Stanford | Department of Biology

JOSÉ R. DINNENY
Professor of Biology
HHMI Investigator

DOB: May 31st, 1978

CURRENT AFFILIATIONS

09/24 – present, Investigator, Howard Hughes Medical Institute

09/22 – present, Professor, Department of Biology, Stanford University

PREVIOUS AFFILIATIONS

01/18 – 08/22, Associate Professor, Department of Biology, Stanford University

07/11 – 12/17, Staff Member, Carnegie Institution for Science, Department of Plant Biology

05/08 – 10/11, Principal Investigator, Temasek Lifesciences Laboratory, Singapore

05/08 – 2013, Assistant Professor, Department of Biological Sciences, National University of Singapore

EDUCATION AND TRAINING

10/05 - 05/08, Post-doctoral Fellow, Philip Benfey advisor, Duke University

09/00 - 09/05, PhD, Detlef Weigel and Martin Yanofsky co-advisors, University of California, San Diego

09/96 - 05/00, BS, Highest Honors, University of California, Berkeley

PREPRINTS- unpublished works

Scharwies JD, Clarke T, Zheng Z, Dinneny A, Birkeland S, Veltman MA, Sturrock CJ, Torres-Martinez HH, Viana WG, Khare R, Kieber J, Pandey BKK, Bennett MJ, Schnable PS, **Dinneny JR** (2024) Maizse genetic diversity identifies moisture-dependent root-branch signaling pathways. *BioRxiv.* Doi: 10.1101/2024.08.26.609741

Wang G, Ryu KH, Dinneny A, Carlson J, Goodstein DM, Lee J, Oh D-H, Oliva M, Lister R, **Dinneny JR***, Schiefelbein J*, Dassanayake M*

*Co-corresponding authors

PUBLICATIONS- highlighted research, all peer-reviewed

Vilarrasa-Blasi J, Vellosillo T, Jinkerson RE, Fauser F, Xiang T, Minkoff BB, Wang L, Kniazev K, Guzman M, Osaki J, Sussman MR, Jonikas MC, **Dinneny JR** (2021) Identification of green lineage osmotic stress pathways *Nature Communications* doi: 10.1038/s41467-024-49844-3

LaRue T, Lindner H, Srinivas A, Exposito-Alonso M, Lobet G, **Dinneny JR** (2022) Uncovering natural variation in root system architecture and growth dynamics using a robotics-assisted phenomics platform. *eLife* doi: 10.7554/eLife.76968

Brophy JAN, Magallon K, Duan L, Zhong V, Ramachandran P, Kniazev K, **Dinneny JR** (2022) Synthetic genetic circuits as a means of reprogramming plant roots. *Science.* doi: 10.1126/science.abo4326*

* Highlighted in Alamos and Shih (2022) *Science* DOI: 10.1126/science.add6805 and in The Mercury News, “Can we hack DNA to grow more food for a hotter, hungry planet” by Lisa Krieger, 12/13/22

Sun Y, Oh DH, Duan L, Ramachandran P, Ramirez A, Bartlett A, Dassanayake M, **Dinneny JR** (*2022*) Divergence in a stress-associated gene regulatory network underlies differential growth control. *Nature Plants.* doi 10.1038/s41477-022-01139-5*

* Highlighted in CNN News and recommended in Faculty Opinions

Vilarrasa-Blasi J, Fauser F, Onishi M, Ramundo S, Patena W, Millican M, Osaki J, Philp C, Nemeth M, Salomé PA, Li X, Wakao S, Kim RG, Kaye Y, Grossman AR, Niyogi KK, Merchant S, Cutler S, Walter P, **Dinneny JR***, Jonikas MC*, Jinkerson RE* (2022) Systematic characterization of gene function in a photosynthetic organism. *Nature Genetics.* doi: 10.1038/s41588-022-01052-9

*Co-corresponding authors

Dickinson AJ, Zhang J, Luciano M, Wachsman G, Schnermann M, **Dinneny JR**, Benfey PN (2021) A plant lipocalin is required for retinal-mediated oscillatory lateral root initiation. *Science* Sep 24;373(6562):1532-1536. doi: 10.1126/science.abf7461.

Cuevas-Velazquez CL, Vellosillo T, Guadalupe K, Schmidt BH, Yu F, Moses D, Brophy JAN, CosioAcosta D, Das A, Wang L, Jones AM, Covarrubias AA, Sukenik S, **Dinneny JR** (2021) Intrinsically disordered protein biosensor tracks the physical-chemical effects of osmotic stress on cells. *Nature Communications* Sep 14;12(1):5438. doi: 10.1038/s41467-021-25736-8.

Vellosillo T*, **Dinneny JR***, Somerville CR*, Ehrhardt DW* (2021) TRANVIA (TVA) facilitates cellulose synthase trafficking and delivery to the plasma membrane. *Proc. Natl. Acad. Sci. U. S. A.* Jul 118(30):e2021790118. doi: 10.1073/pnas.2021790118.

