MASC Update 2020

Nicholas Provart, Department of Cell and Systems Biology & Centre for the Analysis of Genome Evolution and Function, University of Toronto, Canada (MASC President)

Geraint Parry, National Coordinator for GARNet, United Kingdom (MASC Secretary)

Siobhan Brady, Department of Plant Biology, University of California Davis (MASC Treasurer)

Background image from Verbruggen Lab, U. Brussels

MASC Update 2020

- MASC Inc. financials
- Two new board members are due to be elected/nominated
- 2018 IAIC Informatics Meeting recommendations:
  - Arabidopsis informatic resources page at TAIR
  - **Arabidopsis research summary – distillation of annual MASC Report**
  - White paper
- Araport update – interim solution and a view to the future
- Online Plant Bioinformatics specialization

MASC Financials

- Annual filing for FY2019-2020 (year end is August 31st) done by Cowperthwaite Mehta Chartered Accountants – bank balance $3,381.44 at start of year. Current year's activities/balance at July 9th, 2020: $10,980.23

Your transactions for **Sep 1, 2019** to **Jul 10, 2020**

Date	Transaction Description	Withdrawals	Deposits	Balance
Jul 10, 2020	SEND E-TFR FEE	1.50		$10,980.23
Jul 10, 2020	SEND E-TFR CA***Ddz	1,381.69		$10,981.73
Jun 30, 2020	MONTHLY PLAN FEE	5.00		$12,363.42
May 29, 2020	MONTHLY PLAN FEE	5.00		$12,368.42
Apr 30, 2020	MONTHLY PLAN FEE	5.00		$12,373.42
Mar 31, 2020	MONTHLY PLAN FEE	5.00		$12,378.42
Feb 28, 2020	MONTHLY PLAN FEE	5.00		$12,383.42
Jan 31, 2020	MONTHLY PLAN FEE	5.00		$12,388.42
Dec 31, 2019	MONTHLY PLAN FEE	5.00		$12,393.42
Nov 29, 2019	MONTHLY PLAN FEE	5.00		$12,398.42
Nov 19, 2019	MOBILE DEPOSIT		211.41	$12,403.42
Nov 06, 2019	SEND E-TFR FEE	1.50		$12,192.01
Nov 06, 2019	SEND E-TFR CA***eGv	28.24		$12,193.51
Oct 31, 2019	MONTHLY PLAN FEE	5.00		$12,221.75
Oct 28, 2019	IOL CORP CANADA	20.00		$12,226.75
Oct 28, 2019	SEND E-TFR FEE	1.50		$12,246.75
Oct 28, 2019	SEND E-TFR CA***uSd	1,310.80		$12,248.25
Sep 30, 2019	MONTHLY PLAN FEE	5.00		$13,559.05
Sep 25, 2019	WPS-0925S41240		10,182.61	$13,564.05
	Total :	**$2,795.23**	**$10,394.02**	

→ MASC Report printing/postage

→ HST rebate (like VAT)

→ Hostpapa, arabidopsisresearch .org domain Dec. 4, 2019, 1 yr.

