CURRICULUM VITAE

Name:	Ueli Grossniklaus
Date and place of birth:	25 January 1964, Beatenberg, Switzerland
Nationality:	Swiss
Family status:	Married, two adult children
Address:	Department of Plant and Microbial Biology University of Zürich Zollikerstrasse 107 CH-8008 Zürich, Switzerland Phone +41 44 634-8240, PA 8296, Fax 8204 email: grossnik@botinst.uzh.ch

Research Interests

The long-term goal of our research is to elucidate the molecular basis of cell specification, cell-cell communication, and epigenetic regulation with a special focus on plant reproduction. We cover various aspects of reproduction at the physical, molecular, cellular, and organismal level. A considerable effort is placed on the engineering of apomixis, the clonal reproduction through seeds, which has a tremendous potential for applications in agriculture. We have also made significant contributions towards elucidating the role of epigenetics in plant reproduction and are interested in ecological and evolutionary aspects, in particular in the role and inheritance of epigenetic variation.

Education

1984-1989	Undergraduate studies in Molecular and Cellular Biology (Biology II) University of Basel, Switzerland
1988-1989	Diploma thesis under the supervision of Prof. Dr. Walter J. Gehring Biozentrum of the University of Basel, Switzerland
April 1989	Diploma in Biology II (major: Cell Biology), "*Summa cum Laude"*
1989-1993	Graduate studies in Developmental Biology and Genetics PhD under the supervision of Prof. Dr. Walter J. Gehring Biozentrum of the University of Basel, Switzerland
Feb. 1993	Dr. phil. II (Ph.D.), "*Summa cum Laude"*

Academic Positions

1993 (6 months)	Research Assistant in Prof. Dr. Walter J. Gehring's laboratory Biozentrum of the University of Basel, Switzerland
1993-1994 (6 months)	Research Associate in Theoretical and Computational Biology Indian Institute of Science, Bangalore, India
1994-1996	Cold Spring Harbor Laboratory Fellow (Principal Investigator) Cold Spring Harbor Laboratory, Cold Spring Harbor, New York, USA
1996-1999	Senior Staff Investigator (equivalent to Assistant Professor) Cold Spring Harbor Laboratory, Cold Spring Harbor, New York, USA
1999-2000	Staff Scientist, Friedrich Miescher Institute, Basel, Switzerland
1997-2002	Adjunct Professor (PhD Program in Genetics), SUNY Stony Brook, New York, USA
2000-pres	Full Professor (Ordinarius für Entwicklungsbiologie der Pflanzen) Institute of Plant Biology, University of Zürich, Switzerland
2000-2014	Assistant Director, Institute of Plant Biology, University of Zürich, Switzerland
2014-pres	Director, Department of Plant and Microbial Biology, University of Zürich, Switzerland
2015-pres	Director, Botanical Museum, University of Zürich, Switzerland
2019	Distinguished Visiting Professor, Institute of Transformative Biomolecules, University of Nagoya, Japan

Fellowships and Awards

1988	Undergraduate Research Program Participant, Cold Spring Harbor Laboratory, Cold Spring Harbor, New York, USA

1988	Genetic Society of America Undergraduate Award
1989-1991	Fellowship of the "Schweizerische Gesellschaft für Chemische Industrie"
1993	Fellowship of the Jawaharlal Nehru Center for Advanced Scientific Research, Bangalore, India
1993	Fellowship of the Theodor Engelmann-Stiftung
1993	Amerbach Prize of the University of Basel for best PhD Thesis
1994	EMBO Long Term Fellowship (awarded for 2 years, active for 9 months)
1994	Fellowship of the Swiss National Science Foundation (awarded, not activated)
1994	Fellowship of the Roche Research Foundation (awarded, not activated)
1995-1996	Fellowship of Human Frontiers of Science Program (HFSP)
1997	Scholarship of the “Janggen-Poehn-Stiftung”
1998	Demerec-Kaufmann-Holländer Fellowship in Developmental Genetics
1998-2002	Searle Scholarship (http://www.searlescholars.net)
2007	Elected as Member of the European Molecular Biology Organization (EMBO)
2009	Awardee of an Advanced Grant from the European Research Council (ERC)
2011	Elected as Member of *Leopoldina*, the German National Academy of Sciences
2014	Thomson Reuters *Highly Cited Researcher* in Plant and Animal Science

Professional Activities

1998	Co-Organizer of a Rockefeller Foundation Meeting on “Designing a Research Strategy for the Asexual Reproduction of Cereals”, Bellagio, ITA
2001-2007	Member, Executive Board of the “Zürcher Universitätsverein”
2001	Co-Organizer of the 4th Symposium of the Plant Science Center, Zürich, CHE
2003	Organizer of the Conference on "Plant Gametophytes – Evolution, Development and Function", Centro Stefano Franscini, Ascona, CHE
2003-pres	Member, Board of Directors International Society for Plant Molecular Biology, USA
2004-pres	Member, Forum Gene Technology, Swiss Academy of Science sc/nat, CHE
2004-2018	Member, “Kommission Förderprofessuren”, Swiss National Science Foundation, CHE
2004-2010	Member, *EPIGENOME* Network of Excellence, EU Framework Program 6
2005-pres	Member, Board of Trustees of the Julius-Klaus Foundation, Zürich, CHE
2005	Organizer of the Annual Meeting of the EPIGENOME Network of Excellence, Heidelberg, GER
2005	Co-Organizer of the Symposium “Apomixis: Structure, Function and Control” at the International Congress of Botany, Vienna, AUT
2006	Member, International Advisory Committee, 8th International Congress of Plant Molecular Biology, Adelaide, AUS
2006	Co-Chair of the *FASEB Summer Research Conference* “Mechanisms in Plant Development”, Saxton’s River, USA
2006-2011	President, Zürich-Basel Plant Science Center, Zurich, CHE
2006-2011	Program Director, PhD Program ”Plant Science”, University of Zurich, CHE
2007-pres	Member, Executive Board of the Foundation “Forschung für Leben”, Zürich, CHE
2007	Co-Organizer of the 8th Symposium of the Plant Science Center, Zürich, CHE
2008	Member, Advisory Committee 20th International Congress of Sexual Plant Reproduction, Brasilia, BRA
2009-2011	Member, Executive Committee Swiss Plant Science Web
2009-pres	Program Director, ProDoc Program ”Plant Science and Policy”, now PhD program “Science and Policy”, University of Zurich, CHE
2009	Co-Chair*, Gordon Research Conference* “Epigenetics”, Holderness, USA
2010	Co-Organizer of the *NoE EPIGENOME* Workshop “X Chromosome Inactivation and Imprinting”, Emmetten, CHE
2012	Co-Organizer, “SwissPlant12”, Meiringen, CHE
2012	Organizer *EvoRep* Workshop, Guarda Val, Sporz, CHE
2012-2016	Associate Member, *EpiGeneSys* Network of Excellence, EU Framework Program 7
2012-2016	Chair of ”PLANT FELLOWS”, an International Postdoc Fellowship Program in the Plant Sciences, EU Framework Program 7, Zürich, CHE

2013	Chair, Annual Meeting of Life Science Switzerland LS^2, "(R)evolutions in Biology". Zürich, CHE
2013	Co-Organizer of the "Séance de Réflexion: Grüne Getechnik für eine nachhaltige Landwirtschaft", Bern, CHE
2013-pres	Co-Director of the University Research Priority Program "Evolution in Action: From Genomes to Ecosystems", University of Zurich, CHE
2014	Co-Organizer of the Symposium "Molecular Mechanisms of Evolution and Development", Biozentrum of the University of Basel, CHE
2015	Co-Organizer of the "Séance de Réflexion: Neue Verfahren in der Pflanzenzüchtung – Nutzen und Herausforderungen", Bern, CHE
2015-pres	President-elect, International Society for Plant Molecular Biology
2017	Co-Organizer, Symposium "New Frontiers in Genetics and Molecular Biology", International Botanical Congress, Shenzhen, CHN
2017	Co-Organizer of the "Séance de Réflexion: Gene Drive – eine Technik für die Manipulation wilder Populationen", Bern, CHE

Extramural Educational Activities

1997	Instructor of the workshop on "Plant Molecular and Developmental Biology" National Institute of Biological Sciences, Bangalore, IND
1999-2003	Course Organizer "Arabidopsis Molecular Genetics", Cold Spring Harbor Laboratory, Cold Spring Harbor, New York, USA
1998-2002	Guest Lecturer, Graduate Program in Developmental Biology, National University of Singapore, Singapore, SGP
2002	Guest Lecturer, Plant Development Course, University of Utrecht, NLD
2002-2004	Member, Faculty EMBO Course "Plant Development: Molecular and Cellular Basis", Oeiras, PRT
2004-2006	Lecturer "Advanced Techniques in Plant Sciences", Cold Spring Harbor, USA
2004	Member, Faculty EMBO Course on "Plant Reproduction", Beijing, CHN
2010	OIST Summer School on "Quantitative Evolutionary and Comparative Genomics", Okinawa, JAP
2011	Lecturer "Advanced Techniques in Plant Sciences", Cold Spring Harbor, USA
2011	Career Development Lecture "Meet the Professor", Annual Conference of the German Genetics Society, Würzburg, GER
2013	Lecturer. Utrecht PhD Summerschool "Environmental Signaling" Utrecht, NLD
2013-14	Lecturer "Advanced Techniques in Plant Sciences", Cold Spring Harbor, USA
2014	Lecturer, Volkshochschule Zürich, Ringvorlesung "Evolution in Aktion", CHE
2014	Lecturer, Sommerakademie der Studienstiftung, Magliaso, CHE
2015	Career Development Lecture, Centro de Investigación Científica de Yucatán (CICY), Merida, MEX
2015	Lecturer, Summer School "Plant Developmental Biology", Retzbach, GER
2012/14/16	Lecturer, Epigenetics Course, Universitá degli Studi, Milano, ITA
2017	Mentor, 9th Young Investigator Meeting, Goa, IND
2018	Career Development Lecture, Laboratorio Nacional de Genomica para la Biodiversidad (LANGEBIO), Irapuato, MEX

Member of Editorial Boards

1998-2001	Member, Editorial Board "*Journal of Biosciences*"
2000-2005	Member, Editorial Board "*Plant Physiology*"
2001-2003	Member, *Faculty 1000*
2003-pres	Member, Editorial Board "*Organogenesis*"
2004-2012	Member, Editorial Board "*Sexual Plant Reproduction*"
2013-pres	Member, Editorial Board "*Plant Reproduction*"
2005-2013	Member, Editorial Board "*Development*"
2006-2016	Member, Editorial Board "*Epigenetics*"
2008-pres	Member, Editorial Board "*Epigenetics and Chromatin*"
2010-pres	Member, Editorial Advisory Panel "*Scientific Reports*" (Nature Publishing Group)
2012-pres	Member, Editorial Board "*Non-genetic Inheritance*"
2012-pres	Member, Editorial Board "*PeerJ*"

2014-2019	Member, Editorial Board *"PLoS Biology"*
2014-pres	Member, Editorial Board *"Epigenomics"*

Member of Scientific Advisory Boards

2002-2010	Member, Scientific Advisory Board, Institute for Plant Genetics and Crop Plant Research, Gatersleben, GER
2004-2010	Member, Scientific Advisory Board, ARC Center for Excellence in Integrative Legume Research, AUS
2006-2014	Member, Scientific Advisory Board, Institute for Integrative Genomics, University of Lausanne, Lausanne, CHE
2007-2013	Member, Scientific Advisory Board, Gregor Mendel Institute, Vienna, AUT
2012-2018	Member, Scientific Advisory Board, Max-Planck Institute for Developmental Biology, Tübingen, GER

Invited Speaker at International Meetings (past 15 years only)