*Co-corresponding authors

Friesner J, Colon-Carmona A, Schnoes AM, Stepanova AN, Mason GA, MacIntosh GC, Ullah H, Baxter IR, Callis J, Sierra-Cajas K, Elliott K, Haswell ES, Zavala ME, Wildermuth M, Williams ME, Ayalew MB, Henkhaus NA, Prunet N, Lemaux PG, Yadegari R, Amasino RM, Hangarter RP, Innes RW, Brady SM, Long T, Woodford-Thomas T, May V, Sun Y, **Dinneny JR** (2021) Broadening the impact of plant science through innovative, integrative and inclusive outreach. *Plant Direct* Apr 14;5(4):e00316. doi: 10.1002/pld3.316.

Duan L, Pérez-Ruiz JM, Cejudo FJ, **Dinneny JR** (2020) Characterization of *CYCLOPHILLIN38* shows that a photosynthesis-derived systemic signal controls lateral root emergence. *Plant Physiology* Mar 15;185(2):503-518. doi: 10.1093/plphys/kiaa032

Orosa-Puente B, Leftley N, von Wangenheim D, Banda J, Srivastava AK, Hill K, Truskina J, Bhosale R, Morris E, Srivastava M, Kümpers B, Goh T, Fukaki H, Vermeer JEM, Vernoux T, **Dinneny JR**, French AF, Bishopp A, Sadanandom A, Bennett MJ (2018) Roots branch towards water by posttranslational modification of transcription factor ARF7. *Science*. Dec 21;362(6421):1407-1410. doi: 10.1126/science.aau3956. **

*Highlighted in front matter

Wu R, Duan L, Pruneda-Paz JL, Oh DH, Pound M, Kay S, **Dinneny JR** (2018) The *6xABRE* synthetic promoter enables the spatiotemporal analysis of ABA-mediated transcriptional regulation. *Plant Physiology* Aug 177(4):1650-1665. doi: 10.1104/pp.18.00401.**

*Highlighted in front matter

Feng W, Kita D, Peaucelle A, Cartwright HN, Doah V, Duan Q, Liu MC, Maman J, Steinhorst L, Schmitz-Thom I, Yvon R, Kudla J, Wu HM, Cheung AY, and **Dinneny JR** (2018) The FERONIA receptor kinase maintains cell wall integrity during salt stress through Ca^{2+} signaling. *Current Biology* Mar 5;28(5):666-675.e5. doi: 10.1016/j.cub.2018.01.023.**

*Dispatch by Verger and Hamant, Curr Biol. 2018 Mar 5;28(5):R215-R217 and F1000 Prime

Robbins NE and **Dinneny JR** (2018) Growth Is Required for Perception of Water Availability to Pattern Plant Root Branches. *Proc. Natl. Acad. Sci. U. S. A.* Jan 23;115(4):E822-E831. doi:10.1073/pnas.1710709115.**

*Recommended by F1000 Prime

Sebastian J, Yee MC, Viana WG, Rellán-Álvarez R, Feldman M, Priest H, Trontin C, Lee T, Jiang H, Baxter I, Mockler TC, Hochholdinger F, Brutnell TP and **Dinneny JR** (2016) Grasses suppress shootborne roots to conserve water during drought. *Proc. Natl. Acad. Sci. U. S. A.* Aug 2;113(31):8861-6. doi: 10.1073/pnas.1604021113.**

*Highlighted by the BBC, Recommended by F1000 Prime

Fahlgren N, Bart R, Herrera-Estrella L, Rellán-Álvarez R, Chitwood DH, **Dinneny JR** (2016) Plant scientists: GM technology is safe. *Science* Feb 19;351(6275):824. doi:10.1126/science.351.6275.824a.

Rellán-Álvarez R, Lobet G, Lindner H, Pradier P-L, Sebastian J, Yee MC, Geng Y, Trontin C, LaRue

T, Schrager A, Haney C, Nieu R, Maloof J, Vogel JP, **Dinneny JR** (2015) GLO-Roots: an imaging platform enabling multidimensional characterization of soil-grown root systems. *eLife* 2015;10.7554/eLife.07597 doi: 10.7554/eLife.07597.**

*Highlighted in Nature Methods, SF Gate

Bao Y, Aggarwal P, Robbins II NE, Sturrock CJ, Thompson, MC, Tan HQ, Tham C, Rodriguez PL, Vernoux T, Mooney SJ, Bennett MJ, **Dinneny JR** (*2014*) Plant roots employ a patterning mechanism to position lateral root branches towards available water. *Proc. Natl. Acad. Sci. U. S. A.* Jun 24;111(25):9319-24. doi: 10.1073/pnas.1400966111.**

