

Allegato E – Antonella Goggiamani

Decreto Rettrice Università di Roma “La Sapienza” n. 1922/2023 del 19.07.2023

(CODICE CONCORSO 2023POR022)

Antonella Goggiamani
Curriculum Vitae
ai fini della pubblicazione

Place: Roma

Date: July 31st 2023**Part I – General Information**

Full Name Antonella Goggiamani
Spoken Languages Italian, English

Part II – Education

Type	Year	Institution; Notes (Degree, Experience,..)
University graduation	2001	Laurea degree <i>summa cum laude</i> in Chemistry University of Rome “La Sapienza” Advisor: Prof. S. Cacchi Thesis: “ <i>Sintesi Palladio-catalizzata di N-arilossazolidinoni sostituiti</i> ”
Post-graduate studies	2002-2004	Post-graduate Research Fellow Dipartimento di Studi di Chimica e Tecnologia delle Sostanze Biologicamente Attive Facoltà di Farmacia, University of Rome “La Sapienza” Research Title: “ <i>Formazione di legami carbonio-carbonio e eteroatomo-carbonio catalizzata dal palladio e dal rame</i> ” Advisor: Prof. S. Cacchi
	2004-2006	Post-graduate Research Fellow Dipartimento di Studi di Chimica e Tecnologia delle Sostanze Biologicamente Attive Facoltà di Farmacia, University of Rome “La Sapienza” Research Title: “ <i>La catalisi del palladio nella formazione di legami carbonio-carbonio e eteroatomo-carbonio</i> ” Advisor: Prof. S. Cacchi
Ph.D.	2006	Ph.D. in Pharmaceutical Sciences University of Rome “La Sapienza” Dipartimento di Chimica e Tecnologie del farmaco

Thesis: "Formation of Carbon-Heteroatom and Carbon-Carbon Bonds via σ -Organopalladium Complexes"

Advisor: Prof. S. Cacchi

Post-doctorate training	2006	Postdoctoral Research Fellow financed by GlaxoSmithKline University of Rome "La Sapienza" Dipartimento di Studi di Chimica e Tecnologia delle Sostanze Biologicamente Attive, Research Title: " <i>Utilizzo di diazo composti o triazine nelle reazioni palladio catalizzate</i> "
Schools	2002	XXVII Scuola A. Corbella, giugno 2002
	2003	4 th International school of organometallic chemistry-ISOC 2003, Camerino 6-9-2003

Part III – Appointments

III.A – Academic Appointments and National Scientific Habilitations

Start	End	Institution	Position
01/11/2006-		University of Rome "La Sapienza"	Researcher
03/09/2017		Dipartimento di Chimica e Tecnologie del Farmaco Faculty of Pharmacy and Medicine	SC 03/C1 (SSD CHIM/06)
2013		MIUR	Abilitazione Scientifica Nazionale seconda fascia SC 03/C1 (SSD CHIM/06)
2018		MIUR	Abilitazione Scientifica Nazionale prima fascia SC 03/C1 (SSD CHIM/06)
04/09/2017-		University of Rome "La Sapienza"	Associate Professor
present		Dipartimento di Chimica e Tecnologie del Farmaco	

III.B – Other Appointments

Start	End	Institution	Position
2022-present		University of Rome "La Sapienza"	Member of "Collegio dei Docenti" in Molecular Design and Characterization for The Promotion of Health and Well-Being: from Drug to Food
2020			Full member of the Committee for

2023

Admission to the Ph.D. Program in Pharmaceutical Sciences (XXXVI cycle)
 Full member of the Committee for Admission to the Ph.D. Program in “Molecular Design and Characterization for The Promotion of Health and Well-Being: from Drug to Food” (XXXIX cycle)

Part IV – Teaching experience

IV.A - Teaching experience within the Academic Recruitment Field 03/C1, SSD CHIM/06 (courses and supplementary courses)