→ Corporations Canada filing fee

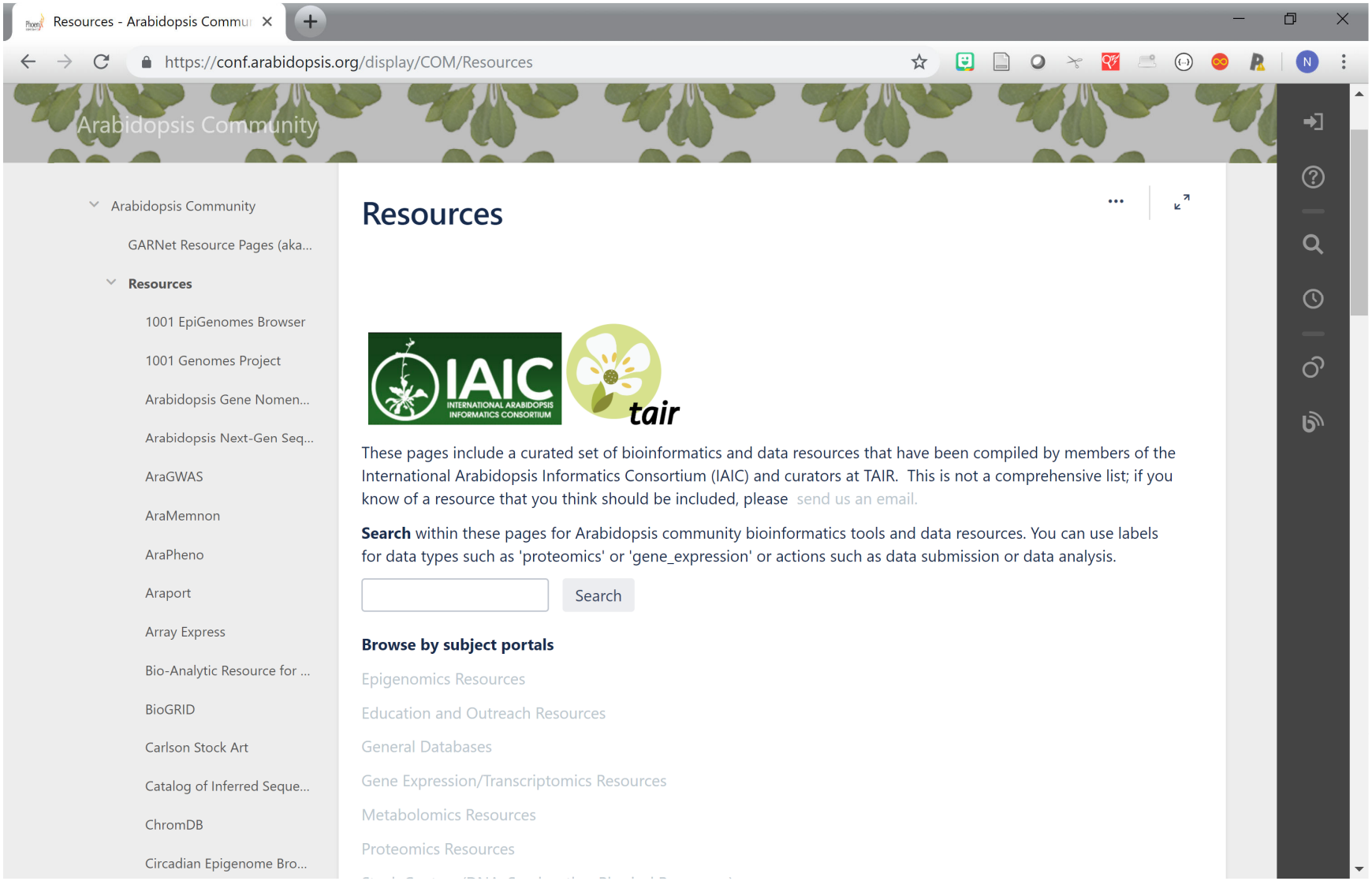
→ Accounting & bookkeeping, T2

→ ICAR2019 MASC fees ($US10 x 791 paying attendees)

Ideas from an Arabidopsis Informatics Workshop, 24-25 May 2018

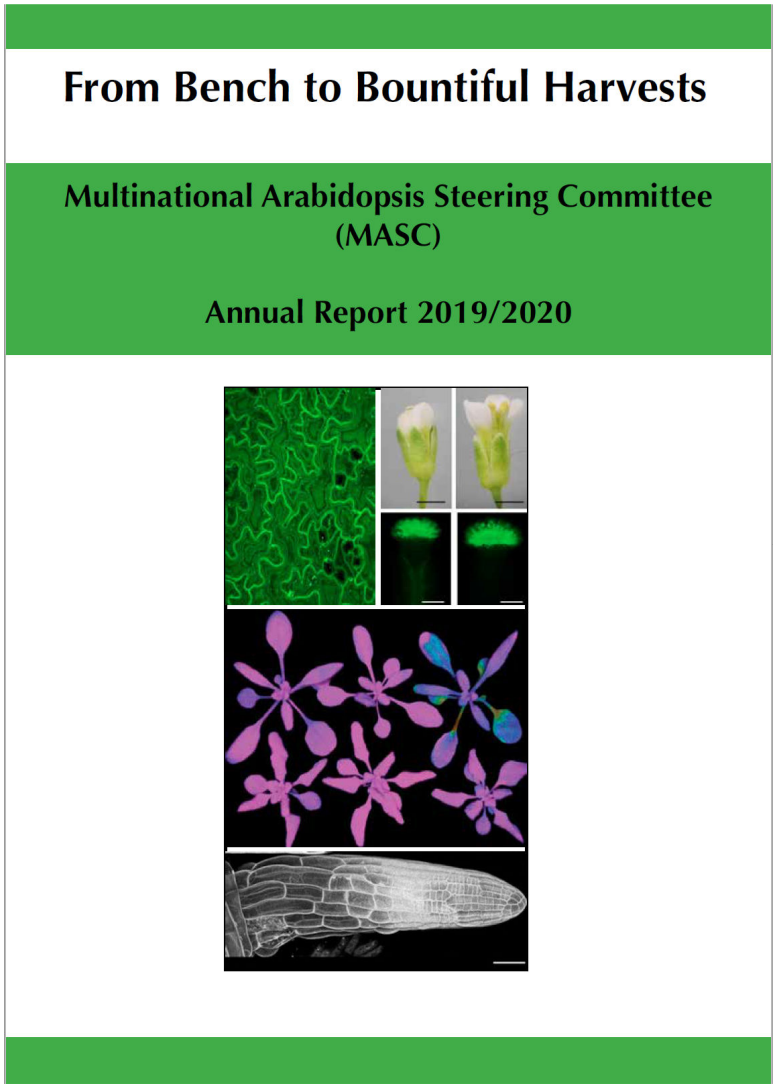
- **Arabidopsis "super-portal" with links and short descriptions for Arabidopsis informatics resources**
- **Published MASC report summary yearly in a journal with all subcommittee chairs as co-authors**
- Improved sharing between major data providers (BAR eFP images now in TAIR gene pages!)
- Ideas to appear in a white paper