*Recommended F1000 Prime

Geng Y, Wu R, Wee CW, Xie F, Wei X, Chan PMY, Tham C, Duan L, **Dinneny JR** (2013) A SpatioTemporal Understanding of Growth Regulation during the Salt Stress Response in Arabidopsis. *The Plant Cell* Jun;25(6):2132-54. doi: 10.1105/tpc.113.112896.**

*'Spotlight' in *Trends in Plant Science*, 10.1016/j.tplants.2013.08.009

Duan L, Dietrich D, Ng CH, Chan PMY, Bhalerao R, Bennett MJ, **Dinneny JR** (2013) Endodermal ABA signaling promotes lateral root quiescence during salt stress in Arabidopsis seedlings. *The Plant Cell* Jan;25(1):324-41. doi: 10.1105/tpc.112.107227.**

*'Spotlight' in *Trends in Plant Science*, 10.1016/j.tplants.2013.08.009

Dinneny JR, Long TA, Wang JY, Mace D, Pointer S, Barron C, Brady SM, Schiefelbein, JS, Benfey PN (2008) Cell identity mediates the response of Arabidopsis roots to abiotic stress. *Science* May 16;320(5878):942-5. doi: 10.1126/science.1153795.**

*'Perspectives' in *Science* 16;320:880-1, 'Research Highlights' in *Nature Genetics* 9, 414

Dinneny JR, Yadegari R, Fischer RL, Yanofsky MF, Weigel D (2004) The role of *JAGGED* in shaping lateral organs. *Development* 131, 1101-1110. doi: 10.1242/dev.00949.**

*'Previews' in *Developmental Cell* 6(3), 318-319

PUBLICATIONS- other primary research, all peer reviewed

Singhvi A, Fitzpatrick A, Scharwies JD, **Dinneny JR**, Arbabian A. (2022) A Thermoacoustic Imaging System for Non-Invasive and Non-Destructive Root Phenotyping. IEEE Transactions on Circuits and Systems II: Express Briefs DOI: 10.1109/TCSII.2022.3159448

Singhvi A, Ma B, Scharwies JD, **Dinneny JR**, Khuri-Yakub BT, Arbabian A (2019) Non-Contact Thermoacoustic Sensing and Characterization of Plant Root Traits, IEEE International Ultrasonics Symposium (IUS), 1992-1995. doi: 10.1109/ULTSYM.2019.8925944

Dickinson AJ, Lehner K, Mi J, Jia KP, Mijar M, **Dinneny J**, Al-Babili S, Benfey PN. (2019) BetaCyclocitral is a conserved root growth regulator. *Proc. Natl. Acad. Sci. U. S. A.* 116(21):10563-10567. doi: 10.1073/pnas.1821445116.

Waidmann S, Ruiz Rosquete M, Schöller M, Sarkel E, Lindner H, LaRue T, Petřík I, Dünser K, Martopawiro S, Sasidharan R, Novak O, Wabnik K, **Dinneny JR**, Kleine-Vehn J. (2019) Cytokinin

functions as an asymmetric and anti-gravitropic signal in lateral roots. *Nature Communications.* 2019 Aug 6;10(1):3540. doi: 10.1038/s41467-019-11483-4.

Sechet J, Htwe S, Urbanowicz B, Agyeman A, Feng W, Ishikawa T, Colomes M, Kumar KS, KawaiYamada M, **Dinneny** JR, O'Neill MA, Mortimer JC (2018) Suppression of Arabidopsis GGLT1 affects growth by reducing the L-galactose content and borate cross-linking of rhamnogalacturonan-II. *The Plant Journal.* doi: 10.1111/tpj.14088

Feldman MJ, Paul RE, Banan D, Barrett JF, Sebastian J, Yee MC, Jiang H, Lipka AE, Brutnell TP, **Dinneny JR**, Leakey ADB, Baxter I. (2017) Time dependent genetic analysis links field and controlled environment phenotypes in the model C4 grass Setaria. *PLoS Genetics.* 2017 Jun 23;13(6):e1006841. doi: 10.1371/journal.pgen.1006841.

Pruitt RN, Joe A, Zhang W, Feng W, Stewart V, Schwessinger B, **Dinneny JR**, Ronald PC. (2017) A microbially derived tyrosine-sulfated peptide mimics a plant peptide hormone. *New Phytologist.* 2017 Jul;215(2):725-736. doi: 10.1111/nph.14609.

Dietrich D, Pang L, Kobayashi A, Fozard JA, Boudolf V, Bhosale R, Antoni R, Nguyen T, Hiratsuka S, Fujii N, Miyazawa Y, Bae TW, Wells DM, Owen MR, Band LR, Dyson RJ, Jensen OE, King JR, Tracy

SR, Sturrock CJ, Mooney SJ, Roberts JA, Bhalerao RP, **Dinneny JR**, Rodriguez PL, Nagatani A, Hosokawa Y, Baskin TI, Pridmore TP, De Veylder L, Takahashi H, Bennett MJ (2017) Root hydrotropism is controlled via a cortex-specific growth mechanism. *Nature Plants.* 2017 May 8;3:17057. doi: 10.1038/nplants.2017.57.