2005	Horizon Symposium "Epigenetics", Nature Publishing Group, Portland, USA
	2nd Alan Wolffe Conference on "Epigenetics and Chromatin", EMBL, Heidelberg, GER
	Juan March Meeting "Plant Stem Cells: Independent Inventions and Conserved Mechanisms", Madrid, ESP
	Babraham Symposium "Epigenetic Gene Regulation", Cambridge, GBR
	Plant Biology 2005, Annual Meeting of the American Society for Plant Biology (ASPB), Seattle, USA (Plenary Speaker)
	Workshop on "Genetic Engineering: Challenges posed by a New Technology to the World Trading System", World Trade Institute, Bern, CHE (Panel Discussant)
	International Botanical Congress (IBC), Vienna, AUT (Keynote Address)
	6th Gordon Research Conference "Epigenetics", Holderness, USA
	ESF & Lynnean Society Meeting on the "Paradox of Asexuality", London, GBR (Chairman)
	Inaugural Symposium of the *Center for Integrative Genomics*, Lausanne, CHE
	8th Symposium of the Plant Science Center Zurich, Zürich, CHE
2006	International Symposium on "Frontiers of Genetics and Biotechnology", Hyderabad, IND (Plenary Speaker)
	Keystone Symposium on "Epigenetics and Chromatin Remodeling in Development", Keystone, USA
	3rd European Plant Science Organisation (EPSO) Conference, Visegrad, HUN
	19th International Congress of Plant Reproduction, Budapest, HUN (Plenary Speaker)
	2nd International Symposium "Molecular Control of Gene Expression", Erlangen, GER
	11th Congress of the International Associates for Plant Tissue Culture & Biotechnology, Beijing, CHN (Plenary Speaker)
	8th ISPMB Congress, Adelaide, AUS (Keynote Speaker)
	Symposium on "Epigenetic Mechanisms in Plant Development and Environmental Adaptation", Geneva, CHE
	Plant Genetics Conference, Deutsche Gesellschaft für Genetik, Kiel, GER
	Inaugural Symposium of the *Gregor Mendel Institute*, Vienna, AUT
2007	5th Okazaki Biology Conference, Okazaki, JAP
	16th Swiss Plant Cell and Molecular Biology Conference, Les Diablerets, CHE
	CILR Annual Symposium, Salt Village, AUS
	"Communication in plants and their responses to the environment", Halle, GER
	"Fabrics of Life", Design Workshop "Epigenetics", Central Saint Martins College of Art and Design, London, GBR
	18th Conference on *Arabidopsis* Research, Beijing, CHN (Plenary Speaker)
	3rd International Apomixis Conference, Wenigerode, GER (Chairman)
	7th Gordon Research Conference "Epigenetics", Holderness, USA
	Conference of the "Societé Française de Biologie Végétale", Versailles, FRA
	Trinational *Arabidopsis* Meeting TNAM, Vienna, AUT

Inaugural Meeting “Fédération Réaumur des Sciences du Vivant”, Grenoble, FRA

2008

3rd Seed Development Symposium, Saskatoon, CAN

“Fabrics of Life”, Design Workshop “Life Cycles”, Central Saint Martins College of Art and Design, London, GBR

Cold Spring Harbor Symposium on Quantitative Biology “Stem Cells”, Cold Spring Harbor, USA

Cantoblanco Workshop “Chromatin at the Nexus of Cell Division and Differentiation”, Madrid, ESP (Organizer)

67th Annual Meeting of the Society for Developmental Biology, Philadelphia, USA

20th International Congress on Sexual Plant Reproduction, Brasilia, BRA

FASEB Summer Research Conference “Mechanisms of Plant Development”, USA

EMBO Members Workshop, Tampere, FIN

Society of Experimental Biology “Plant Symposium”. Nottingham, GBR

Symposium on “Epigenetics”, Wenner-Grenn Foundation, Stockholm, SWE

Frontiers in Sexual Reproduction III, Tucson, USA

Biochemistry and Molecular Biology Conference (BMB 2008), Kobe, JAP

2009

13th ADNAT Convention on “Epigenetic Modifications of the Genome: Mechanisms and Implications”, Hyderabad, IND

FEBS Workshop “Adaptation Potential in Plants”, Vienna, AUT

Symposium on “Molecular Mechanisms in Development and Evolution”, Basel, CHE

“Fabrics of Life”, Design Workshop on “Evolution”, Ecole Nationale Supérieure des Arts Décoratifs, Paris, FRA

EMBO Chromatin and Epigenetics Conference, Heidelberg, GER

UK Genetics Society Meeting, Oxford, GBR

Workshop “25 Years of Imprinting”, Cambridge, GBR

Workshop “Cell-cell Communication in Plant Reproduction”. Bath, GBR

Annual Conference of the German Genetics Society, Cologne, GER

International Plant Molecular Biology Congress, St. Louis, USA

2010

Epigenome NoE Workshop “X Chromosome Inactivation and Imprinting”, Emmetten, CHE

International Conference on “Molecular Aspects of Plant Development”, Vienna, AUT

Banbury Conference on “Epigenetic Reprogramming and Trans-generational Inheritance, Cold Spring Harbor Laboratory, New York, USA

International Symposium on “Cell-cell Communication during Sexual Reproduction”, Nara, JAP

Keystone Symposium on “Receptors and Signaling in Plant Development and Biotic Interactions”, Tahoe City, USA

International Symposium on “Crop Functional Genomics”, Jeju Island, KOR

17th Congress of the Federation of the European Societies for Plant Biology (FESP), Valencia, ESP

Symposium on “Frontiers in Developmental Cell Biology”, Lausanne, CHE

Banbury Conference on “Plant Development and Phenomics”, Cold Spring Harbor Laboratory, New York, USA

54th Congress of the Italian Society for Agricultural Genetics (SIGA), Matera, ITA

2011

53rd Annual Maize Genetics Conference, St. Charles, USA

Meeting of the German Society for Developmental Biology, Dresden, GER

2nd Conference "Challenges for Contemporary Biology - a European Perspective", Poznan, POL

CSH-Asia Conference on "Plant Cell and Developmental Biology", Suzhou, CHN

Workshop on Molecular Mechanisms Controlling Flower Development, Maratea, ITA

Meeting of the Society of Experimental Biology, Glasgow, GBR

International Botanical Congress, Melbourne, AUS

	9th Gordon Research Conference "Epigenetics", Stonehill College, USA
	ESF-EMBO Conference on "Epigenetics in Context". San Feliu, ESP
	EMBO Meeting 2011, Vienna, AUT
	42nd Annual Conference of the German Genetics Society, Würzburg, GER
	Vienna Biocenter PhD-Symposium "Think Different", Vienna, AUT
	Gregor Mendel Institute, Anniversary Symposium, Vienna, AUT
	NESCent Conference on the "Evolution of Genomic Imprinting", Raleigh, USA
2012	22nd Congress on Sexual Plant Reproduction, Melbourne, AUS (Chair)
	Keystone Meeting "Plant Gene Expression and Signaling",Taos, USA
	International Symposium "Nanobiotechnology meets Holonic Communication", Nagoya, JAP
	EMBO Conference "Plant Development and Environmental Interactions", Matera, ITA (Keynote Speaker)
	77th Cold Spring Harbor Laboratory Symposium on Quantitative Biology, "The Biology of Plants", Cold Spring Harbor, USA
	23rd International Conference on Arabidopsis Research (ICAR), Vienna, AUT (Plenary Speaker)
	4th Meeting of the European Society for Evolutionary Developmental Biology, Lisbon, POR
	43rd Annual Meeting of the German Genetics Society, "Chromatin and Epigenetics", Essen, GER
	Trinational Arabidopsis Meeting (TNAM), Lausanne, CHE
	EMBO Symposium "Germline – Immortality through Totipotency" Heidelberg, GER
	35th Annual Meeting of the Molecular Biology Society of Japan, Fukuoka, JAP (Plenary Speaker)
2013	Annual EpiGeneSys Meeting, Amsterdam, NL
	BioSyst.EU Global Systematics Meeting, "Evolutionary Epigenetics", Vienna, AUT
	ALW Meeting "Experimental Plant Sciences", Lunteren, NLD
	COST Workshop "Epigenetics", Kandersteg, CHE
	Gordon Research Conference "Developmental Biology", Barga, ITA (Chair)
	10th Gordon Research Conference "Epigenetics", Bryant University, USA
	NESCent Imprinting Working Group, Raleigh, USA
	Biochemical Society Meeting on "Regulation of Fertilization and Early Seed Development", Bath, GBR (Chair)
	Australian Epigenetic Alliance, National Meeting, Shoal Bay, AUS
2014	"Fabrics of Life", Designs Workshop on "Big Data", Central Saint Martins College of Art and Design, London, GBR
	Workshop "Frontiers in Biology and Medicine", Bangalore, IND
	Keystone Meeting "Epigenetic Reprogramming and Inheritance", Boston, USA
	Oslo Epigenetics Symposium, Oslo, NOR
	Interdisciplinary Workshop "A Dynamic Architecture of Life?", Accademia Nazionale dei Lincei, Rome, ITA
	FESP/EPSO Congress "Plant Biology Europe", Dublin, IRE
	23rd Congress on Sexual Plant Reproduction, Porto, POR (Chair)
	Symposium "Cellular Memory, Reprogramming and Systems Biology", Basel, CHE
	International Symposium on "Pollination and Fertilization", Tai'an, CHN
	Banbury Conference "Epigenetics and Agriculture", Cold Spring Harbor Laboratory, USA
2015	Keystone Symposium "Plant Receptor Kinases" From Molecules to Environment", Taos, USA
	16th Annual Plant Biology Minisymposium, University of Maryland, USA

	48th Annual Meeting for the Japanese Society of Developmental Biologists, Tsukuba, JPN
	CSH Asia Frontiers of Plant Biology "Epigenetics in Growth and Development", Suzhou, CHN
	Symposium "Epigenetics and Development", Tel Aviv University, Tel Aviv, ISR
	26th International Conference on Arabidopsis Research, Paris, FRA
	11th Gordon Research Conference "Epigenetics", Bentley University, Boston, USA
	Cortona Week on "Reproducibility", Cortona, ITA
	EMBO Workshop "Signaling in Plant Development", Brno, CZE
	International Congress of Plant Molecular Biology, Foz de Iguazu, BRA
2016	FEBS/EMBO Course on "Chromatin and the Environment", Spetses, GRE
	4th European Workshop on Peptide Signaling in Plants, Bischoffsheim, FRA
	Kyoto-Swiss Symposium on Life Sciences, Kyoto, JAP
2017	Environmental Epigenetics Conference, KAUST, SAU (Keynote Speaker)
	EMBO Workshop "Avakening the Genome", Dresden, GER
	2nd European Maize Meeting, Gent, BEL
	CSH Asia "Plant Cell and Developmental Biology", Suzhou, CHN
	World Economic Forum New Champions, ERC IdeasLab, Dalian, CHN
	19th International Botanical Congress, Shenzhen, CHN
	PSC Symposium 2017 "Dynamics of Plant Development and Evolution", Zurich, CHE
	65th NIBB Conference "Renaissance of *Marchantia polymorpha* – the Genome and beyond", Okazaki, JAP
2018	23rd Congress on Sexual Plant Reproduction, Gifu, JAP
	49th Annual Meeting of the German Genetics Society
	EMBO Workshop "New Shores in Land Plant Evolution", Lisbon, POR
	Epigenetics Spotlight Meeting, Munich, GER
	41st Annual Meeting of the Molecular Biology Society of Japan, Yokohama, JAP
2019	International Symposium on Plant Receptor Kinases and Cell Signaling, Beijing, CHN
	Plant Epigenetics, CUSO Retreat, Bramboden, CHE
	13th Gordon Research Conference "Epigenetics", Holderness, USA
	7th International Symposium on Transformative Bio-Molecules, Nagoya, JAP

PUBLICATIONS

(Web of Science *h*-index = 73, 16'542 citations; Google Scholar *h*-index = 88, 24'063 citations [30.06.2019])

Peer-Reviewed Articles (Original Contributions)

