

SimonRenny-Byfield

PERSONAL DETAILS

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ACADEMIC QUALIFICATIONS

Ph.D. Plant Evolutionary Genomics 2008-2012
Queen Mary University of London, UK
Supervisors: Professor Andrew R. Leitch
Thesis Title: Evolution of repetitive DNA in angiosperms: Examples from *Nicotiana*

B.Sc Genetics First Class Honors 2005-2008
Queen Mary University of London, UK

PROFESSIONAL EXPERIENCE

Post-Doctoral Research University of California, Davis
Supervisor: Dr. Jeffrey Ross-Ibarra
2014-present

Post-Doctoral Research Iowa State University
Supervisor: Prof. Jonathan F. Wendel
2012-2014

Post-Doctoral Research Queen Mary University of London
Supervisor: Prof. Andrew R. Leitch
2012

PUBLICATIONS

Buggs, R. J., **Renny-Byfield, S.**, Chester, M., Jordan-Thaden, I. E., Viccini, L. F., Chamala, S., Leitch, A. R., Schnable, P. S., Barbazuk, W. B., Soltis, P. S., and Soltis, D. E. (2012). Next-generation sequencing and genome evolution in allopolyploids. *American Journal of Botany*, 99:372–382.

Kelly, L. J., Leitch, A. R., Fay, M. F., **Renny-Byfield, S.**, Pellicer, J., Macas, J., and Leitch, I. J. (2012). Why size really matters when sequencing plant genomes. *Plant Ecology and Diversity*, 5(4):415–425.

Koukalova, B., Moraes, A. P., **Renny-Byfield, S.**, Matyasek, R., Leitch, A. R., and Kovarik, A. (2010). Fall and rise of satellite repeats in allopolyploids of *Nicotiana* over c. 5 million years. *New Phytologist*, 186(1):148–160.

Kovarik, A., **Renny-Byfield, S.**, and Leitch, A. R. (2011). *Evolutionary implications of genome and karyotype restructuring in Nicotiana tabacum L.*, pages 209–224. Springer, New York.

Masonbrink, R., Gallagher, J., Jareczek, J., **Renny-Byfield, S.**, Grover, C., Gong, L., and Wendel, J. (2015). *CenH3* evolution in diploids and polyploids of three angiosperm genera. *BMC Plant Biology*, in press.

Matyasek, R., **Renny-Byfield, S.**[†], Fulnecek, J., Macas, J., Grandbastien, M.-A., Nichols, R., Leitch, A., and Kovarik, A. (2012). Next generation sequencing analysis reveals a relationship between rDNA unit diversity and locus number in *Nicotiana* diploids. *BMC Genomics*, 13:722.

Renny-Byfield, S., Ainouche, M., Leitch, I. J., Lim, K. Y., Le Comber, S. C., and Leitch, A. R. (2010). Flow cytometry and GISH reveal mixed ploidy populations and *Spartina* nonaploids with genomes of *S. alterniflora* and *S. maritima* origin. *Annals of Botany*, 105(4):527–533.

Renny-Byfield, S., Chester, M., Kovak, A., Le Comber, S. C., Grandbastien, M.-A., Deloger, M., Nichols, R. A., Macas, J., Novk, P., W. Chase, M., and R. Leitch, A. (2011). Next generation sequencing reveals genome downsizing in allotetraploid *Nicotiana tabacum*, predominantly through the elimination of paternally derived repetitive DNAs. *Molecular Biology and Evolution*, 28(10):2843–2854.

Renny-Byfield, S., Gallagher, J. P., Grover, C. E., Szadkowski, E., Page, J. T., Udall, J. A., Wang, X., Paterson, A. H., and Wendel, J. F. (2014). Ancient gene duplicates in *Gossypium* (cotton) exhibit near-complete expression divergence. *Genome Biology and Evolution*, 6(3):559–571.

Renny-Byfield, S., Gong, L., Gallagher, J., and Wendel, J. (2015). Persistence of sub-genomes in paleopolyploid cotton after 60 million years of evolution. *Molecular Biology and Evolution*, in press.

Renny-Byfield, S., Kovarik, A., Chester, M., Nichols, R. A., Macas, J., Novak, P., and Leitch, A. R. (2012). Independent, rapid and targeted loss of a highly repetitive DNA sequence derived from the paternal genome donor in natural and synthetic *Nicotiana tabacum*. *PLoS One*, 7(5):e36963.

Renny-Byfield, S., Kovarik, A., Kelly, L. J., Macas, J., Novak, P., Chase, M. W., Nichols, R. A., Pancholi, M. R., Grandbastien, M.-A., and Leitch, A. R. (2013). Diploidization and genome size change in allopolyploids is associated with differential dynamics of low- and high-copy sequences. *The Plant Journal*, 74(5):829–839.

Renny-Byfield, Simon and Wendel, J. (2014). Doubling down on genomes: Polyploidy and crop plants. *American Journal of Botany*, 101(10):1–15.

[†] joint first author

TEACHING

Teaching Assistant

Chromosomal and Population Genomics

2008-2012

Queen Mary University of London

Teaching Assistant

Undergraduate Thesis Advisor

2008-2012

Queen Mary University of London

Guest Lecturer and Teaching Assistant

Ecological Genomics

2015

University of California, Davis

AWARDS AND GRANTS

PhD Fellowship Natural Environment Research Council via Queen Mary University of London £18,000 per annum stipend and consumables

2008-2012

Extra Consumables

£4000

2008-2012

Queen Mary University of London

Bevan Prize

Outstanding Academic achievement in Genetics

2008

Queen Mary University of London

REFERENCES

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