Robbins II NE and **Dinneny J**. (2016). A Method to Analyze Local and Systemic Effects of Environmental Stimuli on Root Development in Plants. *Bio-protocol* 6(17): e1923. doi:10.21769/BioProtoc.1923http://www.bio-protocol.org/e1923

Sebastian J, Wong MK, Tang E, **Dinneny JR**. (2014) Methods to Promote Germination of Dormant Setaria viridis seeds. *PLoS One* 18;9(4):e95109. doi: 10.1371/journal.pone.0095109.

Wang PL, Bao Y, Yee MC, Barrett SP, Hogan GJ, Olsen MN, **Dinneny JR**, Brown PO, Salzman J. (2014) Circular RNA is expressed across the eukaryotic tree of life. *PLoS One.* 7;9(3):e90859. doi: 10.1371/journal.pone.0090859.

Emami, S, Yee MC, **Dinneny JR** (2013) A robust family of Golden Gate Agrobacterium vectors for plant synthetic biology. *Frontiers in Plant Science.* 2;4:339. doi: 10.3389/fpls.2013.00339.

Orlando DA, Brady SM, Koch JD, **Dinneny JR**, Benfey PN (2009) Manipulating large-scale Arabidopsis microarray expression data: identifying dominant expression patterns and biological process enrichment. *Methods in Molecular Biology* 553:57-77. doi: 10.1007/978-1-60327-563-7_4.

Filiault D, Wessinger C, **Dinneny JR**, Lutes J, Borevitz J, Weigel D, Chory J, and Maloof JN (2008) Amino acid polymorphisms in *Arabidopsis* Phytochrome B causes differential response to light. *Proc. Natl. Acad. Sci. U. S. A.* Feb 26;105(8):3157-62. doi: 10.1073/pnas.0712174105.

Brady SM, Orlando D, Lee JY, Wang JY, Koch J, **Dinneny JR**, Mace D, Ohler U, Benfey PN (2007) A high-resolution root spatiotemporal map reveals dominant expression patterns. *Science* Nov 2;318(5851):801-6. doi: 10.1126/science.1146265.

Dinneny JR, Weigel D, Yanofsky MF (2006) *NUBBIN* and *JAGGED* define stamen and carpel shape in *Arabidopsis*. *Development* 133, 1645-1655. doi: 10.1242/dev.02335.**

*Cover issue

Dinneny JR, Weigel D, Yanofsky MF (2005) A genetic framework for fruit patterning in *Arabidopsis thaliana*. *Development* 132, 4687-4696. doi: 10.1242/dev.02062.**

*Cover issue

Wu X, **Dinneny JR**, Crawford KM, Rhee Y, Citovsky V, Zambryski PC, Weigel D (2003) Modes of intercellular transcription factor movement in the *Arabidopsis* apex. *Development* 130, 3735-3745. doi:

10.1242/dev.00577.

Kiyosue T, Ohad N, Yadegari R, Hannon M, **Dinneny J**, Wells D, Katz A, Margossian L, Harada J, Goldberg R, Fischer RL (1999) Control of fertilization-independent endosperm development by the *MEDEA* polycomb gene in *Arabidopsis*. *Proc. Natl. Acad. Sci. U. S. A.* 96, 4186-4191. doi:10.1073/pnas.96.7.4186.

PUBLICATIONS- Reviews, white papers, policy statements, and book chapters (peer reviewed articles indicated with *)

Ragland CJ, Shih KY, **Dinneny JD** (2024) Choreographing root architecture and rhizosphere interaction through synthetic biology. *Nature Communications* 15(1), 1370 doi: 10.1038/s41467-024-45272-5

Bennett MJ, Brady SM, **Dinneny JR**, Helariutta Y, Sozanni R (2023) Developmental Cell 58 (22) Philip N. Benfey (1953-2023), 2413-2415 doi: 10.1016/j.devcel.2023.10.013

*Verslues PE, Bailey-Serres J, Brodersen C, Buckley TN, Conti L, Christmann A, **Dinneny JR**, Grill E, Hayes S, Heckman RW, Hsu P-K, Juenger TE, Mas P, Munnik T, Nelissen H, Sack L, Schroeder JI, Testerink C, Tyerman SD, Umezawa T, Wigge PA (2023) Burning questions for a warming and changing world: 15 unknowns in plant abiotic stress. *The Plant Cell* doi:10.1093/plcell/koac263

*Hirt H, … **Dinneny JR**, et al. (2023) PlantACT! – how to tackle the climate crisis. *Trends in Plant Science* doi:10.1016/j.tplants.2023.01.005

*Dundas C, **Dinneny JR** (2022) Genetic Circuit Design in Rhizobacteria. *BioDesign Research* doi: 10.34133/2022/9858049

*Viana W, Scharwies JD, **Dinneny JD** (2022) Deconstructing the root system of grasses through an exploration of development, anatomy and function. Plant Cell Environ. 2022 Mar;45(3):602-619. doi:

10.1111/pce.14270.

