ALLEGATO B

UNIVERSITÀ DEGLI STUDI DI MILANO
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[Marta Adelina Miranda Mendes]
CURRICULUM VITAE

INFORMAZIONI PERSONALI (NON INSERIRE INDIRIZZO PRIVATO E TELEFONO FISSO O CELLULARE)

COGNOME	MIRANDA MENDES
NOME	MARTA ADELINA
DATA DI NASCITA	[29, Maggio, 1986]

CURRENT POSITION:

RICERCATORE a TEMPO DETERMINATO (TIPO A) 05/A1 BOTANICA GENERALE
Dipartimento di Bioscienze,
Università degli Studi di Milano
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EDUCATION and QUALIFICATIONS

Title	Dissertation	Date - University
PhD in Biomolecular Sciences	"*Molecular Analysis of Double Fertilization Process in Arabidopsis"*. Funded by Marie Curie Actions-FP7- SYSFLO (http://www.sysflo.eu) Supervisor: Prof. Lucia Colombo **Abstract in the appendix A1**	**May 2013.** University of Milan
Master in Biological Sciences	"*Arabidopsis thaliana* pollen tube development characterization in *agp6agp11* null mutant". Supervisor: Prof. Silvia Coimbra	**December 2009.** University of Porto
Degree in Biological Sciences	"*AGP6 and AGP11 in RNAi silenced lines*". Supervisors: Prof. Silvia Coimbra and Prof. Luis Gustavo Pereira	**September 2008.** University of Porto

TEACHING ACTIVITY

- Teaching activity in LAUREA TRIENNALE IN SCIENZE NATURALI (class L-32) - Teaching: Botany (F66-68). At the Biosciences department, University of Milan. from 01-3-2017 to today.

- Teaching activity in LAUREA TRIENNALE IN SCIENZE BIOLOGICHE (class L-13) - Teaching: Developmental biology (F62-21). At the Biosciences department, University of Milan. (3-CFU). from 01-10-2018 to today.

-Collaboration as Assistant Professor in General Botany pratical lessons - course held by Prof. Lucia Colombo and Prof. Elisabetta Caporali - LAUREA TRIENNALE IN SCIENZE BIOLOGICHE - at the Biosciences department, University of Milan. (years 2012/2013; 2013/2014; 2014/2015; 2015/2016)

THESIS SUPERVISOR

Guidance during thesis, experimental design and writing of the project/obtained results,

Master Students - Co-supervisor of 6 experimental thesis and main Supervisor of 1 thesis in Plant Development biology:

1. Co-supervisor of the master student Marco Salina (class LM 6- Biological Sciences), thesis title: “Controllo transcrizionale dell’ovulo in Arabidopsis thaliana.” (2012) - in collaboration with Prof. Colombo, University of Milan. from 01-02-2011 to 01-03-2012

2. Co-supervisor of the master student Beatrice Castelnovo (class LM 6- Biological Sciences), thesis title: “Caratterizzazione funzionale del gene Reproductive Meristem 11 di Arabidopsis thaliana” (2013) - in collaboration with prof. Colombo, University of Milan. from 01-09-2012 to 01-10-2013

3. Co-supervisor of the master student Veronica Battaiola (class LM 6- Biological Sciences), thesis title: “Controllo molecolare del processo di fecondazione in Arabidopsis thaliana” (2014)- in collaboration with prof. Colombo University of Milan. from 01-04-2013 to 01-04-2014

4. Co-supervisor of the master student Stefano Gatti (class LM 6- Biological Sciences) thesis title: "Genetic and epigenetic control of Megaspore Mother Cell (MMC) formation in Arabidopsis thaliana (L.) " (2015)- in collaboration with prof. Colombo. University of Milan. from 01-10-2014 to 01-10-2015

5. Co-supervisor of the master student Marco Michele Rattaggi (class LM 6- Biological Sciences), thesis title: “Molecular and functional characterization of CRK9-EP1 during the fertilization process in Arabidopsis thaliana " (2016) - in collaboration with prof. Colombo, University of Milan. from 01-02-2015 to 01-03-2016

6. Co-supervisor of the master student Edoardo Vignati (class LM 6- Biological Sciences), thesis title: "Female germline specification in Arabidopsis thaliana" 2017 - in collaboration with prof. Colombo, University of Milan. from 01-10-2016 to 01-10-2017

7. Main Supervisor of the master student Giada Callizaya Terceros (class LM 6- Biological Sciences), thesis title: "Molecular control of synergid cell death during fertilization process in Arabidopsis thaliana" (2019) -

in collaboration with prof. Colombo, University of Milan. From 1-1-2018 to 1-4-2019

Bachelor Students - Co-supervisor of 2 experimental thesis in Plant Development biology:

1. Co-supervisor of the undergraduate student in Biotechnology, John Gussoni, thesis title: "Functional characterization of SPOROCYTELESS in Arabidopsis thaliana." (2017) in collaboration with prof. Kater, University of Milan. from 01-12-2016 to 01-07-2017

2. Co-supervisor of the undergraduate student in Biotechnology, Chiara Agnese Colombo, thesis, "Caratterizzazione della regione promotrice di VERDANDI" (2011) in collaboration with prof. Colombo, University of Milan.

PhD students: co-supervisor (during their stay in Milan)

1. PhD student: Luciana Ferreira: Embrapa Genetic Resources and Biotechnology, University of Brasília. Brazil. Title of the project "Study of gibberellin effect during ovule development". 2015/16 in collaboration with prof. Colombo, University of Milan.

2. PhD student: Maria Cielo Pasten: Cerzos, Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET) Bahia Blanca. Title of the project "Molecular study of apomixis in Eragrostis Curvula". 2018 in collaboration with prof. Colombo, University of Milan.

EDUCATIONAL COMMISIONS

- Member of the Interdepartmental Teaching College (CDI) of Biological Sciences.
- Member of the Interdepartmental Teaching College (CDI) of Natural Sciences.
- Member of the Teaching Commission of the doctorate in MOLECULAR AND CELLULAR BIOLOGY year 2018/2019.
- Member of the Bioscience Department Council.
- Member of graduation thesis commissions - Department of Biosciences, University of Milan.