1. Tanaka M, **Grossniklaus U**, Herr W, Hernandez N (1988). Activation of the U2 snRNA promoter by the octamer motif defines a new class of RNA polymerase II enhancer elements. *Genes & Dev* **2**, 1764-1778.
2. Bellen HJ, O'Kane C., Wilson C, **Grossniklaus U**, Pearson R, Gehring WJ (1989). P-element-mediated enhancer detection: a versatile method to study development in *Drosophila*. *Genes Dev* **3**, 1288-300.
3. **Grossniklaus U**, Bellen HJ, Wilson C, Gehring WJ (1989). P-element mediated enhancer detection applied to the study of oogenesis in *Drosophila*. *Development* **107**, 189-200.
4. Wilson C, Pearson RK, Bellen HJ, O'Kane CJ, **Grossniklaus U**, Gehring WJ (1989). P-element-mediated enhancer detection: an efficient method for isolating and characterizing developmentally regulated genes in *Drosophila*. *Genes Dev* **3**, 1301-13**.**
5. Bellen HJ, Wilson C, Gibson G, **Grossniklaus U**, Pearson RK, O'Kane CJ, Gehring WJ (1990). P-element-mediated enhancer detection allows rapid identification of developmentally regulated genes and cell-specific markers in *Drosophila*. *J Physiol Paris* **84**, 1-10.
6. **Grossniklaus U,** Pearson RK, Gehring WJ (1992). The *Drosophila sloppy paired* locus encodes two proteins involved in segmentation that show homology to mammalian transcription factors. *Genes Dev* **6**, 1030-1051.
7. Häcker U, **Grossniklaus U**, Gehring WJ, Jäckle H (l992). Developmentally regulated *Drosophila* gene family encoding the *fork head* domain. *Proc Natl Acad Sci USA* **89**, 8754-8758.
8. **Grossniklaus U** (1993). Identification of developmentally regulated genes by enhancer detection: Isolation and characterization of the *Drosophila* segmentation locus *sloppy paired*. Ph. D. Thesis, University of Basel, Switzerland.
9. Cadigan KM, **Grossniklaus U**, Gehring WJ (1994). Localized expression of *sloppy paired* protein maintains the polarity of *Drosophila* parasegments. *Genes Dev* **8**, 899-913.
10. Cadigan KM, **Grossniklaus U**, Gehring WJ (1994). Functional redundancy: The respective roles of the *sloppy paired* proteins in segmentation. *Proc Natl Acad Sci USA*, **91**: 6324-6328.
11. **Grossniklaus U**, Cadigan KM, Gehring WJ (1994). Three maternal coordinate systems cooperate in the patterning of the *Drosophila* head. *Development* **120**, 3155-3171.
12. Andjelkovic M, Jones PF, **Grossniklaus U**, Cron P, Schier AF, Dick M, Bilbe G, Hemmings BA (1995). Developmental regulation of expression and activity of multiple forms of the*Drosophila* RAC protein kinase. *J Biol Chem* **270**, 4066-4075.
13. **Grossniklaus U**, Madhusudhan MS, Nanjundiah V (1996). Non-linear enzyme kinetics can lead to high metabolic flux control coefficients: implications for the evolution of dominance. *J Theor Biol* **182**, 299-302.
14. Hawkins NC, van Burskik C, **Grossniklaus U**, Schüpbach T (1997). Post-transcriptional regulation of *gurken* by *encore* is required for axis determination in *Drosophila*. *Development* **124**, 4801-4810.
15. Moore JM, Vielle-Calzada J-P, Gagliano W, **Grossniklaus U** (1997). Genetic characterization of *hadad*, a mutant disrupting megagametogenesis in *Arabidopsis thaliana*. *Cold Spring Harbor Symp Quant Biol* **62**, 35-47.
16. **Grossniklaus U**, Vielle-Calzada, J-P, Hoeppner MA, Gagliano WB (1998). Maternal control of embryogenesis by *MEDEA*, a *Polycomb*-group gene in *Arabidopsis*. *Science* **280**, 446-450.
17. Howden R, Park S-K, Moore JM, Orme J, **Grossniklaus U**, Twell D (1998). Selection of T-DNA-tagged male and female gametophytic mutants by segregation distortion in *Arabidopsis*. *Genetics* **149**, 621-631.
18. Vielle-Calzada J-P, Moore JM, Gagliano WB, **Grossniklaus U** (1998). Altering sexual development in *Arabidopsis*. *J Plant Biol* **41**, 71-83.
19. Vielle-Calzada J-P, Thomas J, Spillane C, Coluccio A, Hoeppner MA, **Grossniklaus U** (1999). Maintenance of genomic imprinting at the *Arabidopsis medea* locs requires zygotic *DDM1* activity. *Genes Dev* **13**, 2971-2982.
20. Pruitt RE, Vielle-Calzada J-P, Ploense SE, **Grossniklaus U**, Lolle SJ (2000). *FIDDLEHEAD*, a gene required to suppress epidermal cell interactions in *Arabidopsis*, encodes a putative lipid biosynthetic enzyme. *Proc Natl Acad Sci USA* **97**, 1311-1316.
21. Siddiqi I, Ganesh G, **Grossniklaus U**, Subbiah V (2000). The *dyad* gene is required for progression through female meiosis in *Arabidopsis*. *Development* **127**, 197-207.
22. Spillane C, MacDougall C, Stock C, Köhler C, Vielle-Calzada JP, Nunes SM, **Grossniklaus U**, Goodrich J (2000). Interaction of the *Arabidopsis Polycomb* group proteins FIE and MEA mediates their common phenotypes. *Curr Biol* **10**, 1535-1538.

23. Vielle-Calzada J-P, Baskar R, **Grossniklaus U** (2000). Delayed activation of the paternal genome during seed development. *Nature* **404**, 91-94.

24. Ballesteros L, Bolle C, Lois LM, Moore JM, Vielle-Calzada J-P, **Grossniklaus U**, Chua N-H (2001). LAF1, a MYB transcription activator for phytochrome A signaling. *Genes Dev* **15**, 2613-2625.

25. Budziszewski GJ, Lewis SP, Glover LW, Reineke J, Jones G, Ziemnik LS, Lonowski J, Nyfeler B, Aux G, Zhou Q, McElver J, Patton DA, Martienssen RA, **Grossniklaus U**, Ma H, Law M, Levin JZ (2001). *Arabidopsis* genes essential for seedling viability: liolation of insertional mutants and molecular cloning. *Genetics* **159**, 1765-1778.

26. Hecht V, Vielle-Calzada J-P, Hartog MV, Schmidt EDL, Boutilier K, **Grossniklaus U**, de Vries SC (2001). The *Arabidopsis SOMATIC EMBRYOGENESIS RECEPTOR KINASE 1* gene is expressed in developing ovules and embryos and enhances embryogenic competence in culture. *Plant Phys* **127**, 803-816.

27. Chen C, Marcus A, Li W, Hu Y, Vielle-Calzada J-P, **Grossniklaus U**, Cyr R, Ma H (2002). The *Arabidopsis KIT1* gene is required for spindle morphogenesis in male meiosis. *Development* **129**, 2401-2409.

28. Golden TA, Schauer SE, Lang JD, Pien S, Mushegian AR, **Grossniklaus U**, Meinke DW, Ray A (2002). *SHORT INTEGUMENTS1/SUSPENSOR1/CARPEL FACTORY*, a Dicer homolog, is a maternal effect gene required for embryo development in *Arabidopsis*. *Plant Phys* **130**, 808-820.

29. Alvarez-Venegas R, Pien S, Sadder M, Witmer X, **Grossniklaus U**, Avramova Z (2003). *ATX-1*, an *Arabidopsis* homolog of *trithorax*, activates flower homeotic genes. *Curr Biol* **13**, 627-37.

30. Curtis MD, **Grossniklaus U** (2003). A Gateway cloning vector set for high-throughput functional analysis of genes *in planta*. *Plant Physiol* **133**, 462-469.

31. Huck N, Moore JM, Federer M, **Grossniklaus U** (2003). The *Arabidopsis* mutant *feronia* disrupts the female gametophytic control of pollen tube reception. *Development* **130**, 2149-2159.

32. Köhler C, Hennig L, Spillane C, Pien S, Gruissem W, **Grossniklaus U** (2003). The *Polycomb* group protein MEDEA regulates seed development by controlling expression of the MADS-box gene *PHERES1. Genes Dev* **17**, 1540-1553.

33. Köhler C, Hennig L, Bouveret R, Gheyselinck J, **Grossniklaus U**, Gruissem W (2003). *Arabidopsis MSI1* is a component of the MEA/FIE *Polycomb* group complex and required for seed development. *EMBO J* **22**, 4804-4814.

34. Lalanne E, Honys D, Johnson A, Borner GHH, Lilley KS, Dupree P, **Grossniklaus U**, Twell D (2003). *SETH1* and *SETH2*, two components of the glycosyl-phosphatidyl-inositol anchor biosynthetic pathway, are required for pollen germination and tube growth in *Arabidopsis. Plant Cell* **16**, 229-240.

35. Oh S-A, Park S-K, Jang I, Moore JM, **Grossniklaus U**, Twell D (2003). *halfman1*, an *Arabidopsis* male gametophytic mutant associated with a 150 kb chromosomal deletion at the site of transposon insertion. *Sex Plant Reprod* **16**, 99-102.

36. Baroux C, Fransz P, **Grossniklaus, U** (2004). Nuclear fusions contribute to polyploidization of the gigantic nuclei in the chalazal endosperm of *Arabidopsis*. *Planta* **220**, 38-46.

37. Collinge MA, Spillane C, Köhler C, Gheyselinck J, **Grossniklaus U** (2004). Genetic interaction of an origin recognition complex subunit and the *Polycomb* group gene *MEDEA* during seed development. *Plant Cell* **16**, 1035-1046.

38. Guitton A-E, Page DR, Chambrier P, Lionnet C, Faure JE, **Grossniklaus U**, Berger F (2004). Cellular and genetic controls of antero-posterior development of endosperm in the *Arabidopsis thaliana* seed. *Development* **131**, 2971-2981.

39. Hennig L, Gruissem W, **Grossniklaus U**, Köhler C (2004). Transcriptional programs of early reproductive stages in *Arabidopsis*. *Plant Phys* **135,** 1765-1775.

40. Lalanne E, Michaelidis C, Moore JM, Gagliano W, Johnson A, Patel R, Howden R, Vielle-Calzada J-P, **Grossniklaus U**, Twell D (2004). Analysis of transposon insertion mutants highlights the diversity of mechanisms underlying male progamic development in *Arabidopsis*. *Genetics* **167**, 1975-1986.

41. Page DR, Köhler C, da Costa-Nunes JA, Baroux C, Moore JM, **Grossniklaus U** (2004). Intrachromosomal excision of a hybrid *Ds* element induces large genomic deletions in *Arabidopsis*. *Proc Natl Acad Sci USA* **101**, 2969-2974.

42. Sieber P, Gheyselinck J, Gross-Hardt R, Laux T, **Grossniklaus U**, Schneitz K (2004). Pattern formation during early ovule development in *Arabidopsis thaliana*. *Devl Biol* **273**, 321-334.

43. Spillane C, Baroux C, Escobar J-M, Page DR, Laoueille S, and **Grossniklaus U** (2004). Transposons and tandem repeats are not involved in the control of genomic imprinting at the *MEDEA* locus in *Arabidopsis*. *Cold Spring Harbor Symp Quant Biol* **69**, 465-476.

44. Köhler C, Page DR, Gagliardini V, **Grossniklaus U** (2005). The *Arabidopsis* MEDEA PcG protein controls expression of *PHERES1* by parental imprinting. *Nature Genet* **37**, 28-30.

45. Barrell PJ, **Grossniklaus U** (2005). Whole-mount confocal microscopy for analysis of meiosis of gametophyte development: The *elongate1* mutant in maize produces unreduced embryo sacs through avoidance of meiosis II. *Plant J* **43**, 309-320

46. Thomann A, Brukhin V, Dieterle M, Gheyselinck J, Vantard M, **Grossniklaus U**, Genschik P (2005). *Arabidopsis CUL3A* and *CUL3B* genes are essential for normal embryogenesis. *Plant J* **43**, 437-448.