Dinneny JR. (2020) Mechanobiology: Plant Cells Face Pressure from Neighbors. *Curr Biol.* 2020 Apr 20;30(8):R344-R346. doi: 10.1016/j.cub.2020.02.025.

*Rui Y, **Dinneny JR.** (2020) A wall with integrity: surveillance and maintenance of the plant cell wall under stress. *New Phytologist* 2020;225(4):1428–1439. doi:10.1111/nph.16166

***Dinneny JR**. (2019) Developmental Responses to Water and Salinity in Root Systems. *Annu Rev Cell Dev Biol.* 2019 Aug 5. doi: 10.1146/annurev-cellbio-100617-062949.

*Argueso CT, Assmann SM, Birnbaum KD, Chen S, **Dinneny JR**, Doherty CJ, Eveland AL, Friesner

J, Greenlee VR, Law JA, Marshall-Colón A, Mason GA, O'Lexy R, Peck SC, Schmitz RJ, Song L, Stern D, Varagona MJ, Walley JW, Williams CM. (2019) Directions for research and training in plant omics: Big Questions and Big Data. *Plant Direct.* 2019 Apr 23;3(4):e00133. doi: 10.1002/pld3.133.

*Zengler K, Hofmockel K, Baliga NS, Behie SW, Bernstein HC, Brown JB, **Dinneny JR**, Floge SA,

Forry SP, Hess M, Jackson SA, Jansson C, Lindemann SR, Pett-Ridge J, Maranas C, Venturelli OS, Wallenstein MD, Shank EA, Northen TR. (2019) EcoFABs: advancing microbiome science through standardized fabricated ecosystems. *Nature Methods.* 2019 Jul;16(7):567-571. doi: 10.1038/s41592019-0465-0.

Magallon KJ, **Dinneny JR** (2019) Environmental Stress: Salinity Ruins a Plant's Day In the Sun. *Current Biology* 2019 May 20;29(10):R360-R362. doi:10.1016/j.cub.2019.04.006.

*Scharwies JD, **Dinneny JR** (2019) Water transport, perception, and response in plants. *Journal of Plant Research.* doi: 10.1007/s10265-019-01089-8.

Dinneny JR (2018) Getting it right on GMOs. *Science* 360 (6396), 1407. doi:10.1126/science.aat8772

*Sun Y, **Dinneny JR** (2018) Q&A: How do gene regulatory networks control environmental responses in plants? *BMC Biology.* 2018 Apr 11;16(1):38. doi: 10.1186/s12915-018-0506-7.

*Cuevas-Velazquez C, **Dinneny JR** (2018) Organization out of disorder: liquid-liquid phase separation in plants. *Current Opinion in Plant Biology* May 30;45(Pt A):68-*74. doi: 10.1016/j.pbi.2018.05.005.*

*Friesner J, Assmann SM, Bastow R, Bailey-Serres J, Beynon J, Brendel V, Buell CR, Bucksch A, Busch W, Demura T, **Dinneny JR**, Doherty CJ, Eveland AL, Falter-Braun P, Gehan MA, Gonzales M, Grotewold E, Gutierrez R, Kramer U, Krouk G, Ma S, Markelz RJC, Megraw M, Meyers BC, Murray JAH, Provart NJ, Rhee S, Smith R, Spalding EP, Taylor C, Teal TK, Torii KU, Town C, Vaughn M, Vierstra R, Ware D, Wilkins O, Williams C, Brady SM (2017) The next generation of training for Arabidopsis researchers: bioinformatics and quantitative biology. *Plant Physiology*. 2017 Dec;175(4):1499-1509. doi: 10.1104/pp.17.01490.

*Brophy JAN, LaRue T, **Dinneny JR** (2018) Understanding and engineering plant form. *Seminars in Cell and Developmental Biology* S1084-9521(17)30382-8. doi: 10.1016/j.semcdb.2017.08.051.

Sebastian J and **Dinneny JR** (2016) *Setaria viridis*: a Genetic Model System for Panicoideae Grass Root Systems. *Genetics and Genomics of Setaria, 19:177-193* Springer International Publishing. ISBN: 3319451057, 9783319451053

*Feng W, Lindner H, Robbins II N, **Dinneny JR** (2016) Growing Out of Stress: The Role of Cell- and Organ-scale Growth Control in Plant Water-stress Responses. *The Plant Cell* Aug;28(8):1769-82. doi:10.1105/tpc.16.00182.

*Rellán-Álvarez R, Lobet G, **Dinneny JR** (2016) Environmental Control of Root System Biology. *Annual Review of Plant Biology* Vol. 67: 619-642. doi: 10.1146/annurev-arplant-043015-111848.

