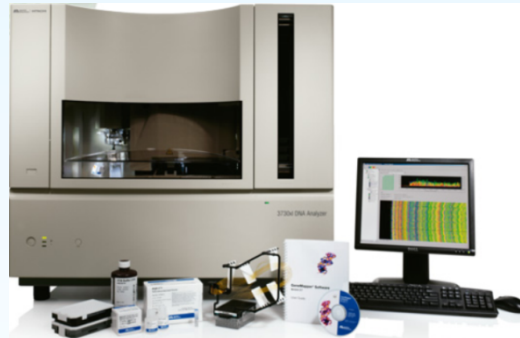


# RevGenUK

The  
Next  
Generation

UK-BRC Wellesbourne 2014



# Brassica TILLING populations

- *Brassica rapa* (R-o-18, developed in Lars Ostergaard's group; Stephenson et al. BMC Plant Biol. 2010 Apr 9;10:62)
- 9,216 plants pooled 8-fold
- EMS 0.3% and 0.4%
- 1 mutation/60kb
- We have TILled 70 genes to date
- 36 TILled genes now released onto *RevGenUK* website with updates every 3 months

# Exome capture



- **Aim:** to sequence the exome of 1056 *B. rapa* TILLING lines
- Using Roche's NimbleGen Target Capture
- Version 1.2 of the Chiifu-401 genome sequence and annotation to design the target capture probes
- 30 Mbp of coding sequence selected from the total coding space using a scoring pipeline based on CODDLE developed by the Comai lab at UC Davis.
- Pilot underway using Chiifu, R-o-18, Chiifu x Ro-18, and known mutants
- An Off-the-Shelf mutant service should be available by the end of 2014
- Small charge for cost-recovery per line

# Brassica TILLING populations

- *Brassica napus* (Cabriolet, 'JBnaCAB\_E', developed in Ian Bancroft's group by Rachel Wells and industrial partners, Wells *et al.* Mol Breed 2014;33:349-362)
- 6156 plants pooled 8-fold
- EMS 0.4%, 0.6%, 0.8%
- Mutation frequencies 1.3 %, 2.6 % and 4.9 % respectively
- Lars' group (Nicola Stacey) have TILled 6 targets to date (two genes with 4 and 2 paralogues each) and have successfully distinguished between paralogues using specific primers

# Brassica TILLING populations

- *Brassica oleracea* (DH line 1012 derived from *B. oleracea* cv. alboglabra x *B. oleracea* cv. italica 'Green Duke', currently under development by Judith Irwin and Lars Ostergaard's groups (Carmel O'Neill))
- Updates will be posted on the *RevGenUK* website

# End of grant and price change

- *RevGenUK* grant finishes March 2015
- TILLING will continue at JIC until at least the end of the next Institute Strategic Programme (2017)
- However it will no longer be subsidised by the BBSRC so the full costs will have to be recovered from the service
- This means that the price of TILLING (at FEC) will go up from £1500 to £3,100 per TILL
- But we no longer charge VAT for our UK clients as long as we collect project and funding information from you prior to the start of the collaboration

# Acknowledgements and contact details

TILLING technician:  
Saleha Bakht

PLs:  
Trevor Wang  
Lars Ostergaard

TGAC:  
John Wright  
Leah Clissold

Email:  
fran.robson@jic.ac.uk  
revgenuk@jic.ac.uk

Website:  
<http://revgenuk@jic.ac.uk>