47. Geisler M, Blakeslee JJ, Bouchard R, Lee OR, Vincenzetti V, Banyopadhyay A, Titapiwatanakun B, Peer WA, Bailly A, Richards EL, Ejendal KFK, Smith AP, Baroux C, **Grossniklaus U**, Müller A, Hrycyna CA, Dudler R, Murphy AS, Martinoia E (2005). Cellular efflux of auxin mediated by the *MDR/PGP* transporter *AtPGP*1. *Plant J* **44**, 179-194.

48. Yang W, Jefferson RA, Huttner E, Moore JM, Gagliano WB, **Grossniklaus U** (2005). An egg apparatus-specific enhancer of *Arabidopsis thaliana*, identified by enhancer detection. *Plant Phys* **139**, 1421-1432.

49. Huanca-Mamani W, Garcia-Aguilar M, Leon-Martinez G, **Grossniklaus U**, Vielle-Calzada JP (2005). *CHR*11, a chromatin-remodeling factor essential for nuclear proliferation during female gametogenesis in *Arabidopsis thaliana*. *Proc Natl Acad Sci USA* **102**, 17231-17236.

50. Baroux C, Gagliardini V, Page DR, **Grossniklaus U** (2006). Dynamic regulatory interactions of *Polycomb* group genes: MEDEA auto-regulation is required for imprinted gene expression in *Arabidopsis*. *Genes Dev* **20**, 1081-1086.

51. Brand L, Hörler M, Nuesch E, Vassalli S, Barrell P, Yang W, Jefferson RA, **Grossniklaus U**, Curtis MD. (2006). A versatile and reliable two-component system for tissue-specific gene induction in *Arabidopsis*. *Plant Physiol* **141**, 1194-1204.

52. da Costa-Nunes JA, Bhatt AM, O'shea S, West CE, Bray CM, **Grossniklaus U**, Dickinson HG (2006). Characterization of the three *Arabidopsis thaliana* RAD21 cohesins reveals differential responses to ionizing radiation. *J Exp Bot* **57**, 971-983.

53. de Folter S, Shchennikova AV, Franken J, Busscher M, Baskar R, **Grossniklaus U**, Angenent GC, Immink RG (2006). A B MADS-box gene involved in ovule and seed development in petunia and *Arabidopsis*. *Plant J* **47**, 934-946.

54. Makarevich G, Leroy O, Akinci U, Schubert D, Clarenz O, Goodrich J, **Grossniklaus U**, Köhler C (2006). Different *Polycomb* group complexes regulate common target genes in *Arabidopsis*. *EMBO Rep* **7**, 947-952.

55. Zhang W, Sun Y, Timofejeva L, Chen C, **Grossniklaus U**, Ma H (2006). Regulation of *Arabidopsis* tapetum development and function by *DYSFUNCTIONAL TAPETUM1* (*DYT1*) encoding a putative bHLH transcription factor. *Development* **133**, 3085-3095.

56. Haun W, Laoueille S, O,Connell M, Spillane C, **Grossniklaus U**, Phillips A, Kaeppler S, Springer N (2007). Genomic imprinting, methylation and molecular evolution of maize *Enhancer of zeste* (*Mez*) homologs. *Plant J* **49**, 325-337.

57. Gross-Hardt R, Kägi C, Baumann N, Baskar R, Moore JM, Gagliano WB, Jürgens G, **Grossniklaus U** (2007). *LACHESIS* restricts gametic cell fate in the female gametophyte of *Arabidopsis*. *PloS Biology* **5**, e47.

58. Baroux C, Pecinka A, Fuchs J, Schubert I, **Grossniklaus U** (2007). The triploid endosperm genome of *Arabidopsis* adopts a peculiar, parental dosage-dependent chromatin organization. *Plant Cell* **19**, 1782-1794.

59. Spillane C, Schmid KJ, Laoueillé-Duprat S, Pien S, Escobar-Restrepo JM, Baroux C, Gagliardini V, Page DR, Wolfe KH, **Grossniklaus U** (2007). Positive Darwinian selection at the imprinted *MEDEA* locus in plants. *Nature* **448**, 349-352.

60. Escobar-Restrepo JM, Huck N, Kessler S, Gagliardini V, Gheyselinck J, Yang WC, **Grossniklaus U** (2007). The FERONIA receptor-like kinase mediates male-female interactions during pollen tube reception. *Science* **317**, 656-660.

61. Langer M, Sniderhan LF, **Grossniklaus U**, Ray A (2007). Transposon excision from an atypical site: a mechanism of evolution of novel transposable elements. *PLoS ONE* **2**, e965.

62. Johnston AJ, Meier P, Gheyselinck J, Wuest SE, Federer M, Schlagenhauf E, Becker JD, **Grossniklaus U** (2007). Genetic subtraction profiling identifies genes essential for *Arabidopsis* reproduction and reveals interaction between the female gametophyte and the maternal sporophyte. *Genome Biol* **8**, R204.

63. Ngo QA, Moore JM, Baskar R, **Grossniklaus U**, Sundaresan V (2007). *Arabidopsis GLAUCE* promotes fertilization-independent endosperm development and expression of paternally inherited alleles. *Development* **134**, 4107-4117.

64. Chen Y-H, Li H-J, Shi D-Q, Yuan L, Liu J, Sreenivasan R, Baskar R, **Grossniklaus U**, Yang W-C (2007). The central cell plays a critical role in pollen tube guidance in *Arabidopsis*. *Plant Cell* **19**, 3563-3577.

65. Chekanova JA, Gregory BD, Reverdatto SV, Chen H, Kumar R, Hooker T, Yazaki J, Li P, Skiba N, Peng Q, Alonso J, Brukhin V, **Grossniklaus U**, Ecker JR, Belostotsky DA (2007). Genome-wide high-resolution

mapping of exosome substrates reveals hidden features in the *Arabidopsis* transcriptome. *Cell* **131**, 1340-1353.

66. Guggisberg A, Baroux C, **Grossniklaus U**, Conti E (2008). Genomic origin and organization of the allopolyploid *Primula egaliksensis* investigated by *in situ* hybridization. *Ann Bot* **101**, 919-927.

67. Pien S, Fleury D, Mylne JS, Crevillen P, Inzé D, Avramoa Z, Dean C, **Grossniklaus U** (2008). Unraveling *trithorax* function in plants: ATX1 dynamically regulates the activation of *FLC* via histone 3 lysine 4 trimethylation. *Plant Cell* **20**, 580-588.

68. Baerenfaller K, Grossmann J, Grobei MA, Hull R, Hirsch-Hoffmann M, Yalovsky S, Zimmermann P, **Grossniklaus U**, Gruissem W, Baginsky S (2008). Genome-scale proteomics reveals Arabidopsis thaliana gene models and proteome dynamics. *Science* **320**, 938-941.

69. Bemer M, Wolters-Arts M, **Grossniklaus U**, Angenent GC (2008). The MADS domain protein DIANA acts together with AGAMOUS-LIKE80 to specify the central cell in *Arabidopsis* ovules. *Plant Cell* **20**, 2088-2101.

70. Johnston AJ, Matveeva E, Kirioukhova O, **Grossniklaus U**, Gruissem W (2008). A dynamic reciprocal RBR-PRC2 regulatory circuit controls Arabidopsis gametophyte development. *Curr Biol* **18**, 1680-1686.

71. Moll C, von Lyncker L, Zimmermann S, Kägi C, Baumann N, Twell D, **Grossniklaus U**, Groß-Hardt R (2008). CLO/GFA1 and ATO are novel regulators of gametic cell fate in plants. *Plant J* **56**, 913-921.

72. Schauer SE, Schlüter PM, Baskar R, Gheyselinck J, Bolaños A, Curtis MD, **Grossniklaus U** (2009). Intronic regulatory elements determine the divergent expression patterns of AGAMOUS-LIKE6 subfamily members in Arabidopsis. *Plant J* **59***,* 987-1000.

73. Boisson-Dernier AJ, Roy S, Kritsas K, Grobei MS, Jaciubek M, Schroeder JI, **Grossniklaus U (**2009). Disruption of the pollen-expressed *FERONIA* homologs *ANXUR1* and *ANXUR2* triggers pollen tube discharge. *Development* **136**, 3279-3288.

74. Grobei MA, Qeli E, Brunner E, Rehrauer H, Zhang R, Roschitzki B, Basler K, Ahrens CH, **Grossniklaus U** (2009). Deterministic protein inference for shotgun proteomics data provides new insights into Arabidopsis pollen development and function. *Genome Res* **19**, 1786-1800.

75. Aquea F, Johnston AJ, Cañon P, **Grossniklaus U**, Acre-Johnson P (2010). *TRAUCO*, a *trithorax* group gene homolog, is required for early embryogenesis in *Arabidopsis thaliana*. *J Exp Bot* **61**, 1215-1224.

76. Pillot M, Baroux C, Arteaga Vasquez M, Autran D, Leblanc O, Vielle-Calzada J-P, **Grossniklaus U**, Grimanelli D (2010). Embryo and endosperm inherit distinct chromatin transcriptional states from the female gametes in *Arabidopsis*. *Plant Cell* **22**, 307-320.

77. Wüst SE, Vijverberg K, Schmidt , Weiss M, Gheyselinck J, Lohr M, Wellmer F, Rahnenführer J, von Mering C, **Grossniklaus U** (2010). *Arabidopsis* female gametophyte gene expression map reveals similarities between plant and animal gametes. *Curr Biol* **20**, 506-512.

78. Matias-Hernandez L, Battaglia R, Galbiati F, Rubes M, Eichenberger C, **Grossniklaus U**, Kater MM, Colombo L (2010). *VERDANDI* is a direct target of the MADS-domain ovule identity complex and affects embryo sac differentiation in *Arabidopsis*. *Plant Cell* **22**, 1702-1717.

79. Johnston AJ, Kirioukhova O, Barrell PJ, Rutten T, Moore JM, Baskar R, **Grossniklaus U**, Gruissem W (2010). Dosage-sensitive function of RETINOBLASTOMA RELATED and convergent epigenetic control are required during the Arabidopsis life cycle. *PLoS Genetics* **6**, e1000988.

80. Fakheran S, Paul-Victor C, Heichinger C, Schmid B, **Grossniklaus U**, Turnbull LA (2010). Adaptation and extinction in experimentally fragmented landscapes. *Proc Natl Acad Sci USA* **107**, 19120-19125.

81. Keinath NF, Kierszniowska S, Lorek J, Bourdais G, Kessler SA, Shimosato-Asano H, **Grossniklaus U**, Schulze W, Robatzek S, Panstruga R (2010). PAMP-induced changes in plasma membrane compartmentalization reveal novel components of plant immunity. *J Biol Chem* **285**, 39140-39149.

82. Kessler SA, Shimosato-Asano H, Keinath NF, Wuest SE, Ingram G, Panstruga R, **Grossniklaus U** (2010). Conserved molecular components for pollen tube reception and fungal invasion. *Science* **330**, 968-971.

83. Dumbliauskas E, Lechner E, Jaciubek M, Berr A, Pazhouhandeh M, Alioua M, Cognat V, Brukhin V, Koncz C, **Grossniklaus U**, Molinier J, Genschik P (2011). The *Arabidopsis* CUL4-DDB1 complex interacts with MSI1 and is required to maintain *MEDEA* parental imprinting. *EMBO J* **30**, 731-743.

84. Brukhin VB, Jacuibek M, Bolanos-Carpio A, Kuzmina V, **Grossniklaus U** (2011). Female gametophytic mutants of *Arabidopsis thaliana* identified in a gene trap insertional mutagenesis screen. *Int J Dev Biol* **55**, 73-84.

85. Felekis D, Muntwyler S, Vogler H, Beyeler F, **Grossniklaus U**, Nelson BJ (2011). Quantitating growth mechanics of living, growing plant cells in situ using microrobotics. *Micro & Nano Letters* **6**, 311-316.