***Dinneny JR** (2015) A developmental biologist's journey to rediscover the Zen of plant physiology. *F1000Research.* 4(F1000 Faculty Rev):264 doi: 10.12688/f1000research.6167.1.

*Robbins NE 2nd, **Dinneny JR** (2015) The divining root: moisture-driven responses of roots at the micro- and macro-scale. *Journal of Experimental Botany*. Apr;66(8):2145-54. doi: 10.1093/jxb/eru496.

***Dinneny JR** (2015) Traversing organizational scales in plant salt-stress responses. *Current Opinion in Plant Biology.* Feb;23:70-5. doi: 10.1016/j.pbi.2014.10.009.

Sebastian, J, Duan, L, **Dinneny JR** (2015) Salt-stress regulation of root system growth and architecture in Arabidopsis seedlings. *Methods Molecular Biology.* 1242:105-22. doi: 10.1007/978-14939-1902-4_10.

Velasquez SM, **Dinneny JR**, Estevez JM. Live imaging of root hairs. *Methods Molecular Biology.* 2015;1242:59-66. doi: 10.1007/978-1-4939-1902-4_5.

*Robbins, NR 2nd, Trontin C, Duan L, **Dinneny JR** (2014) Beyond the barrier: communication in the root through the endodermis. *Plant Physiology.* 166(2), 551-559. doi: 10.1104/pp.114.244871.

***Dinneny JR** (2014) A gateway with a guard: how the endodermis regulates growth through hormone signaling. *Plant Science.* 214, 14-19. doi: 10.1016/j.plantsci.2013.09.009.

Dinneny JR (2013) Cell-type resolution analysis of root development and environmental responses. *Roots and their soil interactions: What we can learn from genomics* Chapter 4: 63-78 Wiley Publishing. ISBN: 978-0-470-96043-1

*Wee CW and **Dinneny JR** (2010) Tools for high-spatial and temporal-resolution analysis of environmental responses in plants. *Biotechnology Letters.* 32(10), 1361-1371. doi: 10.1007/s10529010-0307-8.

***Dinneny JR** (2010) Analysis of the salt-stress response at cell-type resolution. *Plant Cell & Environment* 1;33(4):543-51. doi: 10.1111/j.1365-3040.2009.02055.x.

Dinneny JR, Benfey PN (2009) Studying root development using a genomic approach. *Annual Plant Reviews, Volume 37, Root Development* Chapter 12: 325-351 Blackwell Publishing. ISBN: 978-1-40516150-3

Dinneny JR and Benfey PN (2008) Plant stem cell niches: standing the test of time. *Cell* Feb 22;132(4):553-7. doi: 10.1016/j.cell.2008.02.001.

Dinneny JR and Benfey PN, (2005) Stem cell research goes underground: the *RETINOBLASTOMARELATED* gene in root development. *Cell* 123, 1180-1182. doi:10.1016/j.cell.2005.12.005.

***Dinneny JR** and Yanofsky MF (2005) Drawing lines and borders: how the dehiscent fruit of *Arabidopsis* is patterned. *Bioessays* 27, 42-49. doi: 10.1002/bies.20165.

Dinneny JR and Yanofsky MF (2004) Floral Development: An ABC Gene Chips in Downstream. *Current Biology.* 14, R840-R841. doi: 10.1016/j.cub.2004.09.037.

Dinneny JR and Yanofsky MF (2004) Vascular Patterning: Xylem or Phloem? *Current Biology.* 14, R112-R114. doi: 10.1016/j.cub.2004.01.017

CURRENT FUNDING

John Templeton Foundation, 62923: Leveraging Biodiversity for Plant Climate Resilience: Advancing Community Resources and Fundamental Research, 2023-2026

U.S. Department of Energy, KP1607011: Visualizing Spatial and Temporal Responses of Plant Cells to the Environment, 2022-2025

U.S Department of Energy, DE-SC0023160: Integrated engineering of whole plant water use efficiency in Sorghum and Setaria, 2022-2027

U.S. Department of Energy, DE-SC0022985: Using an evolutionary perspective to discovery and predict stress-associated gene functions, 2022-2025

Chan Zuckerberg Biohub Investigator Award, Awarded 2022-2024

PAST FUNDING

U.S. Department of Energy, DE-SC0020358: Discovering innovations in stress tolerance through comparative gene regulatory network analysis and cell-type specific expression maps, Awarded September 2019

U.S. Department of Energy, DE-SC0018277: Using systems approaches to improve photosynthesis and water use efficiency in sorghum, Awarded September, 2017

National Institutes of Health, Cellular Signaling and Response Systems Program, Signaling in Cell Expansion and Morphogenesis, Awarded March, 2017