ABILITAZIONE SCIENTIFICA NAZIONALE (ASN)

Settore Concorsuale 05/A1 - II Fascia - Abilitata Dal 06/11/2018 al 06/11/2024

RESEARCH POSITIONS

Date	Position - University	Description
March 2017 -current date	**RTD-A (Ricercatore a Tempo Determinato (Tipo A) 05/A1 Botanica)** University of Milan (Department of Biosciences)	**Winner of a Researcher Position** The main theme during this research position was the Plant sexual Reproduction. I've focused mainly on understanding the factors that control the female germline differentiation, as well as the events that precede and follow the fertilization process - extremely important for the formation of seeds. I've tried to deeply investigate in the model species *Arabidopsis thaliana* three main topics: Control of transcription- study of transcription factors important in the development of the embryo sac, the female gametophyte and fertilization; Epigenetic control of sexual reproduction - study of the role of RdDM "RNA-directed DNA methylation" in the formation of the female germ line; Hormones: Auxin and Cytokinin crosstalk in the regulation of fertilization. **Publications during this period: number 1, 2, 3**
May 2015 - February 2017	**Post-doc fellow** University of Milan (Department of Biosciences) and University of Porto (Department of Biology)	**Winner of a fellowship** funded by the Foundation for Science and Technology (FCT) Portugal, **success Rate 18%** (www.fct.pt). Title of the project: "Seed size control by the MADS-box gene SEEDSTICK through the regulation of AGP signalling proteins and Cytokinin metabolism." Supervisors: Prof. Lucia Colombo and Prof. Silvia Coimbra **Abstract in the appendix A2** **Publications during this period: number 4 and 5**
February 2015 - April 2015	**Post-doc fellow** University of Milan (Department of Biosciences)	**Winner of a fellowship** in the frame of the project "PRIN 2012- Title of the project: Genetic and epigenetic control of the fertilization number in Arabidopsis. " (Assegno di ricerca nel Settore Concorsuale 05/A, settore scientifico-disciplinare BIO/01- Botanica Generale) Supervisor: Prof. Lucia Colombo. **Abstract in the appendix A8**
February 2013 - January 2015	**Post-doc fellow** University of Milan (Department of Biosciences)	**Winner of fellowship** in the frame of the project "AGERMELO" (Assegno di ricerca nel Settore Concorsuale 05/A, settore scientifico-disciplinare BIO/01- Botanica Generale) Supervisor: Prof. Lucia Colombo. **Abstract in the appendix A3** **Publications during this period: number 6, 7, 8 and 9**
February 2010 - January 2013	**PhD student** University of Milan (Department of Biosciences)	**Winner of a Marie Curie fellowship ITN**, in the Systems for flowering (SYSFLO) project (http://www.sysflo.eu/). Supervisor: Prof. Lucia Colombo. **Abstract in the appendix A4** **Publications during this period: 10, 11, 14, 15**

October 2008 - December 2009	**Master Student** University of Porto (Department of Biology)	**Master thesis fellowship** in the project "*Arabidopsis thaliana* pollen tube development characterization in *agp6agp11* null mutant" - done in collaboration with the Biodiversity, Functional and integrative genomics (BioFig) project (http://biofig.fc.ul.pt/) and with the sexual plant reproduction group (http://www2.fc.up.pt/agplab/index.html) at the Department of Biology. Supervisor: Prof. Silvia Coimbra **Publications during this period: 12, 13**
February 2008 - September 2008 -	**Graduate student** University of Porto (Department of Biology).	**Degree thesis fellowship** in the project "*AGP6 and AGP11 in RNAi silenced lines*" - done in collaboration with the Functional and integrative genomics (BioFig) project (http://biofig.fc.ul.pt/) in the sexual plant reproduction group (http://www2.fc.up.pt/agplab/index.html) at the Department of Biology Supervisors: Prof. Silvia Coimbra and Prof. Luís Gustavo Pereira.
February 2007 - December 2007	**Undergraduate student** - University of Porto (Department of Biology**).**	Volunteer at the Department of Biology (University of Porto) and IBMC (Institute for molecular and cell Biology). Supervisors: Prof. Silvia Coimbra and Prof. Luís Gustavo Pereira.

RESEARCH POSITIONS / collaboration with foreign laboratories

Date	Position - University	Description
August-September 2014	**Post-doc** **Federal University of Rio de Janeiro** Genetic Department Rio de Janeiro, Brasil	**In the frame of the EVOCODE project. FP7-PEOPLE - EU.** Short stay at the laboratory of Prof. Marcio Alves Ferreira, University of Rio de Janeiro, Department of Biotechnology. Discussion of the obtained results, design of new experiments – follow up of the project. **This collaboration led to the publication number 8**
September-October 2012	**PhD** **University of Oxford,** Department of Plant Sciences, UK	**In the frame of SYSFLO project, Systems for Flowering-Marie Curie ITN -** Short stay at the laboratory of Prof. Hugh Dickinson. Electron microscopy (TEM) technique applied to the female gametophyte. **This collaboration led to the publication number 4**
July-August 2012	**PhD** **Federal University of Rio de Janeiro** Genetic Department Rio de Janeiro, Brasil	**In the frame of the EVOCODE project- FP7-PEOPLE- EU.** Short stay at the laboratory of Prof. Marcio Alves Ferreira, University of Rio de Janeiro, Department of Biotecnology. Bioinformatic analysis of promoter sequences and binding sites. Molecular biology, Bioanalyser and RTpcr techniques. **This collaboration led to the publication number 8**

February 2009	**Master student** **University of Lisbon** Biology Department Lisbon Portugal	**In the frame of "Biological role of arabinogalactan proteins and glycosylphosphatidylinositol anchoring in arabidopsis gametogenesis" project.** Short stay at the laboratory of Prof. Rui Malho BioFig, Botanical Department, Faculty of Sciences, University of Lisbon. Techniques for the study of Pollen tube development in *Arabidopis thaliana*. **This collaboration led to the publication number 13**

