners of the latest developments in - omics technologies. This one day meeting was highly evaluated and was attended by ca 90 people and was also open and free for all EPS PhD students.

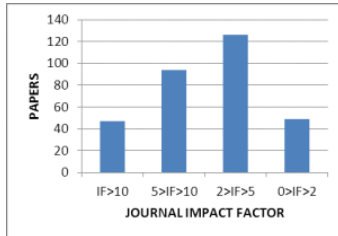
CBSG-ers once again score well with 3 VIDI awards in 2010



Harrold van den Burg (WU Phytopathology) Kerstin Kaufmann (WU Molecular Biology) and Saskia van Wees (UU Phytopathology) have each been awarded VICI grants. Harrold (ex CBSG PhD student) received his award to work further on the molecular mechanism behind how plants develop enhanced resistance after having been infected previously by a pathogen. Saskia will work on the signalling network existing in resistant plants which, together with interaction with plant hormones, results in plant immunity to pathogen infection. Kerstin shall continue her work on DNA-protein interactions related to flower initiation and development in the model plant Arabidopsis.

Bibliometric analysis of CBSG Phase 1 reveals the exceptional scientific quality of the consortium and its publications

Between 2003-2007 CBSG scientists published in total 448 papers and 31 PhD theses. Of the 448 scientific papers, 316 were published in refereed journals with a known Impact Factor. An analysis of these 316 peer reviewed papers has enabled us to analyse the general



quality of our output and its relative impact. This is in turn a reflection of the scientific quality of the consortium as a whole.

This independent analysis has been performed in Jan 2011 by the WUR Library service following agreed protocols (– see van Veller, M.G.P., W. Gerritsma, P.L. van der Togt, C.D. Leon & C.M. van Zeist (2010). *Bibliometric Analyses on Repository Contents for the Evaluation of Research at Wageningen UR*. In: A. Katsirikou and C. H. Skiadas (eds.) *Qualitative and Quantitative Methods in Libraries: Theory and Applications*. p.19-26.).

Some key figures:

- 316 peer reviewed CBSG papers have been analysed
- 47 papers were in IF>10 Journals, including 15 in IF>25 (Nature, Science, Cell).
- The total number of citations is 13024
- The average citation rate per paper is very high: ca **40 citations / paper**
- **48%** of all papers were in the top **10%** most cited for their category
- **16%** of all papers were in the top **1%** most cited for their category

An analysis of the Relative Impact (number of citations relative to the global average in the relevant category – average = 1) reveals an average **RI of 4.27**.

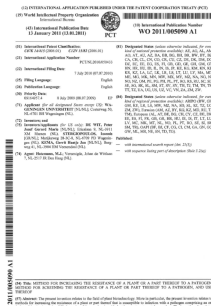
The results above indicate that the scientific output of CBSG is of the highest quality and considerably above the global average. Having a mean citation / paper of 40 and an RI above 4 is exceptional for a set of publications less than 7 years old.

ERC Advanced Grant for Prof. Corné Pieterse (UU)



The prestigious ERC Advanced Investigator Grant (ERC Advanced Grant) funding scheme complements the ERC Starting Grant funding scheme by targeting researchers who have already established themselves as independent research leaders in their own right. ERC Advanced Grants allow exceptional established research leaders in any field of science, engineering and scholarship to pursue frontier research of their choice. They aim to encourage risk-taking and interdisciplinarity, and supports pioneering frontier research projects.

CBSG makes substantial progress in transferring IP rights to industry



CBSG is well on target to meet its expected number of patent applications before the end of 2012. Four recent CBSG patent applications, all belonging to the PSG in Wageningen are currently being discussed for transfer of rights with selected representatives of the industrial partners in CBSG. Two patents are in an advanced stage of negotiations regarding licencing of IP rights. Specific agreements are expected to be closed in the first half of 2011. For the other two, PSG is free to seek interested third parties outside CBSG.

CBSG spin-out NSure wins the 2010 Food Valley Award

The CBSG diagnostics spin-out company NSure has been awarded the 2010 Food Valley Award. Later in the year NSure was also nominated for a prestigious international innovation award. NSure's activities are centred around using novel molecular techniques to monitor the quality of fresh produce and help predict the best time for crop harvesting. The 'simple' tools which NSure is developing are being used particularly in the fruit and vegetable industry and as a result of recent successes, the company is one of the finalists for the 2011 international Fruit Logistica Innovation Award which will be awarded early 2011.