U.S. Department of Energy, ARPA-e, 1565-1555: Thermoacoustic Root Imaging, Biomass Analysis, and Characterization, Awarded December, 2016

Howard Hughes Medical Institute, Simons Foundation, HHMI-Simons Faculty Scholar, Awarded September, 2016

Stanford Precourt Energy Institute, Seed Grant: Enhancing Cellulose Digestion and Bioethanol production through a New Genetic and Molecular Engineering Strategy in Plants and Microbes. PI Lynette Cegeski, Co-PI, José Dinneny, Awarded June, 2018

National Science Foundation, Molecular and Cellular Biology, 1157895: Collaborative Research: Salt-stress regulation of spatiotemporal gene expression patterns in the Arabidopsis root, Awarded May, 2012

U.S. Department of Energy, DE-SC0008769: A Systems-level analysis of drought and density response in the model C4 grass Setaria viridis, Awarded September, 2012

National Science Foundation, Integrated Organismal Systems, 1238202: Natural Variation and Drought Responses in Developing Maize Inflorescences, Awarded April, 2013

ADVISEE RESEARCH FELLOWSHIPS

NSF Graduate Research Fellowship: Therese LaRue, Lauren Pope

Life Sciences Research Fellowship: Josep Vilarrasa-Blasi, Yue Rui

EMBO Fellowship: Josep Vilarrasa-Blasi

Burroughs Welcome Fund CASI: Jennifer Brophy

TomKat Fellowship in Sustainable Energy: Christopher Dundas

Pew Latin America Fellowship: Cesar Cuevas-Velazquez

Deutsche Forschungsgemeinschaft (DFG) Fellowship: Heike Lindner

AWARDS

HHMI Investigatorship (2024)

Charles Albert Shull Award, American Society of Plant Biologists (2023)

Chan Zuckerberg Biohub Investigator Award (2022)

AAAS Fellow (2022)

Stanford Biosciences Excellence in Mentoring and Service Award (2021)

Stanford Woods Institute Leaders in Interdisciplinary Collaboration (LiNC) Fellow (2018)

Science News magazine's 2017 SN 10: Scientists to Watch list (2017)

HHMI-Simons Faculty Scholar (2016)

National Research Foundation Fellowship, Singapore (2008)

Ruth L. Kirschstein National Research Service Award (NIH, 2005)

UCSD Biology Division teaching award (2002)

Babcock Prize, College of Natural Resources, UCB (2000)

Phi Beta Kappa member (2000)

Howard Hughes Medical Institute Predoctoral Fellowship (2000)

TEACHING

Teaching Experience

Autumn 2019 - present	BIO 155/255: Plant Cell and Developmental Biology
Winter 2018 - present	BIO 84: Physiology
Autumn/Winter/Spring 2020, 2021	BIO 305: Managing Your PhD
Winter 2017	BIOS 252, Understanding Plant-Environmental Responses, Stanford University
Summer 2016	Frontiers and Techniques in Plant Science, CSHL
Summer 2009/10	BL5221, TLL, Graduate module in Plant Biology
Spring 2005	BICD 123 Plant Biology Lab, UCSD
Winter 2004	BICD 100 Genetics, UCSD
Spring 2002	BICD 101 Eukaryotic Genetics Lab, UCSD

PhD students advised (current position):

National University of Singapore: Lina Duan (Advanced Cell Diagnostics, Scientist), Yu Geng (Novogene, Research Scientist), Rui Wu (University of Copenhagen, Research Fellow), Bao Yun (Shanghai, Staff Scientist)

Stanford University: Nell Robbins II (ASU Data Analyst), Ying Sun (Salk Institute, Postdoc), Therese LaRue (Hippo Harvest, Plant Scientist)

Post-doctoral fellows trained (current position):

Jennifer Brophy (Assistant Professor, Stanford University), Alexandra "Jazz" Dickenson (Assistant Professor, UCSD), Cesar Cuevas Velazquez (Assistant Professor, UNAM, Mexico City), Wei Feng (Director of R&D, Alamar Biosciences), Heike Lindner (Principal Investigator, University of Bern), Jose Sebastian (Assistant Professor, Indian Institute of Science Education and Research, Berhampur, India and Ramalingaswami Re-entry Fellow), Rubén Rellán-Álvarez (Assistant Professor NCSU), Charlotte Trontin (Scientific Officer at European and Mediterranean Plant Protection Organization), Pooja Aggarwal (Tribal Health Research, Choon Wei "Jeffrey" Wee (Agilent), Chong Han Ng (Lecturer, Melaka Multimedia University)

SERVICE

Outreach

Summer 2018, 2019, 2022, Instructor for 3-week course on Frontiers and Techniques in Plant Science, Cold Spring Harbor Laboratory, NY

"Demystifying the Research and Chalk Talk", Plant Postdocs hosted seminar on preparing for the faculty search process. https://www.youtube.com/watch?v=Gy_NqDYFUP8