SCIENTIFIC Approved PROJECTS

Date	Project - Title
January 2019- current data	**Linea 2 Biosciences Department- UNIMI:** "Auxin and Cytokinin crosstalk impact on female germline fate acquisition"**-** This project aims to better understand the hormonal impact on cell identity - writing and experimental planning **- Coordinator.** Total financed Euro: 9000 **Abstract in the appendix A9**
March 2016 - current date	**SEXSEED project -** "Sexual Plant Reproduction – Seed formation" **- Horizon2020- MSCA RISE 2016 - European Union (EU)- project n. 690946 -** Active participation in the writing, discussion and experimental planning of the SEXSEED project, in the frame of the EU H2020 founding which counts with the collaboration of different countries **Italy-Portugal-USA-Japan and Australia.** This project aims for the better understanding of sexual plant reproduction mechanisms and seed size control in *Arabidopsis thaliana*. Responsible for UNIMI unit - Supervisor: prof: Lucia Colombo **Abstract in the appendix A5** **Results obtained in this project led to publication number 1**
March 2015 - February 2019	**PROCROP project -** "Harnessing Plant Reproduction for Crop Improvement - Horizon2020" **- MSCA RISE 2014- European Union EU- project n.645674**- Participation in the PROCROP Project, in the UNIMI unit, in the frame of the EU H2020 founding which counts with the collaboration of different countries **Italy-France-Argentina and Mexico**. The overall goal of this project is to allow a synergy of inter-related European and international expertise to better understand the mechanisms of sexual/apomictic plant reproduction. **Abstract in the appendix A6** **Results obtained in this project led to publication number 2**
May 2015 - February 2017	**FCT -** (Foundation for Science and Technology, Portugal) **- Project number: SFRH/BPD/99936/.** "Seed size control by the MADS-box gene SEEDSTICK through the regulation of AGP signaling proteins and Cytokinin metabolism."- This project aimed for to better understand the transcriptional control of signalling proteins and hormones during seed development. Writing and experimental planning - **Coordinator.** (Total financed for 2 years: 50.000) **Abstract in the appendix A2** Results obtained in this project led to **publication number 4, 5**.

May2013 - May2015	**AGER MELO-** "Quality of the apple in the post-genomic era, from the creation of new genotypes to post-harvest: nutrition and health". Web site: http://www.agermelo.it/. In the domain of this Project I've had a Post-doc fellowship for two years and some of the **results obtained in this project led to publication number 6, 7** **Abstract in the appendix A3**
July 2010 - December 2014	**Evocode –** "Evolutionary Conservation of Regulatory Network Controlling Flower Development"- **FP7-PEOPLE - EU -** Participation in the EVOCODE project, in the UNIMI unit, which counted with the collaboration of different countries **Italy, Spain, Mexico and Brazil.** An intense collaboration between the research groups lead to the transfer of knowledge between the different laboratories. Furthermore, this project also facilitated a durable network between these countries from which researchers will benefit in the future. From this project I have benefited from two short stays at the laboratory of Prof. Marcio Alves Ferreira in Brazil and some of the results were already published in **Abstract in the appendix A7** **Results obtained in this project led to publication number 8**
February 2010- December 2013	**SYSFLO-** "Systems for Flowering" **- EU -** Web site: http://www.sysflo.eu/ SYSFLO was a Marie Curie Initial Training Network, training early stage researchers in the emerging discipline of systems biology. The researchers involved in this project applied different approaches to the study the genetic regulation of flower development in the model plant *Arabidopsis thaliana*. I've performed my PhD in the frame of this project. **Results obtained in this project led to publication number 9, 10, 11, 14, 15** **Abstract in the appendix A4**
February 2007- December 2009	**FCT -** "Biological role of arabinogalactan proteins and glycosylphosphatidylinositol anchoring in arabidopsis gametogenesis" **-** project funded by FCT (Foundation for Science and Technology, Portugal) within the project PTDC/AGR-GPL/67971/2006. I have performed my master thesis in the frame of this Project. **Results obtained in this project led to publication number 12, 13.**

Scientific SUBMITTED projects

Date	**Project - Title**
2015 (submitted/declined)	**SIR (MIUR)-** Scientific Independence of young Researchers - "Understanding the role of epigenetic regulation and hormonal signaling in female germline cell-fate" Proposal Code: RBSI14VW4S. **Coordinator.**
2018 (submitted/declined)	**PRIN 2019 (MIUR)**- Progetti di Rilevante Interesse Nazionale - "Network on genetics and genomics of plant reproduction for crop breeding." - Prot. 2017HT2MKS - **Coordinator** UNIMI.
2018	**MSCA RISE 2018 -** MAD project- "Mechanisms of Apomictic Developments."

(submitted/declined)	Proposal number: SEP-210508230; Type of action: MSCA-RISE (RISE); Call: H2020-MSCA-RISE-2018 - **Collaborator**.
2019 (Submitted/Reserve list)	**MSCA RISE 2019** - MAD project- "Mechanisms of Apomictic Developments." Proposal number: SEP-872417; Type of action: MSCA-RISE (RISE); Call: H2020-MSCA-RISE-2019 - **Collaborator**.
2019 (Submitted/declined)	**MSCA RISE 2019** - CWDEV project "Insights into cell wall dynamics in plant systems." Proposal number: SEP-872502; Type of action: MSCA-RISE (RISE); Call: H2020-MSCA-RISE-2019 - **Collaborator**.
2019 (Submitted)	**Linea 2** Department of Bioscieneces - "Molecular control of Fertilization Process - Synergid Cell Death"**- Coordinator**.

Active COLLABORATIONS

Prof. Hugh Dickinson, Emeritus Prof of Plant Reproductive Biology- Department of Plant Sciences- University of Oxford. **UK.**	Collaboration within the project "Auxin and Cytokinin crosstalk impact on female germline fate acquisition".
Prof. Matthew Tucker, School of Agriculture food and wine, University of Adelaide. **Australia.**	Collaboration within the project H2020 SEXSEED "Sexual Plant Reproduction".
Prof. Emidio Albertini Dipartimento Di Scienze Agrarie, Alimentari ed Ambientali - University of Perugia. **Italy.**	Collaboration within the project H2020 PROCROP "Harnessing Plant Reproduction for Crop Improvement".
Prof Silvia Coimbra Dipartimento di Biologia, University of Porto. **Portugal.**	Collaboration within the project H2020 SEXSEED project - "Sexual Plant Reproduction.
Prof. Silvina Pessino Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET), Instituto de Investigación en Ciencias Agrarias de Rosario (IICAR), Universidad Nacional de Rosario. **Argentina.**	Collaboration within the project H2020 PROCROP - "Harnessing Plant Reproduction for Crop Improvement".
Prof. Viviana Echenique- Cerzos, Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET) Bahia Blanca. **Argentina.**	Collaboration within the project H2020 PROCROP - "Harnessing Plant Reproduction for Crop Improvement".
Prof. Vera Carneiro- Embrapa Genetic Resources and Biotechnology, University of Brasília. **Brazil.**	Collaboration within the project H2020 H2020 PROCROP - "Harnessing Plant Reproduction for Crop Improvement".
Dr. Celia Baroux Department of Plant and Microbiology, University of Zurich, **Svizerra.**	Collaboration within the project H2020 H2020 MAD - "Mechanisms of Apomictic

	Developments."
Dr. Sebastien Andreuzza Department of Plant Sciences, University of Cambridge. **UK.**	Collaboration within the project "Auxin and Cytokinin crosstalk impact on female germline fate acquisition".
Dr. Sara Farrona- Plant and Agricultural Biosciences Centre (PABC), University of Galway, **UK.**	Collaboration within the project H2020 SEXSEED project - "Sexual Plant Reproduction.