86. Kőszegi D, Johnston AJ, Rutten T, Czihal A, Altschmied L, Kumlehn J, Wüst SE, Kirioukhova O, Gheyselinck J, **Grossniklaus U**, Bäumlein H (2011). Members of the RKD transcription factor family induce an egg cell-like expression program. *Plant J* **67**, 280-291.

87. Schlueter P, Xu S, Gagliardini V, Whittle E, Shanklin J, **Grossniklaus U**, Schiestl FP (2011). Stearoyl-ACP desaturases are associated with floral isolation in sexually deceptive orchids. *Proc Natl Acad Sci USA* **108**, 5696-5701.

88. Autran D, Baroux C, Raissig MT, Lenormand T, Wittig M, Grob S, Steimer A, Barann M, Klostermeier UC, Leblanc O, Vielle-Calzada JP, Rosenstiel P, Grimanelli D, **Grossniklaus U** (2011). Maternal epigenetic pathways control parental contributions to Arabidopsis early embryogenesis. *Cell* **145**, 707-719.

89. Kirioukhova O, Johnston AJ, Kleen D, Kägi C, Baskar R, Moore JM, Bäumlein H, Groß-Hardt R, **Grossniklaus U** (2011). Female gametophytic cell specification and seed development require the function of the putative *Arabidopsis* INCENP ortholog WYRD. *Development* **138**, 3409-3420.

90. McKeown PC, Laouielle-Duprat S, Prins P, Wolff P, Schmid MW, Donoghue MT, Fort A, Duszynska D, Comte A, Lao NT, Wennblom TJ, Smant G, Köhler C, **Grossniklaus U**, Spillane C (2011). Identification of imprinted genes subject to parent-of-origin specific expression in *Arabidopsis thaliana* seeds. *BMC Plant Biol* **11**, 113.

91. Schmidt A, Wuest SE, Vijverberg K, Baroux C, Kleen D, **Grossniklaus U** (2011). Transcriptome analysis of the Arabidipsis megaspore mother cell uncovers the importance of RNA helicases for plant germline development. *PLoS Biol* **9**, e1001155.

92. Schmid MW Schmidt A, Klostermeier UC, Barann M, Rosenstiel P, **Grossniklaus U** (2012). A powerful method for transcriptional profiling of specific cell types in eukaryotes: laser-assisted microdissection and RNA sequencing. *PLoS-ONE* **7**, e29685.

93. Petricka JJ, Schauer MA, Megraw M, Breakfield NW, Thompson JW, Georgiev S, Soderblom EJ, Ohler U, Moseley MA, **Grossniklaus U**, Benfey PN (2012). The protein expression landscape of the *Arabidopsis* root.. *Proc Natl Acad Sci USA* **109**, 6811-6818.

94. You W, Tyczewska A, Spencer M, Daxinger L, Schmid MW, **Grossniklaus U**, Simon SA, Meyers BC, Matzke AJ, Matzke M (2012). Atypical DNA methylation of genes encoding cysteine-rich peptides in *Arabidopsis thaliana*. *BMC Plant Biol* **12**, 51.

95. Mayank P, Grossman J, Wuest S, Boisson-Dernier A, Roschitzki B, Nanni P, Nühse T, **Grossniklaus U** (2012). Characterization of the phosphoproteome of mature *Arabidopsis* pollen. *Plant J* **72**, 89-101.

96. Lindner H, Raissig MT, Sailer C, Shimosato-Asano H, Bruggmann R, **Grossniklaus U** (2012). SNP-Ratio Mapping (SRM): Identifying lethal alleles and mutations in complex genetic backgrounds by next-generation sequencing. *Genetics* **191**,1381-1386.

97. Marshall A, Aalen RB, Audenaert D, Beeckman T, Broadley MR, Butenko MA, Caño-Delgado AI, de Vries S, Dresselhaus T, Felix G, Graham NS, Foulkes J, Granier C, Greb T, **Grossniklaus U**, Hammond JP, Heidstra R, Hodgman C, Hothorn M, Inzé D, Ostergaard L, Russinova E, Simon R, Skirycz A, Stahl Y, Zipfel C, De Smet I (2012). Tackling drought stress: RECEPTOR-LIKE KINASES present new approaches. *Plant Cell* **24**, 2262-2278.

98. Wöhrmann HJ, Gagliardini V, Raissig MT, Wehrle W, Arand J, Schmidt A, Tierling S, Page DR, Schöb H, Walter J, **Grossniklaus U** (2012). Identification of a DNA methylation-independent imprinting control region at the *Arabidopsis MEDEA* locus. *Genes Dev* **26**, 1837-1850.

99. Leshem Y, Johnson C, Wuest SE, Song X, Ngo QA, **Grossniklaus U**, Sundaresan V (2012). Molecular Characterization of the *glauce* mutant: a central cell-specific function is required for double fertilization in *Arabidopsis. Plant Cell* **24**, 3264-3277.

100. Xu S, Schlüter PM, **Grossniklaus U**, Schiestl FP (2012). The genetic basis of pollinator adaptation in a sexually deceptive orchid. *PLoS Genet* **8,** e1002889.

101. Kritsas K, Wuest SE, Hupalo D, Kern AD, Wicker T, **Grossniklaus U** (2012). Computational analysis and characterization of UCE-like elements (ULEs). in plant genomes. *Genome Res* **22**, 2455-2466.

102. Züst T, Heichinger C, **Grossniklaus U,** Harrington R, Kliebenstein DJ, Turnbull LA (2012). Natural enemies drive geographic variation in plant defenses. *Science* **338**, 116-119.

103. Ngo QA, Baroux C, Guthörl D, Mozerov P, Collinge MA, Sundaresan V, **Grossniklaus U** (2012). The armadillo repeat gene *ZAK IXIK* promotes *Arabidopsis* early embryo and endosperm development through a distinctive gametophytic maternal effect. *Plant Cell* **24**, 4026-4043.

104. Iwano M, Ngo QA, Entani T, Shiba H, Nagai T, Miyawaki A, Isogai A, **Grossniklaus U**, Takayama S (2012). Cytoplasmic Ca^{2+} changes dynamically during the interaction of the pollen tube with synergid cells. *Development* **139**, 4202-4209.

105. Sprunck S, Rademacher S, Vogler F, Gheyselinck J, **Grossniklaus U**, Dresselhaus T (2012). Egg cell-secreted EC1 triggers sperm cell activation during double fertilization. *Science* **338**, 1093-1097.

106. Ngo QA, Albrecht H, Tsuchimatsu T, **Grossniklaus U** (2013).The differentially regulated genes *TvQR1* and *TvPirin* of the parasitic plant *Triphysaria* exhibit distinctive natural allelic diversity. *BMC Plant Biol* **13**, 28.

107. Vogler H, Draeger C, Weber A, Felekis D, Eichenberger C, Routier-Kierzkowska AL, Boisson-Dernier A, Ringli C, Nelson BJ, Smith RS, **Grossniklaus U** (2013). The pollen tube: a soft shell with a hard core. *Plant J* **73**, 617-627.

108. Schmidt A, Wöhrmann HJ, Raissig MT, Arand J, Gheyselinck J, Gagliardini V, Heichinger C, Walter J, **Grossniklaus U** (2013). The *Polycomb* group protein MEDEA and the DNA methyltransferase MET1 interact to repress autonomous endosperm development in *Arabidopsis*. *Plant J* **73**, 776-787.

109. Lindner M, Simonini S, Kooiker M, Gagliardini V, Somssich M, Hohenstatt M, Simon R, **Grossniklaus U**, Kater MM (2013). TAF13 interacts with PRC2 members and is essential for *Arabidopsis* seed development. *Dev Biol* **379**, 28-37.

110. Sedeek KE, Qi W, Schauer MA, Gupta AK, Poveda L, Xu S, Liu ZJ, **Grossniklaus U**, Schiestl FP, Schlüter PM (2013). Transcriptome and proteome data reveal candidate genes for pollinator attraction in sexually deceptive orchids. *PLoS One* **8**, e64621.

111. Raissig MT, Gagliardini V, Jaenisch J, **Grossniklaus U**, Baroux C (2013). Efficient and rapid isolation of early-stage embryos from *Arabidopsis thaliana* seeds. *J Vis Exp* ***76***, doi: 10.3791/50371.

112. Lituiev DS, Krohn NG, Müller B, Jackson D, Hellriegel B, Dresselhaus T, **Grossniklaus U** (2013). Theoretical and experimental evidence indicates that there is no auxin gradient patterning the angiosperm female gametophyte. *Development* **140**, 4544-4553.

113. Grob S, Schmid MW, Luedtke NW, Wicker T, **Grossniklaus U** (2013). Characterization of chromosomal architecture in Arabidopsis by chromosome conformation capture. *Genome Biol* **14**, R129.

114. Boisson-Dernier A, Lituiev DS, Nestorova A, Franck CM, Thirugnanarajah S, **Grossniklaus U** (2013). ANXUR receptor-like kinases coordinate cell wall integrity with growth at the pollen tube tip via NADPH oxidases. *PLoS Biol* **11**, 1001719.

115. Raissig MT, Bemer M, Baroux C, **Grossniklaus U** (2013). Genomic imprinting in the *Arabidopsis* embryo is partly regulated by PRC2. *PLoS Genetics* **9**, e1003862.

116. Gossmann TI, Schmid MW, **Grossniklaus U**, Schmid KJ (2014). Selection-driven evolution of sex-biased genes is consistent with sexual selection in *Arabidopsis thaliana*. *Mol Biol Evol* **31**, 574-583.

117. Sailer C, Schmid B, Stöcklin J, **Grossniklaus U** (2014). Sexual *Hieracium pilosella* plants are better inter-specific, while apomicts are better intra-specific competitors. *Persp Plant Ecol Evol Syst* **16**, 43-51.

118. Bashir T, Sailer C, Gerber F, Loganathan N, Bhoopalan H, Eichenberger C, **Grossniklaus U**, Baskar R. (2014). Hybridization alters spontaneous mutation rates in a parent-of-origin-dependent fashion in Arabidopsis. *Plant Physiol* **165**, 424-437.

119. Ngo QA, Vogler H, Lituiev DS, Nestorova A, **Grossniklaus U** (2014). A calcium dialog mediated by the FERONIA signal transduction pathway controls plant sperm delivery. *Dev Cell* **29**, 491-500.

120. Schmidt A, Schmid MW, Klostermeier UC, Qi W, Guthörl D, Sailer C, Waller M, Rosenstiel P, **Grossniklaus U** (2014). Apomictic and sexual germline development differ with respect to cell cycle, transcriptional, hormonal and epigenetic regulation. *PLoS Genet* **10**, e1004476.

121. Grob S, Schmid MW, **Grossniklaus U** (2014). Hi-C analysis in *Arabidopsis* identifies the *KNOT*, a structure with similarities to the *flamenco* locus of *Drosophila*. *Mol Cell* **55**, 678-693.

122. Felekis D, Vogler H, Mechia G, Muntwyler S, Sakar MS, **Grossniklaus U**, Nelson BJ (2014). High-throughput analysis of the morphology and mechanics of tip growing cells using a microrobotic platform," *IEEE/RSJ Int. Conf. Intelligent Robots and Systems (IROS),* 3955-3960.

123. Kessler SA, Lindner H, Jones DS, **Grossniklaus U** (2015). Functional analysis of related CrRLK1L receptor-like kinases in pollen tube reception. *EMBO Reports* **16**, 107-115.

124. Schmid MW, **Grossniklaus U** (2015). Rcount: simple and flexible RNA-Seq read counting. *Bioinformatics* **31**, 436-437.

125. Singh AK, Bashir T, Sailer C, Gurumoorthy V, Ramakrishnan AM, Dhanapal S, **Grossniklaus U**, Ramamurthy B (2015). Parental age affects somatic mutation rates in the progeny of flowering plants. *Plant Physiol*. **168**, 247-57.