"Plantae Presents: Setting SMART Goals", 2023 ASPB hosted seminar on advice for young scientists, https://youtu.be/-0aSDRsqwoY?si=W2s6kaJKIvJtKgdT

"My Plant Biology Story", 2023 NAASC hosted seminar on my journey in science, https://youtu.be/7G3rPe2IRCw?si=TOev51ziuSRBZd0y

"Seeds of Change: using plants to broaden the impact of science in society", 2018 NSF-funded and NAASC organized public symposium and 3-day workshop, Lead organizer, https://youtu.be/iZWNBNBwY0c?si=FiY0VXrwnYAhJgRg

Editorial work

2018 - 2019	Associate Editor, Plant Physiology
2013 – 2017	Managing Editor, Plant Physiology
2015	Guest Editor, PLoS Genetics
2011 – 2015	Associate Editor, Frontiers in Plant Physiology

Leadership/Committee Involvement

2024 – 2025	Associate Chair, Biology Department, Stanford
2024 – 2025	Chair, Greenhouse Committee
2023 – 2024	Biology Department Governance Committee
2023 – 2024	Stanford University Committee on Committees (CoC)
2022 - 2024	Stanford University Faculty Senate, Elected
2022 - 2023	CMOB Faculty Hiring Committee, Chair
2022 - 2023	Executive Board, Life Sciences Initiative, Stanford University
2021 - 2024	Committee on Graduate Studies (C-GS), Stanford University
2019 – 2022	Director of Graduate Studies, Biology Department, Stanford University

2019 - 2022	Chair of Graduate Studies Committee, Biology Dept. Stanford Univ.
2018 - 2019	Graduate Admission Committee, Stanford University
2018 - present	Adaptive Expertise Assessment Committee, Stanford University
2018 - 2020	Chair of the Membership Committee, ASPB
2015 - 2020	Treasurer and Elected member, North American Arabidopsis Steering Committee (NAASC)
2014-2018	ASPB Science Policy Committee
2011-2017	Seminar Committee, Carnegie DPB

Grant Panel Participation

NSF (MCB, IOS), NIH (CSRS), European Union (F7), DOE (BER)

Advisory Board participation

Engineered Living Materials Institute (ELMI) at Cornell University, 2023-present

MiCROP Consortium, University of Wageningen, 2020-present

Environmental Molecular Science Laboratory (EMSL) Review for DOE, 2021

Conference organization

Society for Developmental Biology, Annual meeting, 2024

GRC: Salt and Water Stress, Les Diablerets, Switzerland, 2022

Frontiers and Techniques in Plant Science Summer Course, CSHL, 2018, 2019, 2022

International Conference on Arabidopsis Research, Seattle, Washington, 2021

GRC: Salt and Water Stress, Waterville, NH, 2020, Vice Co-Chair

GRC: Salt and Water Stress, Waterville, NH, 2018, Vice Co-Chair

Carnegie Institution for Science and Stanford Plant Biology Retreat, Asilomar, CA, 2017

International Conference on Arabidopsis Research, St Louis, Missouri, 2017

Carnegie Institution for Science and Stanford Plant Biology Retreat, Stanford, CA, 2014

PROFESSIONAL SOCIETY MEMBERSHIP

AAAS, SACNAS, ASPB, SDB, CSC

INVITED SEMINARS (2020-2024)

GRC: Salt and Water Stress, 2024

American Society of Plant Biologists, Charles Albert Shull Award address, 2024

International Arabidopsis Conference on Research, Keynote, 2024

NYU, Genome Center Symposium, Philip Benfey memorial, 2024

University of Manitoba, Hannah Lecture, 2024

CSHL, Diversity Initiative for the Advancement of STEM invited lecture, 2024

MIT, Biology Dept, Chipperfield Lecture, 2024

Purdue University, Botany seminar series, 2024
American Society for Cell Biology annual meeting, 2023
MIT, Bioengineering Dept, 2023
University of Kentucky, Lexington, 2023
University of Georgia, Athens, student invited lecture, 2023
Gregor Mendel Institute, Vienna, Austria, 2023
UC Riverside, DEI committee invited lecture, 2023
University of Massachusetts, Amherst, 2023
Lawrence Berkeley National Labs, Lawrence lecture, 2023
Exploratorium, San Francisco, Public lecture, 2023
North Carolina Biotechnology Retreat, Keynote lecture, 2022
Virginia Tech, 2022
IQ Biology, Keynote lecture, University of Colorado, Boulder, 2022
EMBO Conference on Agriculture and Climate Change, Montpelier, 2022
John Innes Centre, 2022; Student-invited talk
2nd International Biodesign Research Conference, 2021
University of Utah, 2021
University of Georgia, Athens, 2021
Oak Ridge National Lab, 2021
Iowa State University, 2021
University of Arizona, 2021
University of Illinois, Urbana-Champaign, 2020
Oregon State University, 2020