





CURRICULUM VITAE ABREVIADO (CVA)

Part A. PERSONAL INFORMATION

| First name | Gustavo A. | | |
|--|------------------------|--------------------------------------|------------|
| Family name | SLAFER LAGO | | |
| Gender (*) | Male | Birth date | 13/10/1960 |
| ID number | 48050645-B | | |
| e-mail | gustavo.slafer@udl.cat | URL Web www.icrea.cat/Web/Scientific | |
| | | Staff/gustavo-aslafer-lago-293 | |
| Open Researcher and Contributor ID (ORCID) (*) | | 0000-0002-1766-4247 | |
| (*) Mandatom | | | |

(*) Mandatory

A.1. Current position

| Position | Research Professor of ICRE | CA | | |
|-------------------|--|----------------|------------|--|
| Initial date | 2004 | | | |
| Institution | University of Lleida | | | |
| Department/Center | Agricultural and Forest Sciences and Engineering | | | |
| Country | Spain | Teleph. number | 973-003659 | |
| Key words | Crop physiology, crop breeding, crop management, cereals | | | |

A.2. Previous positions (research activity interuptions, indicate total months)

| Period | Position/Institution/Country/Interruption cause | |
|------------|---|--|
| Until 2003 | Professor, University of Buenos Aires; and Principal Researcher, CONICET - Argentina | |

A.3. Education

| PhD, Licensed, Graduate | University/Country | Year |
|---------------------------------|---------------------------------------|------|
| Doctor of Philosophy, Ph.D. (in | The University of Melbourne Australia | 1005 |
| Crop Physiology) | The University of Meldourne, Austrana | 1993 |
| Master of Science, M.Sc. | University of Duenes Aires Augentine | 1989 |
| (in Crop Production), | University of Duenos Aires, Argentina | |
| Ingeniero Agrónomo | University of Le Dista Angentine | 1984 |
| (BSc in Agronomy) | University of La Plata, Argentina | |

Part B. CV SUMMARY (max. 5000 characters, including spaces)

Gustavo A. Slafer is Research Professor of ICREA and Associate Professor of the University of Lleida (Catalonia-Spain). He is also currently (i) Honorary Professor of both the School of Biosciences, Univ. Nottingham (UK, since 2005), and the Faculty of Agronomy, Univ. Buenos Aires (Argentina, since 2018), (ii) Editor/Associate Editor (responsible for desk-rejections or for the review process, making the final decision on acceptance/rejection) of Food Energy Security (UK), Scientific Reports (UK), Frontiers in Plant Science (Switzerland), and The Crop Journal (China); (iii) Member of the Editorial Board of Field Crops Research (Netherlands), European Journal of Agronomy (EU) and International Journal of Molecular Sciences (Switzerland), and (iv) Member of the Scientific Advisory Council of the GADEA for Science Foundation. Prof. Slafer research focuses on studying the mechanisms underlying the responses of grain crops to environmental and genetic factors. The aim is to identify alternatives to traditional farming and breeding practises to enhance the efficiency of resource use, as an avenue to increase simultaneously both crop productivity and agricultural sustainability. He published more than 220 papers in JCR-indexed journals, the vast majority (more than 90%) in journals ranked in the top quartile of their categories. Using the most restrictive database (Web of Science "Core Collection") at December 2024 he had an h-index of 70 (https://publons.com/researcher/2813883/gustavo-a-slafer/) [and Google Scholar h-index = 95; https://scholar.google.ca/citations?user=DVuZR cAAAJ&hl=en]. Prof. Slafer has been ranked as the Spanish scientist with the highest h index in the field of "Agronomy", with an Fh of 1.63 (i.e. h-index 63% higher than the average h-index of the 13 scientists in this field with highest h-index; h>32; see https://grupodih.info/agr.html#AGRONOMY, this had been updated on Mar2024 when accessed in Dec. 2024). He also published more than 40 chapters in scientific books of