“Super-portal” for Arabidopsis Informatics Resources page at TAIR



https://conf.arabidopsis.org/display/COM/Resources

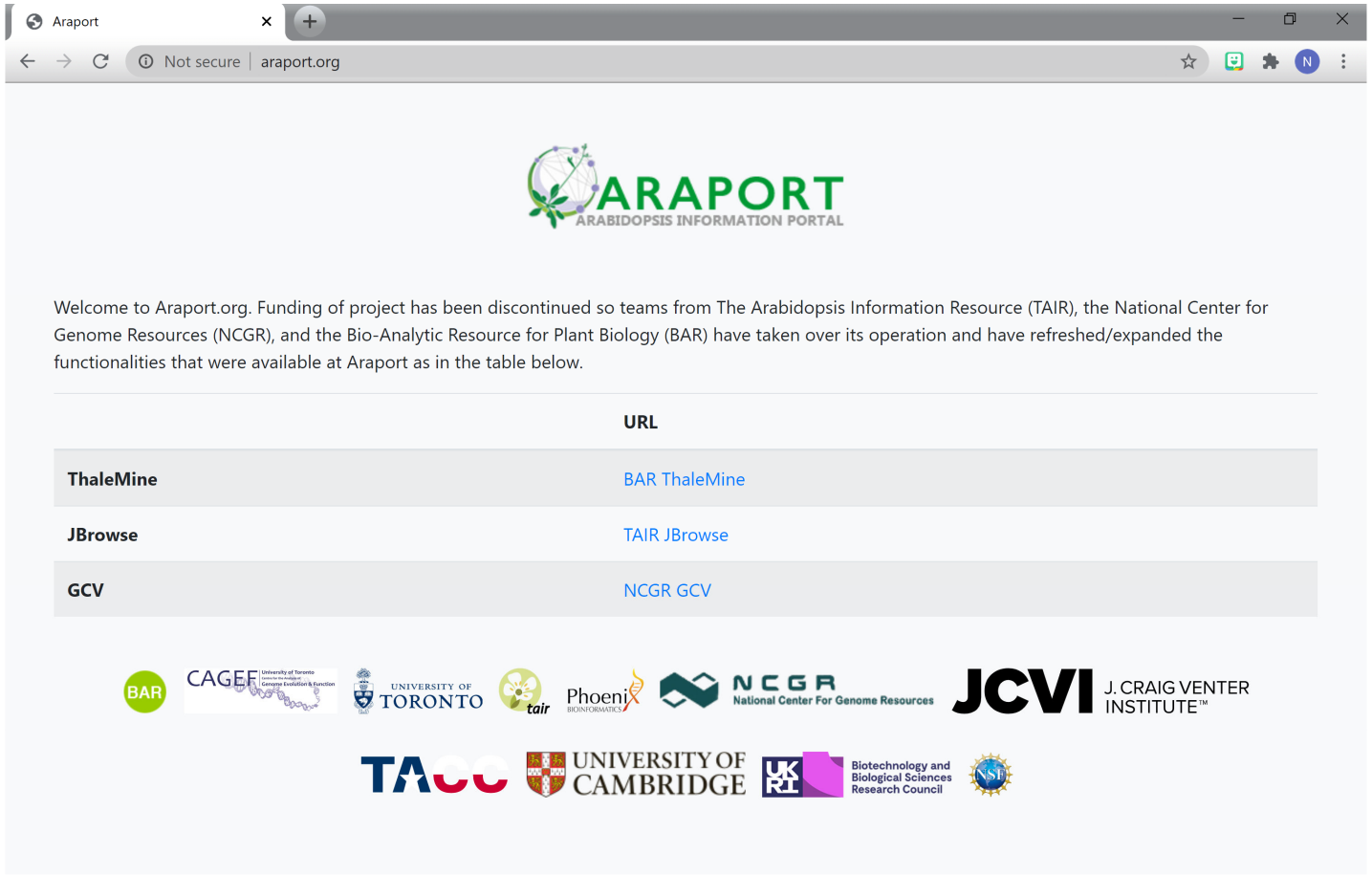
Arabidopsis research summary in Plant Direct