Year	Institution	Course
2002-2005	University of Rome “La Sapienza” Faculty of Pharmacy	General and Inorganic Chemistry, supplementary course
2004-2015	University of Rome “La Sapienza” Faculty of Pharmacy	Organic Chemistry, supplementary course
2012-2014 2018-present	University of Rome “La Sapienza” Faculty of Mathematical, Physical and Natural Sciences	Organic Chemistry Natural Science Degree 6 CFU
2013-present	University of Rome “La Sapienza” Faculty of Pharmacy and Medicine	Organic Chemistry I Pharmaceutical Chemistry and Technology Degree 9 CFU
2021-present	Università Cattolica del Sacro Cuore Faculty of Medicine and Surgery	Organic Chemistry, Pharmacy degree <i>Cultore della materia</i>
2010 2019	Università degli studi della Tuscia Università degli studi di L’Aquila	PhD Thesis committee PhD Thesis committee
2006-present	University of Rome “La Sapienza” Faculty of Pharmacy and Medicine	Laurea Degree Thesis committee (Pharmaceutical Chemistry and Technology Degree; Pharmacy Degree; Natural Science Degree)

IV.B – Other Teaching Activities

Start	End	Institution	Position
2022-present		University of Rome “La Sapienza”	Tutor of Ph.D. student Roberta

		Zoppoli in "Molecular Design and Characterization for The Promotion of Health and Well-Being: from Drug to Food"
20/07/2022 26/07/2023	"University of Rome "La Sapienza"	Cycle of advanced lessons for PhD in "Molecular Design and Characterization for The Promotion of Health and Well-Being: from Drug to Food" <i>"Recent advances in metal-assisted cross-coupling processes: improvement of reaction results by MW irradiation"</i>

Part V - Responsibilities or Institutional Assignments

Start	End	Institution	Position
2019-2021		University of Rome "La Sapienza"	Departmental Representative for the Scientific Committee of the Center for Research and Services Saperi &Co.

Part VI - Funding Information

VI.A – Funding Information [grants as PI-principal investigator]

Year	Program, institution, duration, title	Grant value (€)
2008	FIRB Futuro in Ricerca 2008, MIUR, 36 months (as OU responsible) <i>"Metodologie di sintesi innovative e sostenibili per processi di attivazione del legame C-H"</i>	196.650
2008	Ricerche di ateneo federato 2008, Sapienza, 12 months <i>"Reazioni dei sali di arildiazonio catalizzate dal palladio"</i>	4.874
2010	Progetto di Università 2010, Sapienza, 12 months <i>"La catalisi di metalli di transizione nell'attivazione del legame C-H: sintesi di sostanze di interesse biologico"</i>	13.500
2013	Progetto di Università 2013, Sapienza, 12 months <i>"Sintesi in fase omogenea ed eterogenea di derivati eterociclici azotati ed ossigenati mediante attivazione metallo-assistita del legame C(arilico)-H e studio meccanicistico di alcuni passaggi reattivi connessi con la procedura"</i>	34.946
2016	Progetto di Università 2016, Sapienza, 12 months <i>Targeting Hedgehog pathway: identification and sustainable synthesis of novel Smo and Gli inhibitors and their pharmacological effects in tumors and cancer stem cells.</i>	33.600
2017	Finanziamento annuale individuale delle attività base di ricerca	

VI.B – Funding Information [grants as I-investigator]