international publishers (e.g. Elsevier, CABI, Springer, Academic Press, Taylor & Francis, etc.); and edited 7 scientific books published by CABI (UK), The Haworth Press (USA), Springer Verlag (USA) and Marcel Dekker (USA). Prof. Slafer is "Fellow" of the Crop Science Society of America (only 0.3% of the members can be Fellows) and was awarded prizes in recognition of his contributions to knowledge (the latest was in 2024 the prestigious "Narcís Monturiol Awards" delivered by the Government of Catalonia 'honouring people who have stood out markedly for the services provided in Catalonia for scientific and technological progress' as stated in the web site of the award). Prof. Slafer has been Principal Investigator (of either the whole project or the group of the UdL in multinational research consortia) of Catalonian, Spanish, European and Global (IWYP) competitive grants. He had also signed research contracts with the Industry. He was the main supervisor of the PhD theses of 18 students who already defended their theses (and are successfully doing research or working for the industry across many different countries) and is currently supervising three more students (one of them submitting in the first semester of 2025, the second one in 2026). Due to his international recognition, Prof Slafer has been frequently invited to deliver talks in International conferences and in Prestigious Centres of Research in USA, Australia, Argentina, France, Mexico, The Netherlands, Canada, Hungary, Brazil, UK, Chile, Finland, Uruguay, Ireland, Kazakhstan, and China.

Part C. RELEVANT MERITS (sorted by typology)

C.1. Publications (limited to 10 articles)

In the last 10 years (2015-2024) I published 73 papers in JCR-journals, 6 chapters in international books and edited 1 book (published by Springer-Verlag; ISBN 978-1-4939-8620-0). Most relevant papers published recently, during the execution of the current Project of the Plan Nacional (since 2022) include:

- Carrera, C.S., Savin, R., **Slafer, G.A.**, 2024. Critical period for yield determination across contrasting grain crops. <u>Trends in Plant Science</u>, **29**, 329-342
- Tamagno, S., Carrera, C.S., Marchese, S.I., Savin, R., **Slafer, G.A.**, 2024. Sterility of basal spikelets in wheat. Predetermined fate or a matter of resources? <u>Journal of Experimental Botany</u>, **75**, 7160–7173.
- Ploschuk, R,A., Savin, R., Slafer, G.A., 2024. Dual stress, equivalent harm? Hypothesizing on the type of interactions between waterlogging and high temperature. <u>Frontiers in Plant Science</u>, 15, 1472665.
- Slafer, G.A., Savin, R., Sadras, V.O., 2023. Wheat yield is not causally related to the duration of the growing season. <u>European Journal of Agronomy</u>, 148, 126885.
- Slafer, G.A., Foulkes, M.J., Reynolds, M., Murchie, E.H., Carmo-Silva, E., Flavell. R.B., Gwyn, J., Sawkins, M., Griffiths, S., 2023. A 'Wiring Diagram' for sink-strength traits impacting wheat yield potential. Journal of Experimental Botany, 74, 40–71.
- Reynolds, M.P.*, **Slafer, G.A.***, Foulkes, J.M., Griffiths, S., Murchie, E.H., Carmo-Silva, E., Asseng, S., Chapman, S.C., Sawkins, M., Gwyn, J., Flavell, R.B. 2022. A wiring-diagram to integrate physiological traits of wheat yield potential. <u>Nature Food</u>, **3**, 318-324 [*Co-lead and Co-corresponding authors].
- Sanchez-Bragado, R., Molero, G., Araus, J.L., **Slafer, G.A.** 2023. Awned versus awnless wheat spikes: does it matter? <u>Trends in Plant Science</u>, **28**, 330-343.
- Parrado, J.D., Savin, R., **Slafer, G.A.**, 2023. Photoperiod sensitivity of *Ppd-H1* and *ppd-H1* isogenic lines of a spring barley cultivar. Exploring extreme photoperiods. <u>Journal of Experimental Botany</u>, **74**, 6608–6618.
- Slafer, G.A., García, G.A., Serrago, R.A., Miralles, D.J. 2022. Physiological drivers of responses of grains per m² to environmental and genetic factors in wheat. <u>Field Crops Research</u>, **285**, 108593
- Savin, R., Cossani, C.M., Dahan, R., Ayad, J.Y., Albrizio, R., Todorovic, M., Karrou, M., Slafer, G.A. 2022. Intensifying cereal management in dryland mediterranean agriculture: rainfed wheat and barley responses to nitrogen fertilisation. <u>European Journal of Agronomy</u>, 137, 126518.

C.2. Congresses (limited to 10 entries)

I have co-authored a very large number of posters or oral communications in national and international conferences and was also invited speaker in a number of international meetings. Some of these <u>Invited</u> <u>Talks in the last 5 years</u> include:

- Further improving spike fertility traits in wheat to keep increasing yield potential. International Conference on Plant Biology and Biotechnology (ICPBB 2024). Almaty,





Kazakhstan, 3-6 June 2024.

