

# Abraham Mendoza, PhD

Head of Sustainable Organic Chemistry / Institute of Molecular Science (ICMol)

Valencia, Spain

[abraham.mendoza@uv.es](mailto:abraham.mendoza@uv.es) | +34 963 544 268 | [www.icmol.es/soc](http://www.icmol.es/soc)  
| [ORCID](#) | [Researcher ID](#) | [Scopus](#) | [LinkedIn](#) | [@Mendozalab](#) |

## Professional Summary

---

Abraham Mendoza (AM) started his independent career at Stockholm University in 2013, initially as a Junior Researcher of the Swedish Research Council, then tenured as a Wallenberg Academy Fellow in 2017. He has expanded the support to his research with an ERC Starting Grant, and other national grants from the Swedish government and different foundations. In 2021, he was promoted to "Docent" (Assoc. Prof.) at SU and in 2022 was recruited to ICMol (Univ. València) as Head of Sustainable Organic Chemistry (Distinguished Researcher) with support from the Generalitat Valenciana (CIDEAGENT Senior). In 2024, he took over a research position from the ATRAE program of the Spanish Government in the same institution.

## Professional Experience

---

- |             |   |
|-------------|---|
| since 2022  | <b>University of Valencia, ICMol</b><br><i>Head of Sustainable Organic Chemistry</i><br><i>Distinguished researcher, ATRAE Fellow</i> |
| 2013 - 2022 | <b>Stockholm University</b><br><i>Group leader</i><br><i>Wallenberg Fellow</i><br><i>Associate Professor</i>                          |

## Education

---

- |             |   |
|-------------|---|
| 2012 - 2013 | <b>The University of Cambridge</b> , Cambridge, UK<br><i>Postdoctoral Research Associate, Marie Curie Fellow</i><br>Advisor: Prof. M. J. Gaunt  |
| 2010 - 2012 | <b>The Scripps Research Institute</b> , La Jolla, CA<br><i>Postdoctoral Research Associate, Fullbright Fellow</i><br>Advisor: Prof. P. S. Baran   |
| 2004 - 2009 | <b>Enrique Moles Research Institute</b> , Oviedo, Spain<br><i>PhD in Organic &amp; Organometallic Chemistry</i><br>Advisors: Prof. J. Barluenga, Prof. F. J. Fañanás & Prof. F. Rodríguez |
| 2004 - 2009 | <b>University of Oviedo</b> , Oviedo, Spain<br><i>BSc in Chemistry</i>  |

## Honors & Awards

---

- |             |   |
|-------------|---|
| 2025        | <b>Editorial Advisory Board, Eur. J. Org. Chem.</b> , Wiley Publishing    |
| 2023        | <b>Young Researcher Award</b> , Eli Lilly & Company                       |
| 2023        | <b>RSEQ Young Group Leader Award</b> , Royal Spanish Society of Chemistry |
| 2017        | <b>Thieme Chemistry Journals Award</b> , Thieme publishing                |
| 2016        | <b>JSP Fellow</b> , Swiss Chemical Society                                |
| 2012 - 2013 | <b>Marie Curie Intra-European Fellowship</b> , European Union             |
| 2010 - 2012 | <b>Fulbright Fellowship</b> , US Department of State                      |

2010 | **Extraordinary doctorate award**, U. Oviedo  
2005 - 2009 | **FPU National Graduate Fellowship**, Spanish Government