126. Felekis D, Vogler H, Mecja G, Muntwyler S, Nestorova A, Huang T, Sakar MS, **Grossniklaus U**, Nelson BJ (2015). Real-time, automated characterization of 3D morphology and mechanics of developing plant cells. *International Journal of Robotics Research* **34.8**, 1136-1146.

127. Lindner H, Kessler SA, Müller LM, Shimosato-Asano H, Boisson-Dernier A, **Grossniklaus U** (2015). *TURAN* and *EVAN* mediate pollen tube reception in *Arabidopsis* synergids through protein glycosylation. *PLoS Biology* **13**, e1002139.

128. Schmid MW, Grob S, **Grossniklaus U** (2015). HiCdat: a fast and easy-to-use Hi-C data analysis tool. *BMC Bioinformatics* **16**, 277.

129. Boisson-Dernier A, Franck CM, Lituiev DS, **Grossniklaus U** (2015) Receptor-like cytoplasmic kinase MARIS functions downstream of CrRLK1L-dependent signalingn during tip growth. *Proc Natl Acad Sci USA* **112**, 12211-12216.

130. Pires ND, Bemer M, Müller LM, Baroux C, Spillane C, **Grossniklaus U** (2016). Quantitative genetics identifies cryptic genetic variation in the paternal regulation of seed development. *PLoS Genet* **12**, e1005806.

131. Sailer C, Schmid B, **Grossniklaus U** (2016). Apomixis allows the transgenerational fixation of phenotypes in hybrid plants. *Curr Biol* **26**, 331-337.

132. Müller LM, Lindner H, Pires ND, Gagliardini V, **Grossniklaus U** (2016). A subunit of the oligosaccharyltransferase complex is required for interspecific gametophyte recognition in *Arabidopsis*. *Nat Commun* **11**, 10826.

133. Wuest SE, Philipp MA, Guthörl D, Schmid B, **Grossniklaus U** (2016). Seed production affects maternal growth and senescene in *Arabidopsis*. *Plant Phys* **171**, 392-404.

134. Sedeek KE, Whittle E, Guthörl D, **Grossniklaus U**, Shanklin J, Schlüter PM (2016). Amino acid change in an orchid desaturase enables mimicry of the pollinator's sex pheromone. *Curr Biol* **26**, 1505-1511.

135. Florez Rueda AM, **Grossniklaus U**, Schmidt A (2016). Laser-assisted microdissection (LAM) as a tool for transcriptional profiling of individual cell types. *J Vis Exp 10*, doi 10.3791/53916.

136. Rövekamp M, Bowman JL, **Grossniklaus U** (2016). *Marchantia* Mp*RKD* regulates the gametophyte-sporophyte transition by keeping egg cells quiescent in the absence of fertilization. *Curr Biol* **11**, 1782-1789.

137. Burri JT, Hu C, Shamsudhin N, Wang X, Vogler H, **Grossniklaus U**, Nelson BJ (2016). Dual-axis Cellular Force Microscope for mechanical characterization of living plant cells. *Proceedings of the 2016 IEEE International Conference on Automation Science and Engineering (CASE)*, 942-947.

138. Shamsudhin N, Atakan HB, Läubli N, Vogler H, Hu C, **Grossniklaus U**, Nelson BJ (2016). Probing the micromechanics of the fastest growing plant cell – the pollen tube. *Proceedings of the 38th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC'16),* 461-464.

139. Khanday I, Das S, Chongloi GL, Bansal M, **Grossniklaus U**, Vijayraghavan U (2016). Genome-wide targets regulated by the OsMADS1 transcription factor reveals its DNA recognition properties. *Plant Phys* **172**, 372-388.

140. Florez-Rueda AM, Paris M, Schmidt A, Widmer A, **Grossniklaus U**, Städler T (2016). Genomic imprinting in the endosperm is systematicallt perturned in abortive hybrid tomato seeds. *Mol Biol Evol* **33**, 2935-2946.

141. Hedhly A, Vogler H, Schmid MW, Pazmino D, Gagliardini V, Santelia D, **Grossniklaus U** (2016). Starch Turnover and Metabolism during Flower and Early Embryo Development. *Plant Physiol* **172**, 2388-2402.

142. Hu C, Munglani G, Vogler H, Fabrice TN, Shamsudhin N, Wittel FK, Ringli C, **Grossniklaus U**, Herrmann HJ, Nelson BJ (2016). Characterization of size-dependent mechanical properties of tip-growing cells using a lab-on-chip device. *Lab Chip* **17**, 82-90.

143. Shamsudhin N, Laeubli N, Atakan HB, Vogler H, Hu C, Haeberle W, Sebastian A, **Grossniklaus U**, Nelson BJ (2016). Massively parallelized pollen tube guidance and mechanical measurement on a Lab-on-a-Chip platform. *PLoS One* **11**, e0168138.

144. Shamsudhin N, Atakan HB, Läubli N, Vogler H, Chengzhi Hu, Sebastian A, **Grossniklaus U**, Nelson BJ (2016). Probing the micromechanics of the fastest growing plant cell – the pollen tube. *Conf Proc IEEE Eng Med Biol Soc 2016,* 461-464.

145. Baroux C, Pecinka A, Fuchs J, Kreth G, Schubert I, **Grossniklaus U** (2016). Non-random chromosome arrangement in triploid endosperm nuclei. *Chromosoma* **126**, 115-124.

146. Hu C, Vogler H, Aellen M, Shamsudhin N, Jang B, Burri JT, **Grossniklaus U**, Pané S, Nelson BJ (2017). High precision, localized proton gradients and fluxes generated by a microelectrode device induce differential growth behaviors of pollen tubes. *Lab Chip* **17**, 671-680.

147. GrossmannJ, Fernández H, Mayank P, Valdés AE, Gagliardini V, Cañal MJ, Russo G, **Grossniklaus U** (2017). Proteogenomic analysis greatly expands the identification of proteins related to reproduction in the apogamous fern *Dryopteris affinis* ssp. *affinis*. *Front Plant Sci* **8**:336.

148. Hu C, Zhang Q, Vogler H, Burri JT, Shamsudhin N, **Grossniklaus U**, Nelson BJ (2017). *In vivo* tracking and measurement of pollen tube vesicle motion. *Proceedings of the IEEE International Conference on Robotics and Automation 2017*, in press.

149. Zhao X, Bramsiepe J, Van Durme M, Komaki S, Prusicki MA, Maruyama D, Forner J, Medzihradszky A, Wijnker E, Harashima H, Lu Y, Schmidt A, Guthörl D, Logroño RS, Guan Y, Pochon G, **Grossniklaus U**, Laux T, Higashiyama T, Lohmann JU, Nowack MK, Schnittger A (2017). RETINOBLASTOMA RELATED1 mediates germline entry in Arabidopsis. *Science* **356**, eaaf6532.

150. Bowman JL, Kohchi T, Yamato KT, ... **Grossniklaus U**, ... Rövekamp M, ... Schmid MW, ... Schmutz J (2017). Insights into land plant evolution garnered from the *Marchantia polymorpha* genome. *Cell* **171**, 287-304.

151. Ndinyanka Fabrice T, Kaech A, Barmettler G, Eichenberger C, Knox JP, **Grossniklaus U**, Ringli C (2017). Efficient preparation of Arabidopsis pollen tubes for ultrastructural analysis using chemical and cryo-fixation. *BMC Plant Biol* **17**, 176.

152. **Grossniklaus U** (2017). Polyspermy produces tri-parental seeds in maize (*Zea mays*). *Curr Biol* **27**, R1300-R1302.

153. Mecchia M, Santos-Fernandez G, Duss NN, Somoza SC, Boisson-Dernier A, Gagliardini V, Martínez-Bernardini A, Ndinyanka Fabrice T, Ringli C, Muschietti JP, **Grossniklaus U** (2017). RALF4/19 peptides interact with LRX proteins to control pollen tube growth in *Arabidopsis*. *Science* **358**, 1600-1603.

154. Ndinyanka Fabrice T, Vogler H, Draeger C, Munglani G, Gupta S, Herger AG, Knox JP, **Grossniklaus U**, Ringli C (2018). LRX Proteins play a crucial role in pollen grain and pollen tube cell wall development. *Plant Physiol* **176**, 1981-1992.

155. Schmid MW, Giraldo-Fonseca A, Rövekamp M, Smetanin D, Bowman JL, **Grossniklaus U** (2018). Extensive epigenetic reprogramming during the life cycle of *Marchantia polymorpha. Genome Biol* **19**, 9.

156. Kliver S, Rayko M, Komissarov A, Bakin E, Zhernakova D, Prasad K, Rushworth C, Baskar R, Smetanin D, Schmutz J, Rokhsar DS, Mitchell-Olds T, **Grossniklaus U**, Brukhin V (2018). Assembly of the *Boechera retrofracta* genome and evolutionary analysis of apomixis-associated genes. *Genes* **9**, 185.

157. Hedhly A, Vogler H, Eichenberger C, **Grossniklaus U** (2018). Whole-mount Clearing and staining of *Arabidopsis* flower organs and siliques. *J Vis Exp* **134**, doi: 10.3791/56441.

158. Burri JT, Vogler H, Läubli NF, Hu C, **Grossniklaus U**, Nelson BJ (2018). Feeling the force: how pollen tubes deal with obstacles. *New Phytol* **220**, 187-195.

159. Kirioukhova O, Shah JN, Larsen DS, Tayyab M, Mueller NE, Govind G, Baroux C, Federer M, Gheyselinck J, Barrell PJ, Ma H, Sprunck S, Huettel B, Wallace H, **Grossniklaus U**, Johnston AJ (2018). Aberrant imprinting may underlie evolution of parthenogenesis. *Sci Rep* **8**, 10626.

160. Zhang L, Cai X, Wu J, Liu M, Grob S, Cheng F, Liang J, Cai C, Liu Z, Liu B, Wang F, Li S, Liu F, Li X, Cheng L, Yang W, Li MH, **Grossniklaus U**, Zheng H, Wang X (2018). Improved *Brassica rapa* reference genome by single-molecule sequencing and chromosome conformation capture technologies. *Hortic Res* **5**, 50.

161. Tsuchimatsu T, Kakui H, Yamazaki M, Marona C, Tsutsui H, Hedhly A, Meng D, Sato Y, Städler T, **Grossniklaus U**, Kanaoka MM, Lenhard M, Nordborg M, Shimizu KK (2019). Adaptive reduction of male gamete number in a selfing species. *bioRxiv* 272757.

162. Schmid MW, Heichinger C, Coman Schmid D, Guthörl D, Gagliardini V, Bruggmann R, Aluri S, Aquino C, Schmid B, Turnbull LA, **Grossniklaus U** (2018). Contribution of epigenetic variation to adaptation in *Arabidopsis*. *Nat Commun* **9**, 4446.

163. Wyder S, Raissig MT, **Grossniklaus U** (2019). Consistent reanalysis of genome-wide imprinting studies in plants using generalized linear models increases concordance across datasets. *Sci Rep* **9**, 120.

164. Läubli NF, Shamsudhin N, Vogler H, Munglani G, **Grossniklaus U**, Ahmed D, Nelson BJ (2019). 3D manipulation and imaging of plant cells using acoustically activated microbubbles. *Small Methods* **3**, 1800527.

165. Burri JT, Vogler H, Munglani G, Läubli NF, **Grossniklaus U**, Nelson BJ (2019). A microrobotic system for simultaneous measurement of turgor pressure and cell-wall elasticity of individual growing plant cells. *IEEE Robotics and Automation Letters* **4**, 641-646.

166. Díaz M, Pecinkova P, Nowicka A, Baroux C, Sakamoto T, Gandha PY, Jerábková, Matsunaga S, **Grossniklaus U**, Pecinka A (2019). The SMC5/6 complex subunit NSE4A is involved in DNA damage repair and seed development in Arabidopsis. *Plant Cell*, in press.

167. Grob S, **Grossniklaus U** (2019). Invasive DNA elements modify the nuclear architecture of their insertion site by *KNOT*-linked silencing in *Arabidopsis thaliana*. *Genome Biol*, in press.