- Barley yield physiology. Effects of *PPD-H1* alleles beyond phenology and differences between
 6- and 2-row barleys. Australian Barley Technical Symposium. Adelaide, Australia, 12-15
 August 2024.
- Wheat yield as affected by high temperature. Interference with mechanisms determining wheat yield. Rank Symposium on Net Zero Agriculture. Lake District, UK 15-18 April 2024.
- Traits determining sink strength for improving wheat yield. Resource allocation to juvenile spikes, efficiency in its use and floret development. Iberian Plant Biology 2023. Braga, Portugal, 12 July 2023
- Wheat yield physiology as affected by N-fertilization. 2nd Workshop Argentina UK Partnership Wheat. School of Agronomy-Univ Buenos Aires, Argentina, 27 November 2023.
- Overview of "sink side" dynamics, important processes and traits using a Wiring Diagram. Workshop: Delivering High Impact Traits and Novel Genetic Variation, within the IWYP (International Wheat Yield Partnership) Conference 2021. Online Format, 21 September 2021.
- Physiological bases for improving resilience to environmental stresses and resource use efficiency in wheat. XVI European Society for Agronomy Congress. Online Format, 1-3 September 2020.
- Heat x Nitrogen penalties on yield of cereals. MonoGram 2019 (MonoGram is a Network of UK based researchers with interest in small grain cereal and grass). University of Nottingham. UK. 30 April 2 May 2019.
- Crop physiology in relation to breeding grain crops. Invited lecturer at the EUROPE SCIENTISTS MEETING, Corteva-Pioneer. Cremona, Italy. 5-7 February 2019.
- Brechas de rendimiento de trigo en ambientes con estrés hídrico: cuantificación y mitigación.
 Taller "Estrategias para reducir las brechas de rendimiento e incrementar la sostenibilidad de los sistemas de producción de cultivos anuales". Universidad Austral de Chile. 23-25 septiembre 2019

C.3. Research projects

I have participated (as Researcher or Principal Investigator) in many national and international competitive grants and few contracts with the industry. The projects that were active in the last 10 years (since 2015) are listed below (in all cases the funding indicated is that corresponding only to the share for our lab at the UdL):

- Plan Nacional (España) de I+D, Ministerio de Ciencia e Innovación de España Agencia Estatal de Investigación, Proyectos de Transición Ecológica y Digital, Sept 2022-Nov 2024 (prorrogado a Sep 25). Proyecto Coordinado "Adapting wheat to climate change: mitigating the penalties of heat waves on wheat yield and quality (HeWaWheat)" [2980980 €]. Sub-proyecto 1 UdL: Genetic adaptation of wheat yield to heat waves: physiological bases of variability in plasticity of floret development, grain set and grain growth. Código TED2021-130466B-C21, € 161000 (Co-Director/Co-Investigador Principal y Coordinador 2 del Proyecto coordinado).
- Plan Nacional (España) de I+D, Ministerio de Ciencia e Innovación de España Agencia Estatal de Investigación, Sep 2022-Ago 2025. Fertilidad de espigas en trigo: rol de genes promisorios, variabilidad en material elite, plasticidad y compensaciones. Código PID2021-127415OB-I00, € 157,300 (Director/Investigador Principal).
- AGROTECNIO Joint Research Projects. Analysing the physiological effects, and developing simple protocols for high throughput automatic determination, of seedling and spike densities to provide support to selection in breeding programs. 01 Sept 2021 31 Ago 2023. 20000€
- PRIMA (Partnership for Research and Innovation in the Mediterranean Area; a partnership between 19 Participating States and the EU Horizon 2020). 15 Sept 2019-14 Sept 2022. Utilization of local genetic diversity to understand and exploit barley adaptation to harsh environments and for prebreeding; GENDIBAR (2018-SECTION2-8), € 85,000.
- Plan Nacional (Spain) de I+D, Ministerio de Economia y Competitividad de España, 2019-2021. Plasticidad fenotipica del rendimiento y calidad de trigo en respuesta a golpes de calor en fases reproductivas de genotipos contrastantes (RTI2018-096213-B-I00), € 153,670.
- FSOV, Fonds de Soutien à l'obtention Végétale [French funding supporting the development of valuable genetic materials]. Plasticité des composantes de rendement des céréales à pailles (PlastiX). March 2020 February 2023 (FSOV 2018 R), 80,845€ (GASlafer also responsible for the whole consortium for the "Ecophysiological determinism of plastic response")