## Research grants

---

2024 - 2028	<b>ATRAE Program</b> , Spanish Research Agency (AEI) Hidrogeno verde mediante nueva quimica radicalaria y semiconductores 2D avanzados, ATR2023-145209 992 400 EUR
2023 - 2026	<b>PID Generacion de Conocimiento</b> , Spanish Research Agency (AEI) Valorization of raw materials into important products fostered by redox-active diazocompounds - RAW2VIP, PID2022-141845NB 212 500 EUR
2022 - 2026	<b>CIDEGENT Senior</b> , Generalitat Valenciana Organic Synthesis based on Highly Unsaturated Carbon, CIDEGENT/2021/034 400 000 EUR
2022 - decl.	<b>Wallenberg Academy Fellows</b> , Knut & Alice Wallenberg Foundation Photochemistry of Weakly Interacting Organic Molecules: Sustainable Chemistry and Chemical Biology, KAW 2021.0177 875 000 EUR
2022 - decl.	<b>Project Grant</b> , Swedish Research Council Sustainable synthesis enabled by transient photoinitiators, 2021-04500 340 000 EUR
2021 - 2025	<b>Industrial PhD</b> , Swedish Foundation for Strategic Research New therapeutics with robust C1 photo-linchnpins, 2021-04500 AstraZeneca R&D Gothenburg (co-applicant) 250 000 EUR
2017 - 2023	<b>ERC Starting Grant</b> , H2020 (EU) Automatized Catalysis and Single-Carbon Insertion - SINGLE-C H2020-ERC-STG-714737 1 487 245 EUR
2017 - 2021	<b>Wallenberg Academy Fellows</b> , Knut & Alice Wallenberg Foundation Synthetic shortcuts illuminated by electron transfer, KAW 2016.0153 750 000 EUR
2014 - 2018	<b>Career Integration Grant</b> , Marie Curie Actions (EU 7th Framework Program) Development and application of Artificial Systems for Activation of DiOxygen and C-H bonds - ASADO-CH, MCA-CIG-631159 50 000 EUR
2013 - 2017	<b>Junior Researchers Grant</b> , Swedish Research Council Development and application of artificial systems for activation of dioxygen and C-H bonds, 2012-2969 395 425 EUR

## Publications

---

1. Silvi, E.; Wei, W.-J.; Johansson, M. J.; Himo, F.\*; **Mendoza, A.\*** Uncatalyzed Diboron Activation by a Strained Hydrocarbon: Experimental and Theoretical Study of [1.1.1]Propellane Diborylation *Chem. Eur. J.* **2024**, *30*, e202402152
2. Chowdhury, R.; Elek, G. Z.; Meana-Baamonde, B.; **Mendoza, A.\*** Modular synthesis of (borylmethyl)silanes through orthogonal functionalization of a carbon atom *Org. Lett.* **2023**, *25*, 1935-1940
3. Colas, K.; dos Santos, A. Catarina V. D.; Kohlhepp, S. V.; **Mendoza, A.\*** Direct Addition of Grignard Reagents to Aliphatic Carboxylic Acids Enabled by Bulky *turbo*-Organomagnesium Anilides *Chem. Eur. J.* **2022**, *28*, e202104053