CONGRESSES participation

Title of the presentation (year)	Congress/ Date / Place
Speaker - **Mendes M.A.,** Callizaya G., Colombo L. **(2018).** "Synergid cell death in Arabidopsis a role for Cytokinin"	SEB -Advances In Plant Reproduction – From Gametes To Seeds- 30th June - 1st July - **Florence, Italy.**
Invited Speaker - **Mendes M.A,** Colombo L. **(2017). "**Live and Let die, double fertilization process in Arabidopsis thaliana."	Workshop on molecular mechanisms controlling flower development. 3rd to 7th September - **Padua, Italy.**
Speaker - Mendes M.A. **(2017).** "Molecular mechanisms that control double fertilization process in Arabidopsis thaliana – a role for MADS box, REM and Cytokinin in synergid degeneration."	Differenziamento SBI (Annual meeting on the SBI group - Cellular and molecular Biology and Biotechnology) 14th to 16th June - **Milan, Italy.**
Poster - Vignati E., **Mendes M.A.**, Costantini E. and Colombo L. **(2018).** "SPOROCYTELESS/NOZZLE: new insights to understand the mechanism that controls sporogenesis."	25th International Congress on Sexual Plant Reproduction. 11th-16th June. **Gifu, Japan.**
Poster - Lopes A., Pereira A., Ferraz R., Sousa P., Pereira L., **Mendes, M.A.,** Masiero S., Colombo L., Coimbra S. **(2018).** "Stay stick: how to fit each tile in the SEEDSTICK TF control frame?"	25th International Congress on Sexual Plant Reproduction- 11th-16th June - **Gifu, Japan.**
Poster - Di Marzo M., de Folter S., Ezquer I., **Mendes M.A.,** Colombo, L. **(2018).** "The MADS-box transcription factor SEEDSTICK (STK) acts through CYTOKININ OXIDASE/DEHYDROGENASE 7 (CKX7) to influence fruit elongation process"	International Symposium on Auxins and Cytokinins in Plant Development- 1st - 5th July- **Prague, Czech Republic.**
Poster - Di Marzo M., Herrera-Ubaldo U., Ezquer I., Caporali E., Novak O., **Mendes M.A.,** de Folter S., Colombo, L. **(2019).** "The MADS-box transcription factor SEEDSTICK (STK) acts through CYTOKININ OXIDASE/DEHYDROGENASE 7 (CKX7) to guide fruit elongation".	Plant Organ Growth Symposium- 24th - 26th April - **Bordeaux, France.**
Poster - Guazzotti A., Manrique S., Cucinotta M., **Mendes M.A.,** Segre M., Bressana M.F, Franks R.G, Colombo L. **2016.**	24th Sexual Plant reproduction meeting - 18th - 23th March - **Tucson, USA**.

"Genetic and Epigenetic Regulation of Ovule Primordia Formation."	
Poster - **Mendes M.A.,** Ferrero, S., Carretero-Paulet L., Botton A., Eccher G., Masiero S. and Colombo L. **2014. "**Fruitlet abscission in apple (Malus × domestica Borkh.) the role of hormones.**"**	23rd Sexual Plant reproduction meeting. July 13th – 18th - **Porto, Portugal.**
Speaker - Mendes M.A. and Colombo, L. **2013. "**STK-ABS role during female gametophyte development.**"**	European Frontiers of Plant Reproduction Research. 2rd -4th October - **Oslo, Norway.**
Speaker - **Mendes, M.A.,** Colombo, L. **2012. "**MADS-domain Transcription Factor Complex mediate Short-Range DNA Loop Formation is Essential for Target Gene Expression."	SYSFLO meeting. 31st January -1st February. **Norwich, UK.**
Speaker - **Mendes, M.A.,** and Colombo, L. **2012. "***VERDANDI:* the first target of the MADS box complex STK-SEP3 and its role during fertilization process in *Arabidopsis thaliana."*	5th International Ph.D. School in Plant Development. 25th – 28th September. **Certosa di Pontignano, Siena, Italy**
Speaker - **Mendes, M.A.,** Guerra, F. and Colombo, L. **2012. "***VERDANDI*: the first identified target of the MADS box complex STK-SEP3 and its role during fertilization process in *Arabidopsis thaliana.* "- Plant Reproduction for food",	22nd Sexual Plant Reproduction meeting. 13th -17th February. **Melbourn, Australia.**
Speaker - **Mendes, M.A.,** Colombo, L. **2012. "**Transcriptional network involved in *Arabidopsis thaliana* ovule development."	SYSFLO meeting. Oral presentation. **Grenoble, France.**
Speaker - **Mendes, M.A.,** Colombo, L. **2011. "**Transcriptional network involved in *Arabidopsis thaliana* ovule development."	Workshop on Molecular Mechanisms Controlling Flower Development. Oral presentation. 14th-17th June **- Maratea, Italy.**
Speaker - Mendes, M.A., Colombo, L. **2011** "Molecular and functional characterization of *VERDANDI*, a direct target of ovule identity complex STK-SEP3".	BLOOMnet Network Meeting, Joint SYSFLO. 8th-10th February. **Berlin, Germany.**
Poster - Costa, M., **Mendes, M.A,** Coimbra, S. and Pereira L.G. **2010**. "Arabinogalactan proteins *AGP6* and *AGP11* are necessary for *Arabidopsis* pollen development".	Cell Wall Metting. 25th -30th July. **Porto, Portugal.**
Poster - **Mendes, M.A.,** Coimbra, S. and Pereira, L.G. **2009** "*AGP6* and *AGP11* are essential for pollen development in *Arabidopsis thaliana*".	IJUP, Young researchers of University of Porto Congress. **Porto, Portugal.**

Poster - Mendes, M.A., Coimbra, S. and Pereira, L.G. **2008** "AGP6 and AGP11 are essential for the intine wall layer formation in Arabidopsis thaliana".	XII ENEB 12º National Biology Students congress". Braga, Portugal.