Reviews and Correspondence

168. **Grossniklaus U**, Schneitz K (1998). Genetic and molecular control of ovule development and megagametogenesis. *Seminars in Cell & Devl Biol* **9**, 227-238.

169. **Grossniklaus U**, Vielle-Calzada J-P (1998). Parental conflict and infanticide during embryogenesis. *Trends in Plant Sciences* **3**, 328.

170. **Grossniklaus U**, Koltunow AM, van Lookeren Campagne M (1998). A bright future for apomixis. *Trends in Plant Science* **3**, 415-416.

171. Lemieux B, **Grossniklaus U** (1999, 2000, 2001). Paper Alerts in Genomics and Molecular Genetics. *Curr Opin Plant Biol* **2, 3, 4**.

172. Grimanelli D, Leblanc O, Perotti E, **Grossniklaus U** (2001). Developmental genetics of gametophytic apomixis. *Trends Genet* **17**, 597-604.

173. **Grossniklaus U**, Nogler GA, van Dijk P (2001). How to avoid Sex. The genetic control of gametophytic apomixis. *Plant Cell* **13**, 1491-1498.

174. **Grossniklaus U**, Spillane C, Page DR, Köhler C (2001). Genomic imprinting and seed development: endosperm formation with and without sex. *Curr Opin Plant Sci* **4**, 21-27.

175. Spillane C, Steimer A, **Grossniklaus U** (2001). Apomixis in agriculture: the quest for clonal seeds. *Sex Plant Reprod* **14**, 179-187.

176. Spillane C, Vielle-Calzada J-P, **Grossniklaus U** (2001). APO 2001. A sexy apomixer in Como. *Plant Cell* **13**, 1480-1491.

177. Vielle-Calzada J-P, Baskar R, **Grossniklaus U** (2001). Seed development: Early paternal gene activity in *Arabidopsis*. Response. *Nature* **414**, 6865.

178. Baroux C, Spillane C, **Grossniklaus U** (2002). Evolutionary origins of the endosperm in flowering plants. *Genome Biol* **3**, 1026.1-1026.5.

179. Köhler C, **Grossniklaus U** (2002). Epigenetics: the flowers that come in from the cold. *Curr Biol* **12**, 129-31.

180. Köhler C, **Grossniklaus U** (2002). Epigenetic inheritance of expression states in plant development: the role of *Polycomb* group proteins. *Curr Opin Cell Bio*l **14**, 773-779.

181. Page DR, **Grossniklaus U** (2002). The art and design of genetic screens: *Arabidopsis thaliana*. *Nat Rev Genet* **3**, 124-136.

182. da Costa-Nunes JA, **Grossniklaus U** (2003). Unveiling the gene-expression profile of pollen. *Genome Biol* **5**, 205.1-205.3.

183. Koltunow AM, **Grossniklaus U** (2003). Apomixis: a developmental perspective. *Ann Rev Plant Devl* **54**, 547-574.

184. Pruitt RE, Bowman JL, and **Grossniklaus U** (2003). Plant genetics: a decade of integration. *Nature Genet* **33** Suppl, 294-304.

185. Reyes JC, **Grossniklaus U** (2003). Diverse functions of *Polycomb* group proteins during plant development. *Sem Cell Devl Biol* **14**, 77-84.

186. Bernasconi G, Ashman T-L, Birkhead TR, Bishop JDD, **Grossniklaus U**, Kubli E, Marshall DL, Schmid B, Skogsmyr BI, Snook RR, Taylor D, Till-Bottraud I, Ward PI, Zeh DW, Hellriegel B. (2004). Evolutionary ecology of the pre-zygotic stage. *Science* **303**, 971-975.

187. Spillane C, Curtis MD, **Grossniklaus U** (2004). Apomixis technology development – virgin births in farmer's fields? *Nature Biotech* **22**, 687-691.

188. Steimer A, Schöb H, **Grossniklaus U** (2004). Epigenetic control of plant development: new layers of complexity. *Curr Op Plant Biol* **7**, 11-19.

189. Day RC, **Grossniklaus U**, Macknight RC (2005). Be more specific! Laser-assisted microdissection of plant cells. *Trends in Plant Sci* **10**, 397-406.

190. Brukhin V, Curtis M, **Grossniklaus U** (2005). The female gametophyte: no longer the forgotten generation. *Curr Science* **89**, 1844-1852.

191. Schöb H-P, **Grossniklaus U.** (2006). High-resolution insights into the 'methylome' of *Arabidopsis thaliana*. *Cell* **126**, 1025-1028.

192. Pien S, **Grossniklaus U** (2007). *Polycomb* and *trithorax* group proteins in *Arabidopsis*. *Biochim Biophys Acta* **1769**, 375-382.

193. Baroux C, Pien S, **Grossniklaus U** (2007). Chromatin modification and remodeling during early seed development. *Curr Opin Genet Dev* **17**, 473-479.

194. Curtis M, **Grossniklaus U** (2007). Molecular control of autonomous embryo and endosperm development. *Sex Plant Rep* **21**, 79–88.

195. Baroux C, Autran D, Gillmor CS, Grimanelli D, **Grossniklaus U** (2008). The maternal to zygotic transition in animals and plants. *Cold Spring Harb Symp Quant Biol* **73**, 89-100.

196. **Grossniklaus U** (2009). Plant Science. Paternal patterning cue. *Science* **323**, 1439-40.

197. Müller B, **Grossniklaus U** (2010). Model organisms – a historical perspective. *J Proteomics* **73**, 2054-2063.

198. Boisson-Dernier A, Kessler SA, **Grossniklaus U** (2011). The walls have ears: the role of plant CrRLK1Ls in sensing and transducing extracellular signals. *J Exp Bot* **62**, 1581-1591.

199. Raissig MT, Baroux C, **Grossniklaus U** (2011). Regulation and flexibility of genomic imprinting during seed development. *Plant Cell* **23**, 16-26.

200. Baroux C, Raissig MT, **Grossniklaus U** (2011). Epigenetic regulation and reprogramming during gamete formation in plants. *Curr Opin Genet Dev* **21**, 124-33.

201. Paszkowski J, **Grossniklaus U** (2011). Selected aspects of transgenerational epigenetic inheritance and resetting in plants. *Curr Opin Plant Biol* **14**, 195-203.

202. **Grossniklaus U** (2011). Plant germline development: a tale of cross-talk, signaling, and cellular interactions. *Sex Plant Reprod* **24**, 91-95.

203. Kessler SA, **Grossniklaus U** (2011). She's the boss: signaling in pollen tube reception. *Curr Opin Plant Biol* **14**, 622-627.

204. Jones AM, Aebersold R, Ahrens CH, Apweiler R, Baerenfaller K, Baker M, Bendixen E, Briggs S, Brownridge P, Brunner E, Daube M, Deutsch EW, **Grossniklaus U**, Heazlewood J, Hengartner MO, Hermjakob H, Jovanovic M, Lawless C, Lochnit G, Martens L, Ravnsborg C, Schrimpf SP, Shim YH, Subasic D, Tholey A, van Wijk K, von Mering C, Weiss M, Zheng X. (2012). The HUPO initiation on Model Organism Proteomes, iMOP. *Proteomics* **12**, 340-345.

205. Schmidt A, Schmid MW, **Grossniklaus U** (2012). Analysis of plant germline development by high-throughput RNA profiling: technical advances and new insights. *Plant J* **70**, 18-29.

206. Lindner H, Müller LM, Boisson-Dernier A, **Grossniklaus U** (2012). CrRLK1L receptor-like kinases: not just another brick in the wall. *Curr Opin Plant Biol* **15**, 659-669.

207. Pires ND, **Grossniklaus U** (2012). How to fine-tune an epigenetic switch. *Dev Cell* **23**, 453-454.

208. Bemer M, **Grossniklaus U** (2012). Dynamic regulation of Polycomb group activity during plant development. *Curr Opin Plant Biol* **5**, 523-529.

209. Hirsch S, Baumberger R, **Grossniklaus U** (2012). Epigenetic variation, inheritance, and selection in plant populations. *Cold Spring Harb Symp Quant Biol* **77**, 97-104.

210. Wuest SE, Schmid MW, **Grossniklaus U** (2013). Cell-specific expression profiling of rare cell types as exemplified by its impact on our understanding of female gametophyte development. *Curr Opin Plant Biol* **16**, 41-49

211. Baroux C, Autran D, Raissig MT, Grimanelli D, **Grossniklaus U** (2013). Parental contributions to the transcriptome of early plant embryos. *Curr Opin Genet Dev* **23**, 72-74.

212. **Grossniklaus U,** Kelly B, Ferguson-Smith AC, Prembrey M, Lindquist S (2013). Transgenerational epigenetic inheritance: how important is it? *Nature Rev Genetics* **14**, 228-235.

213. Lituiev SL, **Grossniklaus U** (2014). Patterning of the angiosperm female gametophyte through the prism of theoretical paradigms. *Biochem Soc Trans* **42**, 332-339.

214. Pires ND, **Grossniklaus U** (2014). Different yet similar: evolution of imprinting in flowering plants and mammals. *F1000Prime Rep* **6**,63.

215. **Grossniklaus U**, and Paro R (2014). Transcriptional silencing by polycomb-group proteins. *Cold Spring Harb Perspect Biol* **6**, a019331.

216. Schmidt A, Schmid MW, **Grossniklaus U** (2015). Plant germline formation: common concepts and developmental flexibility in sexual and asexual reproduction. *Development* **142**, 229-241.

217. Vogler H, Felekis D, Nelson BJ, **Grossniklaus U** (2015). Measuring the mechanical properties of plant cell walls. *Plants* **4**, 167-182.

218. Schmid MW, Schmidt A, **Grossniklaus U** (2015) The female gametophyte: an emerging model for cell type-specific systems biology in plant development. *Front Plant Sci.* **6**, 907.

219. Vogler H, Martinez-Bernardini A, **Grossniklaus U** (2016). Maybe she's NOT the boss: male-female crosstalk during sexual plant reproduction. *Genome Biol* **17**, 96.

220. Grob S, **Grossniklaus U** (2017). Chromosome conformation capture-based studies reveal novel features of plant nuclear architecture. *Curr. Opin. Plant Biol.* **36**, 149-157.

221. Brukhin V, Osadtchiy JV, Florez-Rueda AM, Smetanin D, Bakin E, Nobre MS, **Grossniklaus U** (2019). The *Boechera* genus as a resource for apomixis research. *Frontiers Plant Sci* **10**, 392.

Book Contributions

222. **Grossniklaus U**, Moore JM, Gagliano WB (1998). Molecular and genetic approaches to understanding and engineering apomixis: *Arabidopsis* as a powerful tool. In *Advances in Hybrid Rice Technology*. Proceedings of the 3rd International Symposium on Hybrid Rice 1996 (Virmani SS, Siddiq EA, Muralidharan K, eds.). International Rice Research Institute, Manila, Philippines, pp. 187-211.

223. Messing, J, **Grossniklaus U** (1999). Genomic imprinting in plants. In *Results and Problems in Cell Differentiation: Genomic Imprinting* (Ohlsson R, ed.). Springer Verlag, Berlin, Germany, pp. 24-39.

224. **Grossniklaus U** (2001). From sexuality to apomixis: molecular and genetic approaches. In *Advances in Apomixis Research* (Savidan Y, Carman J, Dresselhaus T, eds). CYMMIT Press, Mexico. pp. 168-211.

225. Baroux C, Spillane C, **Grossniklaus U** (2002). Genomic imprinting during seed development. In *Advances in Genetics: Homology Effects* (Dunlap JC, Wu C-t, eds). Academic Press, San Diego, USA, pp. 165-214.

226. Spillane C, Vielle-Calzada J-P, **Grossniklaus U** (2002). Parent-of-origin effects and seed development: Genetics and epigenetics. In *The Handbook of Transgenic Food Plants* (Hui YH, Khachatourians GG, McHughen A, Nip WK, Scorza R, eds). Marcel Dekker Inc., New York, USA, pp. 109-136.