4. Costantini, M.; **Mendoza, A.\*** Modular Enantioselective Synthesis of *cis*-Cyclopropanes through Redox-Active Carbene Transfer and Stereoselective Photo-Decarboxylation *ACS Catalysis* **2021**, *11*, 13312–13319
5. Planas, F.; Costantini, M.; Montesinos-Magraner, M.; Himo, F.\*; **Mendoza, A.\*** Combined Experimental and Computational Study of Ruthenium *N*-hydroxyphthalimidoyl Carbenes in Alkene Cyclopropanation Reactions *ACS Catalysis* **2021**, *11*, 10950–10963
6. Chowdhury, R.; **Mendoza, A.\*** *N*-hydroxyphthalimidyl diazoacetate (NHPI-DA): a modular methylene linchpin for the C–H alkylation of indoles *Chem. Commun.* **2021**, *57*, 4532–4535
7. Chowdhury, R.; Yu, Z.; Tong, M. L.; Kohlhepp, S. V.; Yin, X.; **Mendoza, A.\*** Decarboxylative Alkyl Coupling Promoted by NADH and Blue Light *J. Am. Chem. Soc.* **2020**, *142*, 20143–20151
8. Planas, F.; Kohlhepp, S. V.; Huang, G.; **Mendoza, A.\***; Himo, F.\* Computational and Experimental Study of *turbo*-Organomagnesium Amide Reagents: Cubane Aggregates as Reactive Intermediates in Pummerer Coupling *Chem. Eur. J.* **2020**, *27*, 2767–2773
9. Martinez de Castro, E.; Suarez-Pantiga, S.; **Mendoza, A.\*** Scalable Synthesis of Esp and Rhodium(II) Carboxylates from Acetylacetone and  $\text{RhCl}_3 \cdot x\text{H}_2\text{O}$  *Org. Proc. Res. Dev.* **2020**, *24*, 1207–1212
10. Colas, K.; dos Santos, A. Catarina V. D.; **Mendoza, A.\*** *i*-Pr<sub>2</sub>NMgCl·LiCl Enables the Synthesis of Ketones by Direct Addition of Grignard Reagents to Carboxylate Anions *Org. Lett.* **2019**, *21*, 7908–7913
11. Yu, Z.; **Mendoza, A.\*** Enantioselective Assembly of Congested Cyclopropanes using Redox-Active Aryldiazoacetates *ACS Catalysis* **2019**, *9*, 7870–7875
12. Bratt, E.; Suárez-Pantiga, S.; Johansson, M. J.; **Mendoza, A.\*** Mechanism and regioselectivity of the anionic oxidative rearrangement of 1,3-diketones towards all-carbon quaternary carboxylates *Chem. Commun.* **2019**, *55*, 8844–8847
13. Montesinos-Magraner, M.; Costantini, M.; Ramirez-Contreras, R.; Muratore, M.; Johansson, M. J.; **Mendoza, A.\*** General Cyclopropane Assembly via Enantioselective Transfer of a Redox-Active Carbene to Aliphatic Olefins *Angew. Chem. Int. Ed.* **2019**, *58*, 5930–5935
14. Colas, K.; **Mendoza, A.\*** Iterative Synthesis of Pluripotent Thioethers through Controlled Redox Fluctuation of Sulfur *Synlett* **2018**, *29*, 1329–1333
15. Qiu, Y.; **Mendoza, A.\***; Posevins, D.; Himo, F., Kalek, M.\*; Bäckvall, J.-E.\* Mechanistic Insight into Enantioselective Palladium-Catalyzed Oxidative Carbocyclization-Borylation of Enallenes *Chem. Eur. J.* **2018**, *24*, 2433–2439
16. Colas, K.; Martin-Montero, R.; **Mendoza, A.\*** Intermolecular Pummerer Coupling with Carbon Nucleophiles in Non-Electrophilic Media *Angew. Chem. Int. Ed.* **2017**, *56*, 16042–16046
17. Otero-Fraga, J.; Suarez-Pantiga, S.; Montesinos-Magraner, M.; Rhein, D.; **Mendoza, A.\*** Direct and Stereospecific [3+2] Synthesis of Pyrrolidines from Simple Unactivated Alkenes *Angew. Chem. Int. Ed.* **2017**, *56*, 12962–12966
18. Otero-Fraga, J.; Montesinos-Magraner, M.; **Mendoza, A.\*** Perspectives on Intermolecular Azomethine Ylide [3+2] Cycloadditions with Non-Electrophilic Olefins *Synthesis* **2017**, *49*, 802–809
19. **Mendoza, A.\***; Colas, K.; Suarez-Pantiga, S.; Goetz, D.; Johansson, M. J. Chemical Innovation through Ligand Total Synthesis *Synlett* **2016**, *27*, 1753–1759
20. Suarez-Pantiga, S.; Colas, K.; Johansson, M. J.; **Mendoza, A.\*** Scalable synthesis of piperazines enabled by visible light irradiation and aluminum organometallics *Angew. Chem. Int. Ed.* **2015**, *54*, 14094–14098
21. Chan, L.; McNally, A; Toh, Q. Y.; **Mendoza, A.\***; Gaunt, M. J.\* A Counteranion Triggered Arylation Strategy Using Diaryliodonium Fluorides *Chem. Sci.* **2015**, *6*, 1277–1281