CONGRESS organization

Workshop on Molecular Mechanisms Controlling Flower Development
Padua, Italy.
3rd-7thSeptember 2017
website: http://flowerdev2017.unimi.it/index.html

Workshop on Molecular Mechanisms Controlling Flower Development
Maratea Italy
14th-17th June 2011
Website: http://maratea.wix.com/maratea2011

RESEARCH PAPERS

1. Pinto S.C., **Mendes M.A.,** Coimbra S., Tucker M.R. **(2019)**. Revisiting the Female Germline and Its Expanding Toolbox. **Trends Plant Sci. doi:** 10.1016/j.tplants.2019.02.003. **IF 12,1 PQ:Q1.**

2. Ferreira, L.G., de Alencar Dusi D.M, Irsigler, A.S.T, Gomes, A.C.M.M., **Mendes, M.A.,** Colombo, L., de Campos Carneiro, V.T. **(2018)**. GID1 expression is associated with ovule development of sexual and apomictic plants. **Plant Cell Rep. doi:** 10.1007/s00299-017-2230-0. **IF 3,2 PQ:Q1.**

3. Abdellatif Bahaji, Goizeder Almagro, Ignacio Ezquer, Ángela María Sánchez-López, Francisco José Muñoz, Ramón José Barrio, M. Carmen Sampedro, Nuria De Diego, Lukáš Spíchal, Karel Doležal, Danuse Tarkovska, Elisabetta Caporali, **Marta A. Mendes**, Edurne Baroja-Fernández and Javier Pozueta Romero **(2018)**. "PGI1 is an important determinant of seed yield in Arabidopsis". **Plant Cell. doi:** 10.1105/tpc.18.00312. **IF 9,3 PQ:Q1.**

4. **Mendes, M.A.,** Guerra, R., Castelnovo B., Velazquez,Y.S., Morandini, P., Manrique, S., Baumann N., Groß-Hardt, R., Dickinson, H. and Colombo **(2016)**. Live and Let die: a REM complex promotes fertilization through synergid cell death in Arabidopsis. **Development. doi:** 10.1242/dev.134916. **IF 5,8 PQ:Q1.**

5. Cucinotta, M., Manrique, S., Guazzotti, A., Quadrelli, N.E., **Mendes, M.A.,** Benkova, E., Colombo, L. **(2016)**. Cytokinin response factors integrate auxin and cytokinin pathways for female reproductive organ development. **Development**. **doi:** 10.1242/dev.143545. **IF 5,8 PQ:Q1.**

6. Ferrero, S., Carretero-Paulet, L., **Mendes, M.A.,** Botton, A., Eccher, G., Masiero, S., Colombo L. **(2015).** Transcriptomic Signatures in Seeds of Apple (Malus domestica L. Borkh) during Fruitlet Abscission. **PLoS One. doi:** 10.1371/journal.pone.0120503**. IF 3,4 PQ:Q1.**

7. Lovisetto, A., Masiero, S., Rahim, M.A., **Mendes, M.A.,** Casadoro, G. **(2015)**. Fleshy seeds form in the basal Angiosperm Magnolia grandiflora and several MADS-box genes are expressed as fleshy seed tissues develop. **Evolution and Development. doi:** 10.1111/ede.12106. **IF 2,25 PQ:Q1.**

8. Mantegazza, O., Gregis, V., **Mendes, M.A.,** Morandini, P., Alves-Ferreira, M., Patreze, C.M., Nardeli, S.M., Kater, M.M., Colombo, L. **(2014).** Analysis of the arabidopsis REM gene family predicts functions during flower development. **Annals of Botany. doi:** 10.1093/aob/mcu124. **IF 3,6 PQ:Q1.**

9. Pajoro A[1#], Biewers S[1#], Dougali E[1#], Valentim F.L[1#], **Mendes M.A[1#],** Porri A[1#], Coupland G, Van de Peer Y, van Dijk A.D, Colombo L, Davies B, Angenent G.C. **(2014).** The (r)evolution of gene regulatory networks controlling Arabidopsis plant reproduction; a two decades history. **Journal of Experimental Botany. doi:** 10.1093/jxb/eru233. **[1#]authors contribute equally to the paper. IF 5,3 PQ:Q1.**

10. **Mendes, M.A.,** Guerra R.F., Berns M.C., Manzo, C., Masiero, S., Finzi L., Kater M. M. and Colombo L. **(2013).** MADS-domain Transcription Factor Complex mediate Short-Range DNA Loop Formation

is Essential for Target Gene Expression. **Plant Cell. doi:** 10.1105/tpc.112.108688. **IF 9,5 PQ:Q1.**

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INDEX

Citations and Scientific production statistics - 393 citations with H-index=10 (in Google schoolar); 279 citations with H-index 8 (in Scopus).

ACTIVITY AS REVIEWER/EDITOR IN PEER REVIEW JOURNALS

Reviewer - Plant Biosystems. ISSN-1126-3504.
Reviewer - New Phytologist. ISSN: 1469-813.
Reviewer - Scientific reports by Nature research Journal. ISSN 2045-2322.
Guest Editor - Fronteirs of Plant Science - "Genetics and Genomics of Plant Reproduction for Crop Breeding" (ID 8183). Current online: https://www.frontiersin.org/research-topics/8183/geneticsand-genomics-of-plant-reproduction-for-crop-breeding

TRAINING

February 2019, Milan Italy	**Workshop of 3D Correlative Microscopy - School ZEISS Academy - Correlative-organized Microscopy da UNITECH NO LIMITS.** Dipartimento Bioscienze- University of Milan.
February 2018, Milan Italy	**Confocal microscope Course- organized Microscopy da UNITECH NO LIMITS.**
July 2015, Milan Italy	**Confocal microscope Course-** CIMA- Centro Interdipartimentale di Microscopia Avanzata- Dipartimento Bioscienze- University of Milan.
February 2012, Milan Italy	**Confocal microscope and imaging Course-** Piattaforma di Imaging Cellulare e Molecolare di Fondazione Filarete. LEICA SPE AND LEICA SP5.
September 2011, Leeds UK	**SYSFLO ESR Training Course** on Getting published and Completing your PhD. Marie Curie ITN actions.
November 2010, **Wolfenbuttel Germany**	**SYSFLO** BIOBASE**,** ESR Training Course on Gene Regulation Analysis Tools and IP / Commercialization. Marie Curie ITN actions.