→ Distill 100 pages to a summary of Arabidopsis research highlights, Inaugural paper accept for publication in Plant Direct!

BAR and TAIR took on main parts of Araport, NCGR a new partner

- Araport funding was not renewed by National Science Foundation in U.S.
- TAIR has set up Araport's JBrowse instance with all current tracks
- The BAR has rebuilt and updated Thalemine completely
- New Genome Context Viewer instance to view 14 assembled *A.th.* genomes



Funding for future Araport work

- Library subscription model (as TAIR currently implements for institutions)?
- Donations model?
- ICAR participant levy or through MASC levy?

From 2018 MASC bioinfo survey: selected “Education” remarks

24. As a graduate student I would really like to be able to have tutorials on various types of analyses you can do on data sets so that I can maximize the information I can collect from a single data set

17. As a biology educator I would really like to be able to utilize resources/demonstrations/exercises provided by that resource so that I can raise student awareness of the bioinformatic field, the online resources available and how they can be used to answer biological questions.

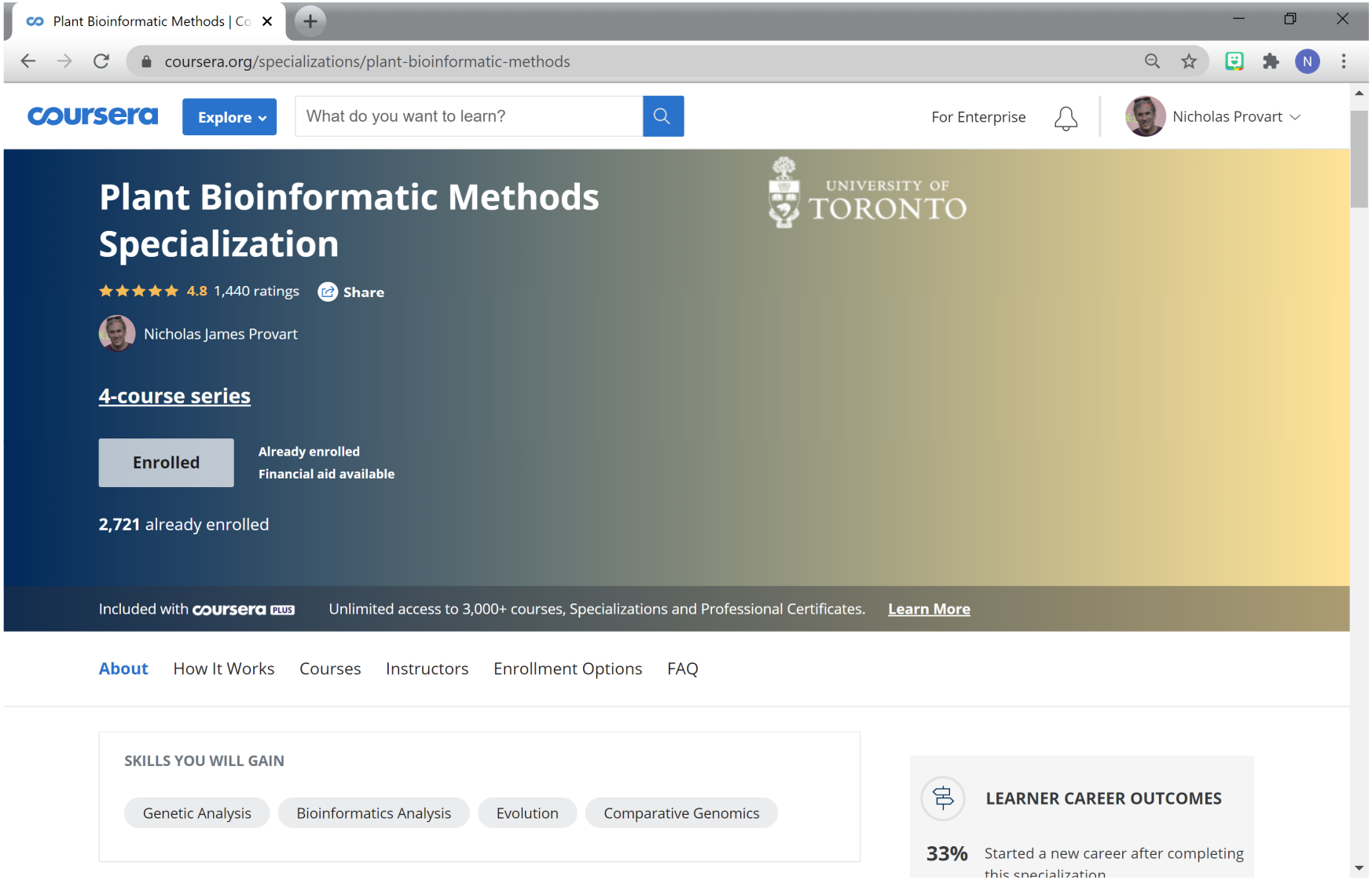
56. As a PI I would really like to be able to have an accessible, easy-to-follow "manual" that takes trainees through different levels of bioinformatics/biocomputing, with the option to "stop" at the level they are most comfortable with for their work and abilities, so that I can guide trainees from different disciplines and points in their careers to make the most efficient use of computational tools in their work.