22. Wilde, N.; Isomura, M.; **Mendoza, A.**; Baran, P. S.\* Two phase synthesis of (-)-Taxuyunnanine D *J. Am. Chem. Soc.* **2014**, *136*, 4949–4912
23. Ishihara, Y; **Mendoza, A.**; Baran, P. S.\* Total Synthesis of taxane terpenes: cyclase phase *Tetrahedron* **2013**, *69*, 5685–5701
24. Cala, L.; **Mendoza, A.**; Fañanás, F. J.\*; Rodríguez, F.\* A catalytic multicomponent coupling reaction for the enantioselective synthesis of spiroacetals *Chem. Commun.* **2013**, *49*, 2715–2717
25. Voica, A.-F.; **Mendoza, A.**; Gutekunst, W. R.; Otero Fraga, J.; Baran, P. S.\* Guided desaturation of unactivated aliphatics *Nature Chem.* **2012**, *4*, 629–635
26. **Mendoza, A.**; Ishihara, Y; Baran, P. S.\* Scalable enantioselective total synthesis of taxanes *Nature Chem.* **2012**, *4*, 21–25
27. Fañanás, F. J.\*; **Mendoza, A.**; Arto, T.; Temelli, B.; Rodríguez, F.\* Scalable total synthesis of (-)-Berkelic Acid by a protecting group-free strategy *Angew. Chem. Int. Ed.* **2012**, *51*, 4930–4933
28. Fañanás, F. J.\*; Arto, T.; **Mendoza, A.**; Rodríguez, F.\* Synthesis of 2,5-dihydropyridine derivatives by gold-catalyzed reactions of beta-ketoesters and propargylamines *Org. Lett.* **2011**, *13*, 4184–4187
29. **Mendoza, A.**; Pardo, P.; Rodríguez, F.\*; Fañanás, F. J.\* Synthesis of [3.3.1] bicyclic compounds by a Bronsted acid catalysed double intramolecular Michael addition *Chem. Eur. J.* **2010**, *16*, 9758–9762
30. Barluenga, J.\*; Calleja, J.; **Mendoza, A.**; Rodríguez, F.; Fañanás, F. J. Synthesis of polycyclic compounds by a cascade cycloisomerization/Diels-Alder reaction *Chem. Eur. J.* **2010**, *16*, 7110–7112
31. Barluenga, J.\*; **Mendoza, A.**; Rodríguez, F.; Fañanás, F. J. A palladium(II)-catalyzed synthesis of spiroacetals through a one-pot multi-component cascade reaction *Angew. Chem. Int. Ed.* **2009**, *48*, 1664–1647
32. Barluenga, J.\*; **Mendoza, A.**; Rodríguez, F.; Fañanás, F. J. Synthesis of furoquinolines through a one-pot multicomponent cascade reaction catalyzed by platinum complexes *Chem. Eur. J.* **2008**, *14*, 10892–10895
33. Barluenga, J.\*; **Mendoza, A.**; Rodríguez, F.; Fañanás, F. J. Synthesis of spiroquinolines through a one-pot multicatalytic and multicomponent cascade reaction *Angew. Chem. Int. Ed.* **2008**, *48*, 7044–7047
34. Barluenga, J.\*; **Mendoza, A.**; Dieguez, A.; Rodríguez, F.; Fañanás, F. J. Umpolung reactivity of alkenyl Fischer carbene complexes, copper enolates and electrophiles *Angew. Chem. Int. Ed.* **2006**, *48*, 4848–4850

## Reviews & assays

---

1. **Mendoza, A.**; Rodríguez, F.\*; Fañanás, F. J.\* Asymmetric halocyclization of unsaturated compounds: an overview and recent developments *Curr. Org. Chem.* **2013**, *10*, 384–393
2. **Mendoza, A.**; Baran, P. S.\* Synthesis: a constructive debate – Practical synthesis *Nature* **2012**, *492*, 188–189

## Book chapters

---

1. Arto, T.; **Mendoza, A.**; Fañanás, F. J.\*; Rodríguez, F.\* Chapter 2 – (-)-Berkelic Acid: Lessons Learned From Our Investigations on a Scalable Total Synthesis. *Strategies and Tactics in Organic Synthesis* **2014**, *10*, 33–50 (Ed: M. Harmata), Elsevier