227. **Grossniklaus U**, Moore JM, Brukhin V, Gheyselinck J, Baskar R, Vielle-Calzada J-P, Baroux C, Page DR, Spillane C (2003). Engineering of apomixis in crop plants: what can we learn from sexual model systems. In: *Plant Biotechnology 2002 and Beyond* (Vasil I, ed). Kluver Academic Pulishers, Dordrecht, Netherlands, pp. 309-314.

228. Curtis MD, Brand L, Yang W, Nüesch E, Moore JM, Jefferson R, and **Grossniklaus U** (2004). Apomixis technology development: transgene containment and fixation of heterosis. *Proceedings of the 8th International Symposium on the Biosafety of Genetically Modified Organisms*, Montpellier, pp. 167-173.

229. Köhler C, and **Grossniklaus U** (2005). Seed development and genomic imprinting in plants. *Prog Mol Subcell Biol.* **38**, 237-62.

230. Curtis MD, **Grossniklaus U** (2005). Thale Cress (*Arabidopsis thaliana*) genome. In: *Encyclopedia of Molecular Cell Biology and Molecular Medicine* (Meyers RA, ed). Wiley-VCH Publisher, Weinheim, Germany, pp. 245-282.

231. **Grossniklaus U** (2005). Genomic imprinting in plants: a predominantly maternal affair. In *Annual Plant Reviews: Plant Epigenetics* (Meyer P, ed). Blackwell, Sheffield, UK, pp. 174-200.

232. Barrell, PJ, **Grossniklaus U** (2006). Cytology of female meiosis and embryo sac development in maize (*Zea mays*). *Proceedings of the 13th Australasian Plant Breeding Conference "Breeding for Success: Diversity in Action"*, pp. 66 ff.

233. Curtis MD, **Grossniklaus U** (2006). Conditional gene expression in plants. In *Floriculture, Ornamental and Plant Biotechnology: Advances and Topical Issues* (Teixeira da Silva, ed). Global Science Books Vol. II, London, UK, pp. 77-87.

234. **Grossniklaus U**, Paro R (2006). Transcriptional silencing by *Polycomb* group proteins. In *Epigenetics* (Jenuwein T, Reinberg D, Allis D, eds). CSHL Press, Cold Spring Harbor, USA, pp. 211-230.

235. Curtis MD, **Grossniklaus U** (2007). Apomixis and amphimixis: two sides of the same coin. In *Apomixis: Evolution, Mechanisms and Perspectives* (Hörandl E, Grossniklaus U, van Dijk PJ, Sharbel TF, eds). *Regnum Vegetabile* **147**, 37-62.

236. Matzk F, Prodanovic S, Czihal A, Tiedemann J, Arzenton F, Blattner F, Kumlehn J, Altschmied L, Schubert I, Johnston AJ, **Grossniklaus U**, Bäumlein H (2007). Apomixis: preliminary lessons from Poa, Hypericum and wheat egg cells. In *Apomixis: Evolution, Mechanisms and Perspectives* (Hörandl E, Grossniklaus U, van Dijk PJ, Sharbel TF, eds). *Regnum Vegetabile* **147**, 159-166.

237. Curtis MD, **Grossniklaus U** (2007). Plant genetics and development. *Encyclopedia of Life Sciences*, pp. 1-10 (doi: 10.1002/9780470015902.a0002033).

238. Evans MMS, **Grossniklaus U** (2008). The maize megagametophyte. In *The Maize Handbook (*Hake S, Benetzen J, eds). Springer, New York, USA, pp. 79-104.

239. Pien S, **Grossniklaus U** (2010). Chromatin immunoprecipitation protocol for histone modifications and protein-DNA binding analyses in *Arabidopsis. Methods Mol Biol.* **631**, 209-220.

240. Barrell P, **Grossniklaus U** (2013). Examining female meiocytes of maize by confocal microscopy. *Methods Mol Biol* **990**, 45-52.

241. Hirsch S, Baumberger R, **Grossniklaus U** (2013). Epigenetic variation, inheritance, and selection in plant populations. *Cold Spring Harb Symp Quant Biol* **77**, 97-104.

242. Wuest SE, **Grossniklaus U** (2014). Laser-assisted microdissection applied to floral tissues. *Methods Mol Biol* **1110**, 329-344.

243. **Grossniklaus U**, Paro R (2014). Transcriptional silencing by *Polycomb* group proteins. *Cold Spring Harb Perspect Biol* **6**, a019331.

244. Felekis D, Vogler H, **Grossniklaus U**, Nelson BJ (2014). Microrobotic tools for plant biology. In *Emerging Tools for Micro and Nano Manipulation*, Wiley-VCH.

245. Baroux C, **Grossniklaus U** (2015). The maternal-to-zygotic transition in flowering plants: Evidence, mechanisms, and plasticity. *Curr Top Dev Biol.* **113**, 351-371.

246. **Grossniklaus U** (2015). Molecular regulation of reproductive development. In *Biochemistry and Molecular Biology of Plants*, 2nd Edition (Buchanan BB, Gruissem W, Jones RL, eds). Wiley Blackwell, USA, pp. 872-924.

247. You W, Pien S, **Grossniklaus U** (2017). Chromatin immunoprecipitation protocol for histone modifications and protein-DNA binding analyses in *Arabidopsis. Methods Mol Biol* 1456, 1-13.

248. Sasheva P, **Grossniklaus U** (2017). Differentially methylated region - representational difference analysis (DMR-RDA): a powerful method to identify DMRs in uncharacterized genomes. *Methods Mol Biol* 1456, 113-125.

249. Grob S, **Grossniklaus U** (2017). Chromatin conformation capture-based analysis of nuclear architecture. *Methods Mol Biol* 1456, 15-32.

250. Vogler H, Shamsudhin N, Nelson BJ, **Grossniklaus U** (2017). Measuring cytomechanical forces on growing pollen tubes. In *Pollen Tip Growth - from Biophysical Aspects to Systems Biology* (Obermeyer G, Feijó J, eds). Springer, Germany, pp. 65-86.

251. Vogler H, **Grossniklaus U**, Hedhly A (2017). An introduction to male germline development. *Methods Mol Biol* **1669**, 3-15.

252. Pires ND, **Grossniklaus U** (2018). Identification of parent-of-origin-dependent QTLs using bulk-segregant sequencing (Bulk-Seq). *Methods Mol Biol* **1675**, 361-371.

253. She W, Baroux C, **Grossniklaus U** (2018). Cell-type specific chromatin analysis in whole-mount plant tissues by immunostaining. *Methods Mol Biol* **1675**, 443-454.

254. Rivera A, Cañal MJ, **Grossniklaus U**, Fernandez H (2018). The gametophyte of fern: Born to reproduce. In Current Adcances in Fern Research (Fernandez H, ed). Springer, Germany, pp. 3-19.

255. Baroux C, **Grossniklaus U** (2019). Seeds – An evolutionary innovation underlying reproductive success in flowering plants. *Curr Top Dev Biol* **131**, 605-642.

Books and Other Publications

256. **Grossniklaus U** (2000). Sex, Plants and Rock'n Roll: Die genetischen Grundlagen der Fortpflanzungsbiologie bei Pflanzen. *Forschung für Leben* **58**, 18-23.

257. **Grossniklaus U** (2001). Apomixis – Nachkommen ohne männliche Beteiligung. *Briefe aus dem Bot. Garten* **35** (6).

258. **Grossniklaus U**, Keller B, Linder HP (2002). Wissenschaftliche Forschung im Botanischen Garten. Züriberg **20**, 7.

259. Hörandl E, **Grossniklaus U**, van Dijk PJ, Sharbel TF (eds) (2007). *Apomixis: Evolution, Mechanisms and Perspectives. Regnum Vegetabile* **147**.

260. **Grossniklaus U** (2007). Vorwort. In *Pflanzenbiotechnologie in der Schweiz – Ein Jahr nach der Gentechfrei-Initiative* (Kohler S, Maranta A, Sautter C, eds). Plant Science Center, Switzerland.

261. **Grossniklaus U** (2009). Editorial. *Plant Science Newsletter* 15, 1 (2009/15)

262. Dahinden M, Romeis J, Kohler S, **Grossniklaus U**, Folkers G (eds) (2012). *Grüne Gentechnologie: Forschungs zwischen Anspruch und Wirklichkeit: Wie weiter nach NFP59 und Moratorium?* Collegium Helveticum Idea Verlag, Zürich, Switzerland.

263. Braun R, **Grossniklaus U**, Gygax D, Kohler S, Matthias P, Romeis J, Sanvido O, Stieger P (2013). Gentechnisch veränderte Nutzpflanzen und ihre Bedeutung für eine nachhaltige Landwirtschaft in der Schweiz. Akademien der Wissenschaften Schweiz, Bern, Switzerland.

264. Lüthi C, Romeis J, Mauch F, **Grossniklaus U**, Studer B, Kohler S (2016). Neue Pflanzenzüchtungs-techniken für die Schweizer Landwirtschaft – grosses Potential, offene Zukunft. Akademien der Wissenschaften Schweiz, Bern, Switzerland.

265. Rauter H, Rapo C, Paschke M, Schöb H, Gagliardini V, **Grossniklaus U** (2017). Mutationen und Keimblattentwicklung von *Arabidopsis thaliana*. In *Pflanzenwissenschaftliche Experimente für Familien und Schulklassen* (Dahinden M, Paschke M, eds). Zurich-Basel Plant Science Center, Switzerland.

266. **Grossniklaus U (**2019). Preface. *Plant Development and Evolution*. *Curr Top Dev Biol* **131**.

267. **Grossniklaus U** (ed) (2019). *Plant Development and Evolution*. *Curr Top Dev Biol* **131**.

Publications with Contributions from my Laboratory on which I was not an Author

268. Sieber P, Wellmer F, Gheyselinck J, Riechmann JL, Meyerowitz EM (2007). Redundancy and specialization among plant microRNAs: role of the *MIR164* family in developmental robustness. *Development* **134**, 1051-1060.

269. She W, Grimanelli D, Rutowicz K, Whitehead MW, Puzio M, Kotlinski M, Jerzmanowski A, Baroux C (2013). Chromatin reprogramming during the somatic-to-reproductive cell fate transition in plants. *Development* **140**, 4008-4019.

270. Zürcher E, Tavor-Deslex D, Lituiev D, Enkerli K, Tarr PT, Müller B (2013). A robust and sensitive synthetic sensor to monitor the transcriptional output of the cytokinin signaling network *in planta*. *Plant Physiol* **161**, 1066-1075.

271. She W, Grimanelli D, Baroux C (2014). An efficient method for quantitative, single-cell analysis of chromatin modification and nuclear architecture in whole-mount ovules in *Arabidopsis. J Vis Exp* **88**, e51530.

272. She W, Baroux C (2015). Chromatin dynamics in pollen mother cells underpin a common scenario at the somatic-to-reproductive fate transition of both the male and female lineages in *Arabidopsis. Front Plant Sci*. **6**, 294.

273. Zürcher E, Liu J, di Donato M, Geisler M, Müller B (2016). Plant development regulated by cytokinin sinks. *Science* **353**,1027-1030.

274. Gossmann TI, Saleh D, Schmid MW, Spence MA, Schmid KJ (2016). Transcriptomes of plant gametophytes have a higher proportion of rapidly evolving and young genes than sporophytes. *Mol Biol Evol* **33**, 1669-1678.

275. Vogiatzaki E, Baroux C, Jung JY, Poirier Y (2017). PHO1 expots phosphate from the chalazal seed coat to the embryo in developing *Arabidopsis* seeds. *Curr Biol* **27**, 2893-2900.

276. Franck CM, Westermann J, Bürssner S, Lentz R, Lituiev DS, Boisson-Dernier A (2018). The protein phosphatases *ATUNIS1* and *ATUNIS2* regulate cell wall integrity in tip-growing cells. *Plant Cell* **30**, 1906-1923.