RESEARCH TECHNIQUES

Molecular Biology: ChIP - Chromatin immunoprecipitation; BIFC – Bimolecular Fluorescence complementation; Constructing, Molecular cloning -(Gateway system, Goden Gate); PCR techniques (RT-PCR, qRT-PCR, etc); Bacterial transformation (E.coli, *A. tumefaciens)*; In situ hybridization; Mutant screening; T-DNA Mutant analysis, genetic crosses, CRISP-CAS9 genome editing, *Arabidopsis* transformation.

Functional genomics and Bioinformatics: RNA- sequencing and ChIP sequencing analysis;

Microscopy: Analysis of different phases of ovule, pollen and plant development through different sampling techniques together with the use of different microscopes: Optical microscope, Fluorescence microscope, Confocal microscope, TEM- Transmission electron microscope.

LANGUAGE SKILLS

Portuguese: Mother language; **English**: Excellent; **Italian**: Excellent.

Other ACTIVITIES

- Member of the IASPRR - International Association for Research on the Reproduction of Sexual Plants. The association promotes contact with those involved in reproduction research vegetable - The society maintains a public website, publishes articles scientific reports on the journal Plant Reproduction and informs its members about scientific activities and on progress through the newsletter in which I wrote an article;

- Member of the SEB - Society of Experimental Biology;

- Member of the organizing committee of the "FASCINATION OF PLANTS DAY" http://www.plantday.it/; Milan, Italy. (2015-2017).

- Participation in "Music For Plant Research; Plants Connect People" (2013);

- Recognition by the municipality of Milan, through an interview on its website - European citizens who are pursuing a professional career in Milan. https://www.yesmilano.it/movetomilano/stories/marta-adelina-mendes.

APPENDICES

A1

PhD thesis - "Molecular Analysis of Double Fertilization Process in Arabidopsis"

Fertilization and seed formation are key events in the life cycle of flowering plants. The seed represents an elaborated functional unit, whose main purpose is to propagate the plant's offspring. The first step in seed development is the formation of ovules and subsequently the achievement of a successful double fertilization process.

In our lab we have discovered that the MADS-box domain protein complex formed by SEEDSTICK (STK) and SEPALLATA3 (SEP3), responsible to maintain ovule identity, have as a direct target a member of the REM family, VERDANDI (VDD, REM20). With the combination of Bio-informatics studies and ChIP-qPCR experiments using specific STK and SEP3 antibodies, we were able to identify REM11, as the second direct target of the STK-SEP3 complex. The phenotype of the rem11 mutant is very similar to the one described for vdd-1/+ demonstrating that REM11 plays a similar function in the fertilization process. To better understand the fertilization defect observed in these mutants we have used a new technique developed to observe fertilization in vivo, by visualizing the gametes with a combination of markers for sperm cells and for the female gamete. In the rem11 or in vdd-1 gametophytes the synergid cell seemed to lose identity. Although the pollen tubes reached the micropyle, the two sperm cells didn't migrate toward the egg and center cells. These results showed the important and the direct involvement of these two genes in the control of synergid driven processes. Ultimately we discovered that genes responsible for the pollen tube attraction like the transcription factor MYB98, are correctly expressed in the mutants whereas genes, probably responsible for the degeneration process are miss-expressed. In summary, we can say that, two very different processes are regulated by the synergid cells: 1) the attraction of the pollen tube and 2) the synergid degeneration (apoptosis). We discover that the second step is specifically controlled by VDD and 3 REM11, two proteins that by yeast-2-hybrid experiments were able to interact. Based on these results we have decided to study if other REM transcription factors could interact with REM11 and VDD. In conclusion STK-SEP3 MADS-box complex are able to directly regulate a REM transcription factor complex that has a very important and specific role during the double fertilization process. To understand how VDD-REM11 complex regulate synergid degeneration we have performed a RNA sequencing experiment comparing wild-type mature carpels to mutant ones. Exciting targets have been discovered and discuss in this thesis.

I have also studied the regulation of VDD transcription by STK-SEP3 complex. In VDD regulatory region three CArG boxes were identified and by Chromatin Imunoprecipitation experiments, we have showed that the ovule identity proteins STK and SEP3 bind to the first and third CArG boxes. We have performed in vivo and in vitro experiments showing that the STK-SEP3 complex is needed to form short-range loops in VDD promoter. For years evidences based on in vitro biochemical assays and yeast experiments shown that MADS box proteins form multimeric complexes. New evidences for the quartet-floral model were obtained, analyzing the activation of VDD promoter by STK-SEP3 multimeric complex. Least but not the last, I have also analyzed the interaction of ARABIDOPSIS BSISTER (ABS) with STK, showing that they have a function in the regulation of the endothelium development, the inner most integument layer of the mature ovule that we demonstrated to be required to the double fertilization process.

A2

FCT- “Seed size control by the MADS-box gene SEEDSTICK through the regulation of AGP signalling proteins and Cytokinin metabolism”

Human population is estimated to reach 9 billion by 2050. To reach the food and energy needs of this growing population it will be necessary to double agricultural yields without increasing arable land and despite the climate change. Seeds account for the large majority of calories consumed by humans and are a source for the production high-added value components like proteins and oils. Understanding the factors that regulate seed development can enable, for example, to increase their size and raise agricultural productivity without increasing arable land.
This project intents to provide new insights in the role of MADS box transcription factors – AGP sinaling proteins – Cytokinin metabolism during seed development by uncovering functions, targets and putative signalling cascades, increasing our knowledge on the transcriptional, signalling and hormonal control of seed development in Arabidopsis thaliana through a combination of genetic and transcriptomic approaches.
Arabidopsis is a good model to study seed development as its developmental program is conserved with major seed crops such as soybean and canola. Increasing our knowledge of Arabidopsis seed development can help to increase not only agricultural yields, but also the contents of high added-value seed components like proteins and oil in seeds, so the project has great potential to contribute to Portugal’s excellence and competitiveness in the world.