- Generalitat de Catalunya, Convocatoria Competitiva de Support Als Grups De Recerca, 2017-2020. Grupo de Recerca Consolidat en Agronomía i Millora del Rendiment i Qualitat de Cultius Extensius. Codigo: 2017 SGR 890 €37,840. IP: G. Slafer.
- AGENCIA ESTATAL DE INVESTIGACIÓN (Programa REDES DE EXCELENCIA). 1/7/2017-30/6/2019. Fisiologia del Rendimiento y Calidad para la Mejora de Cereales. Código AGL2016-81855-REDT, €20,000. Coordinator of the Network (9 groups across Spain) and IP of the UdL: GA Slafer.
- INTERNATIONAL WHEAT YIELD PARTNERSHIP (International, headquarters in the USA), 2016-2019. A diversity toolkit to maximize harvest index by controlling the duration of developmental phases. Código IWYP25FP, €280,000. IP: G. Slafer.
- Plan Nacional (España) de I+D, Ministerio de Economia y Competitividad de España, 2016-2018. Variabilidad genotipica en atributos determinantes del número de granos y posibles compensaciones con el peso y calidad nutricional de los granos en material elite de trigo. Código AGL2015-69595-R, €180,000. IP: G. Slafer.
- CYTED (Programa Iberoamericano de Ciencia y Tecnología para el Desarrollo). 2016-2019. Intensificación de la producción con manejo sostenible de los cultivos extensivos. Financiación no dividida por partners, el total para funcionamiento de la red (5 miembros) es de 25000€ por año. Red 116RT0502. IP: G. Slafer.
- Generalitat de Catalunya, Convocatoria Competitiva de Support Als Grups De Recerca, 2014-2016. Grupo de Recerca Consolidat en Agronomía i Millora del Rendiment i Qualitat de Cultius Extensius. Codigo: 2014 SGR 1040 €27,000. IP: G. Slafer.
- Plan Nacional (España) de I+D, Ministerio de Economia y Competitividad de España, 2013-2015. Control genetico de atributos fisiologicos determinantes del número de granos en trigo. Código AGL2012-35300, €210,600. IP: G. Slafer
- European Commission, Jan 2012-Dec 2015. Programa Collaborative Project; FP7-KBBE-2011-5. Genetics and physiology of wheat development to flowering (ADAPTAWHEAT). € 309,960. IP: G. Slafer

C.4. Other relevant merits (not included in Part B of this CVA)

- Over the last 10 years (2015-2024) I supervised 8 PhD students that defended their theses at the University of Lleida. They are now working as scientists in public (Univ of Adelaide-Australia, Pennsylvania State Univ-USA, Cornell University-USA, INRAE ClermontFerrand-France) or private organisations (LIMAGRAIN-Spain, Navarra; CBC-Europe based at Spain, Catalonia; and AgIDEA, Argentina).
- I was Lecturer in different courses of the UdL. Currently I am in charge of (i) the introduction and crop development modules of the course "Biotecnological Applications for Improving Crop Productivity" within the Degree of Biotechnology; and (ii) the course "Writing and publication of scientific papers" within a European Master degree (MEDFOR).
- Member of the Committee for Experimental Sciences for the Accreditation of Research and Lecturing positions of the Basque Country University System, UNIQUAL, until 2013.
- Member of the Committee for Agriculture Andalusian Agency for Knowledge. 2016 2018.
- President of the Committee for Evaluation of Research Groups of Agriculture of CSIC (Spanish Council for Scientific Research). 2017- 2019.
- Member of the Expert Panel for the evaluation of Faculty of Agriculture University of Zagreb. Agency for Science and Higher Education, Croatia. 2018.
- Member of the Committee for Evaluating project proposals for FONTAGRO (Fondo Regional de Tecnología Agropecuaria; an alliance of 15 countries -Spain and Latin American countries-producing a co-financing mechanism for the development of agricultural technology in Latin America, the Caribbean, and Spain,) 2021 2024.
- Bolsa de Cereales Award, granted by the National Academy of Agronomy and Veterinary of Argentina, 2017
- Awarded the "MensaLleida" 2023 prize to scientific and technological knowledge, in recognition to the achievements over the career and contributions of the studies in crop physiology. Lleida, Spain. 2024
- Narcís Monturiol Medal 2024 of the Government of Catalonia to honour outstanding contribution to the development of science and technology in Catalonia. Barcelona, Spain 2024