122. As a teacher of molecular biology I would really like to be able to use a combined website to teach students how to look for gene expression patterns and search for promoter elements and known transcription factor targets so that I can so that they can learn how to work from large transcriptomic datasets to predict transcription factor binding sites.

32. As a lecturer I would really like to be able to have students search for homologues of an Arabidopsis protein, do a multiple alignment, draw an approximate tree so that I can have students identify the evolutionary origin of a chloroplast protein

Ask and ye shall receive…

Plant Bioinformatic Methods Specialization on Coursera.org



https://www.coursera.org/specializations/plant-bioinformatic-methods - 2,721 registrants to date, free to audit. Arabidopsis-friendly!

See also ART-21 White Paper

Plant Direct / Volume 3, Issue 4

WHITE PAPER | Open Access

Directions for research and training in plant omics: Big Questions and Big Data

Cristiana T. Argueso, Sarah M. Assmann, Kenneth D. Birnbaum, Sixue Chen, José R. Dinneny, Colleen J. Doherty, Andrea L. Eveland, Joanna Friesner, Vanessa R. Greenlee, Julie A. Law, Amy Marshall-Colón, Grace Alex Mason, Ruby O'Lexy, Scott C. Peck, Robert J. Schmitz, Liang Song, David Stern, Marguerite J. Varagona, Justin W. Walley, Cranos M. Williams ... See fewer authors

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Abstract

A key remit of the NSF-funded "Arabidopsis Research and Training for the 21st Century" (ART-21) Research Coordination Network has been to convene a series of workshops with community members to explore issues concerning research and training in plant biology, including the role that research using *Arabidopsis thaliana* can play in addressing those issues. A first workshop focused on training needs for bioinformatic and computational approaches in plant biology was held in 2016, and recommendations from that workshop have been published (Friesner et al., *Plant Physiology*, 175, 2017, 1499). In this white paper, we provide a summary of the discussions and insights arising from the second ART-21 workshop. The second workshop focused on experimental aspects of omics data acquisition and analysis and involved a broad spectrum of participants from academics and industry, ranging from graduate students through post-doctorates, early career and established investigators. Our hope is that this article will inspire beginning and established scientists, corporations, and funding agencies to pursue directions in research and training identified by this workshop, capitalizing on the reference species *Arabidopsis thaliana* and other valuable plant systems.