A3

AGER MELO project - "Quality of the apple in the post-genomic era, from the creation of new genotypes to post-harvest: nutrition and health"

The Italian apple chain, from production to consumers, operates in a context of international competition. Among the main pressing factors are the high cost of production (Italy cannot compete with the production costs of non-western countries) and the need of a more sustainable agriculture in terms of environmental impacts. Additionally, the consumers appear sensitive to a higher fruit quality not only in sensorial terms (which however must remain at the highest standard) but also regarding nutritional and health-related (functional) properties. To respond to these challenges, this project will address the study and the improvement of the apple fruit quality using a global perspective at three main levels: A) KNOWLEDGE and TOOLS. By developing fundamental technological genetic/genomics tools for apple breeding and technologies and tools for non-invasive fruit quality assessment; by elucidating the main structure of the apple fruit metabolome and its relationship with standard fruit quality parameters to improve the knowledge about the molecular bases of fruit quality with emphasis on nutritional and health-related properties. B) APPLICATIONS FOR GLOBAL IMPROVEMENT OF FRUIT QUALITY. By applying the above powerful molecular genetics tools and knowledge to molecular breeding and to the production chain in order to a) improve apple resistance to pathogens, b) enhance fruit quality (mainly in terms of nutritional aspects), c) reduce environmental impacts and increase sustainability, and d) optimize the production chain. C) SCIENTIFIC AND TECHNOLOGICAL TRANSFER OF KNOWLEDGE. The transfer of the information to all the relevant apple chain stakeholders and to the scientific community will pursued by dedicated initiatives, events and publications.

A4

SYSFLO project - “Systems for flowering”

The formation of a flower is an exquisitely controlled process involving the change from vegetative to reproductive growth, followed by the correct placement and development of all the floral organs: sepals, petals, stamens and carpel. Not only is the control of floral development an important biological question but flowering and seed formation is of huge economic significance as it is vital to crop breeding and agricultural productivity.
The tremendous advancements in genetic and molecular biology techniques in the past two decades has meant that a good proportion of the master genetic regulators involved in flowering have already been identified and characterised using Arabidopsis as a model system. These regulators act as switches, turning on or off different developmental pathways. However, there are still large gaps in our knowledge of what is happening between these regulators and the outcome of their actions.
SYSFLO seeks to address this gap using a systems biology approach to further study the control of reproductive development in Arabidopsis. The project is a collaboration between partners with expertise in laboratory techniques and partners with strengths in bioinformatics and computer modelling. The laboratory based groups will investigate when and where different genes are expressed during floral development and the interactions between these gene products. The computational groups will analyse the results and generate a network model that can begin to integrate all the data. This model will then be used to generate predictions, to be tested experimentally by the lab partners.

A5

SEXSEED project - “Sexual Plant Reproduction – Seed formation”

By 2050, it is estimated that the human population will reach 9 billion. To feed this growing population, it will be necessary to at least double agricultural yields, without increasing the amount of arable land.
Understanding the factors that regulate sexual reproduction will enable this critical aspect of agricultural production to be engineered for increased productivity, without increasing arable land. Our project will provide new insights into the network controlled by SEEDSTICK (STK), a MADS box transcription factor, which is the master regulator in the production of seeds.
The objective of this proposal is to strengthen research partnerships through staff exchanges and networking activities, at international and intercontinental levels. By combining transcriptomic and genetic approaches, we aim to uncover new functions for STK targets and implicate them in putative signalling cascades, increasing our knowledge on the network that controls seed formation in Arabidopsis. Arabidopsis is an excellent model to study seed formation, as it shares a conserved developmental program with major seed-producing crop plants, important to improve not only gross agricultural productivity, but also the composition of seeds and hence the production of components used for high added-value seed-derived products. The growing importance of seeds and seed-derived products to humanity and the central role of STK in seed
development means that this project has great potential to contribute to Europe’s excellence and competitiveness in the world. Detailed analysis of the network of regulatory genes controlling reproductive development in Arabidopsis represents the biological theme around which our training programme will be built. By taking advantage of the scientific competences developed by the partners, it will be possible to expand our knowledge of seed formation in the model species and then to transfer this knowledge horizontally into vital agricultural crop species.

A6

PROCROP project - "Harnessing Plant Reproduction for Crop Improvement"

Increased crop productivity through genetic improvement of plants has significantly impacted world agriculture and the world's population. Crop plants have followed the general pattern of introduction, selection, and hybridization. Once introgressed, selection and breeding strategies have led to new cultivars with improved yield and adaptation. Unfortunately, many of these important traits are typically polygenic. The consequence is that only certain unique allele combinations comply to generate elite performing genotypes. The fixation of a given genotype occurs naturally in species that display an asexual type of seed production named apomixis (i.e. clonal seed production). Unfortunately, apomixis does not naturally occur in major crop species with few exceptions (Citrus, mango and mangosteen). In crop species, apomixis would enable the instantaneous fixation of the complete genome of the best plants. When coupled with male-sterility systems, apomictic reproduction (with no need for male contribution) could help in addressing issues related to transgene escape from GM crops to organic or conventional crops, and thereby allow for better coexistence systems. This trait by itself is highly valuable for agriculture, but despite many efforts it has never been possible to introduce it into the domesticated crop species of today. The financial and economic impacts of the development of apomixis technology and its application to major crops are amazing (€1800-2300 million per annum per crop). The overall goal of the proposal is to allow for a synergy of inter-related European and international expertise to better understand the mechanisms of sexual/apomictic plant reproduction and to facilitate the application of this increased knowledge in the development of new approaches for agriculture and food industry to increase productivity.

A7

EVOCODE project -"Evolutionary Conservation of Regulatory Network Controlling Flower Development"

This research exchange programme focuses on plant reproduction. The world population depends for its nutrition on agricultural crop products, mainly as seeds and fruits. Improvements of crop plants to achieve better yields under suboptimal growth conditions will be essential to keep up with the increase in world population and to reduce the impact of high yield farming on the environment. Most agricultural products, such as seeds and fruits, are derived from the reproductive process of flowering plants. Therefore, crop improvement requires a detailed understanding of flower and fruit development. Research on reference species, such as Antirrhinum, Arabidopsis and rice have revealed interconnected regulatory networks based primarily on transcription factors that guide the patterning and growth of flowers and fruits. We will focus on a fundamental, economically important and experimentally tractable biological system, plant reproduction, and we will take advantage of genomic and post-genomic tools to analyse the regulatory network controlling reproductive process. To obtain maximum benefit from a broad comparative analysis, we will focus on a key set of genetic interactions that clearly regulate flower development and cell fate in the reference species. However using a comparative approach, we aim to understand how evolutionary variation led to differences and/or similarities in reproductive processes in (crop) species. Detailed analysis of the network of regulatory genes controlling reproductive development in Arabidopsis represents the biological theme around which our training programme is built. The exchange of researchers between Italy, Spain, Mexico and Brazil will allow an intense collaboration between the research groups that will lead to the transfer of knowledge between the different laboratories. Furthermore, this project will also facilitate a durable network between these countries from which researchers will benefit now and in the future.

A8

PRIN 2012 - "Controllo Genetico Ed Epigenetico Del Numero E Della Fertilità Degli Ovuli In Arabidopsis"

La formazione del primordio dell'ovulo, il suo differenziamento e sviluppo e infine il processo di doppia fecondazione sono eventi indispensabili allo sviluppo del seme. Il numero dei semi è una delle caratteristiche più importanti nella coltivazione delle piante. L'ottimizzazione del rendimento dei raccolti è necessaria per soddisfare la crescente domanda alimentare e per scopi non alimentari, come ad esempio la produzione di oli industriali e biocarburanti. I network genetici che determinano il numero di ovuli e la loro fertilità sono strettamente interconnessi e un ristretto numero di geni regolatori controllano entrambi questi processi di sviluppo; un esempio sono i geni CUP SHAPE COTYLEDONS1(CUC1) e CUC2 che codificano per fattori di trascrizione. Questo progetto si propone di studiare il network molecolare alla base del controllo del numero di ovuli e della fertilità utilizzando Arabidopsis thaliana come organismo modello. Gli obiettivi saranno raggiunti mediante un approccio integrato di tecnologie avanzate, disponibili nelle due Unità di Ricerca (UR) proponenti questo progetto, quali la microscopia laser, l'immunoprecipitazione della cromatina (ChIP) per l'identificazione dei target di fattori trascrizionali e l'analisi trascrittomica (RNASeq) dei mutanti scelti per il raggiungimento degli obiettivi previsti. Un aspetto dello sviluppo dell'ovulo molto importante, ma fino ad ora trascurato, è il coinvolgimento della regolazione epigenetica dell'espressione genica. I mutanti Athda19 e Atmcc1, in cui è aumentata l'acetilazione degli istoni, hanno un fenotipo simile a quello descritto per la linea mutante cuc2 pSTK::CUC1 RNAi. La nostra intenzione è quella di capire come le modificazioni epigenetiche correlano con l'attività dei fattori di trascrizione CUCs nel modulare l'espressione di geni necessari per la formazione e lo sviluppo dei primordi degli ovuli. L'obiettivo finale è di identificare il network genetico responsabile di questo processo e i geni che controllano il numero di ovuli in Arabidopsis. Inoltre i risultati ottenuti saranno il primo passo per il trasferimento tecnologico dalla specie modello a specie di interesse più applicativo come Brassica napus. La scelta di questa specie è motivata dalla disponibilità della sequenza genomica di Brassica napus oltre che di mutanti accessibili alla comunità scientifica internazionale. Brassica napus è, inoltre, filogeneticamente molto vicina ad Arabidopsis. Gli aspetti applicativi della ricerca e, quindi, il trasferimento tecnologico e la valorizzazione dei risultati ottenuti sono di grande interesse per il settore agro-alimentare e industriale. Il progetto è articolato in modo che le due UR, con competenze avanzate e complementari necessarie per lo svolgimento delle attività previste, interagiscano costantemente per raggiungere i risultati scientifici attesi e per garantire una eccellente formazione ai giovani ricercatori

A9

LINEA 2 2018 "Auxin and Cytokinin crosstalk impact on female germline fate acquisition"

The evolutionary success of sessile organisms strongly depends on dispersal and survival strategies. About 150 million years ago, two key innovations in plant reproductive biology triggered the advent of flowering plants (or Angiosperms): first, contrary to gymnosperms that reproduce through the fertilization of female gametes within naked ovules born on leaf-like organs, the ovules of Angiosperms develop into specialized female reproductive organ or carpels. Fertilization triggers the differentiation of carpel tissues into fruits, which consist in protective and dispersal units containing seeds. The second innovation occurs within ovules with the double fertilization of the female gametophyte that harbours two female gametes with

distinct fates: the fertilized egg cell develops into the embryo (i.e. the next sporophytic generation) while the fertilization of the central cell yields a companion nourishing tissue, the endosperm. The surrounding maternal tissues of the ovule and the two fertilization products, the embryo and the endosperm, comprise the seed. During Angiosperms expansion in the vegetation of most terrestrial habitats, fruits and seeds underwent a tremendous diversification in size, form, texture, colour, and metabolic activities. This resulted in an astonishing variety of structures providing animals and Humans with essential macro- (e. g. carbohydrates, lipids and proteins) and micronutrients (e. g. vitamins or antioxidants) as well as many other molecules of interest (e.g. repellents, pharmacopeia). Seeds are complex biological systems whose success depends on a complex, intricate network of interactions. One critical area in basic and agricultural research and innovation is dedicated to understanding all aspects of seed biology. Among these, the formation of seeds carrying maternal embryos (clones of the mother), a phenomenon called apomixis, has been long identified as a promising, revolutionizing tool for plant breeding and agriculture. Apomicts inherently possess the potential of founding new populations by only a single propagule or individual. Unlike their sexual relatives, apomictic plants do not necessarily require fertilization process and notably in most of the cases the germ cell does not get reduced by meiosis, so the progeny possesses a high ploidy level. Apomixis occurs in many plant genera and species, including a few of economical interest such as Citrus trees and tropical forage grasses (Hojsgaard et al., 2014) but, unsurprisingly, it is absent from major food crops which domestication and further improvement heavily depended on genetic recombination, a phenomenon skipped during apomictic developments.

The natural apomitic specie *Paspalum notatum* transcriptome is now available (Ortiz et al., 2017). Comparative analyses between sexual and apomitic *Paspalum* led to the identification of novel candidate genes for sexual and for apomitic development. Several genes related to auxin and cytokinin (CK) were found to be differentially expressed when sexual and apomitic trascriptomes were crossed. These two phytohormes have been already shown to drive the growth of the ovule primordium in the model sexual species *Arabidopsis thaliana* (Ceccato et al., 2013; Cucinotta et al., 2016). This project aims to focus on the understanding of the impact of the auxin and cytokinin crosstalk in the sexual/apomitic germline differentiation.

Data	3/8/2019	Luogo	Milano