year	Program, institution, duration, title	Grant value (€)
2003	PRIN 2003; MIUR, 24 months <i>"Aspetti stereochimici nella funzionalizzazione di legami multipli"</i>	112.200
2003	FIRB 2003; MIUR, 36 months <i>"Enzimi e catalizzatori organo-metallici per nuove biotrasformazioni e l'ottimizzazione di processi produttivi eco-compatibili"</i>	430.500
2005	PRIN 2005; MIUR, 24 months <i>"Aspetti stereochimici nella funzionalizzazione di legami multipli"</i>	138.600
2007	Acquisizione di medie e grandi attrezzature scientifiche di ateneo 2007; Sapienza, 12 months <i>"Metodologie cromatografiche accoppiate alla spettrometria di massa, per l'analisi ad alta efficienza di molecole d'interesse farmaceutico e biomedico"</i>	74.300
2007	PRIN 2007; MIUR, 24 months <i>"Aspetti stereochimici nella funzionalizzazione di legami multipli"</i>	104.300
2007-2009	Progetti di ricerca universitari 2007, 2008, 2009; Sapienza, 36 months <i>"Nuove strategie di sintesi e nuove metodologie di separazione stereoselettiva"</i>	88.930
2007-2009	Ricerche di ateneo federato 2007, 2008, 2009; Sapienza, 36 months <i>"Prodotti di interesse biologico: isolamento, sintesi e chimica delle separazioni"</i>	25.222
2008	Acquisizione di medie e grandi attrezzature scientifiche di Ateneo 2008; Sapienza, 12 months <i>"Attività di ricerca interdipartimentale"</i>	95.000
2009	Acquisizione di medie e grandi attrezzature scientifiche di Ateneo 2009; Sapienza, 12 months <i>"Sistema di calcolo per farmaceutica computazionale"</i>	
2009	Ricerche di ateneo federato 2009; Sapienza, 12 months <i>"Proteine e nanoparticelle di metalli di transizione: nuove frontiere per la catalisi e la chimica sostenibile"</i>	
2011	Acquisizione di medie e grandi attrezzature scientifiche di Ateneo 2011; Sapienza, 12 months <i>"Strumentazione integrata spettrometro di massa Orbitrap/cromatografo liquido ultraperformante (orbitrap-MSn/UHPLC). Studi "multi-omics" ad alta efficienza di sistemi biologici complessi"</i>	
2011	Progetti di ricerca universitari 2011; Sapienza, 12 months <i>"Design and development of innovative and ecofriendly synthetic methodologies in organo and organometallo catalysis"</i>	
2012	PRIN 2012; MIUR, 36 months <i>"Identificazione, sintesi sostenibile e studio dell'efficacia di nuovi farmaci molecolari nei tumori del sistema nervoso"</i>	335.761
2014	Progetti di ricerca universitari 2014, awards; Sapienza, 12 months <i>"Identification, sustainable synthesis and research of molecular drugs efficacy in brain tumors treatment"</i>	
2014	Progetti di ricerca universitari 2014, acquisizione di medie e grandi attrezzature scientifiche; Sapienza, 12 months	

	<i>“Potenziamento dello spettrometro NMR AVANCE 400 del Dipartimento di Chimica e Tecnologia del Farmaco. Acquisizione di consolle Avance III HD 400 di nuova generazione e di Cryoprobe”</i>	
2015	Progetti di ricerca universitari 2015; Sapienza, 12 months <i>“Synthesis and evaluation of innovative molecular drugs in brain tumors treatment”</i>	
2017	Programmi di Ricerca Scientifica di Rilevante Interesse Nazionale, PRIN 2017 <i>“Targeting Hedgehog pathway: Virtual screening identification and sustainable synthesis of novel Smo and Gli inhibitors and their pharmacological drug delivery strategies for improved therapeutic effects in tumors”</i>	677.500
2017	Progetti di ricerca universitari 2017; Sapienza <i>“Targeting Hedgehog pathway: synthesis and evaluation of novel Smo and Gli inhibitors and their pharmacological effects in tumors and cancer stem cells”</i>	53.750
2018	Horizon 2020 <i>Separation, fractionation, and isolation of biologically active natural substances from corn oil and other side streams – ExCornsEED</i>	4.259.297
2018	Progetti di ricerca universitari 2018; Sapienza, 18 months <i>“I complessi pi greco-indolil e benzofuril palladio come intermedi nella sintesi di composti biologicamente attivi”</i>	37.800
2019	Progetti di ricerca universitari 2019; Sapienza, 36 months <i>“Novel Smo and Gli1 inhibitors for targeting Hedgehog pathway: identification within modeling screening and their green synthesis, in vitro and in vivo tests through improved drug delivery strategies to enhance the therapeutic effects”</i>	39.000
2020	Progetti di ricerca universitari 2020; Sapienza, 18 months <i>“Sintesi Oro Catalizzata di Composti Eterociclici ad Attività Biologica”</i>	11.000
2021	DOMINOS (Digital Osce for Medical specialties - INNOVation for Students) Erasmus+ project, KA220 HED Cooperation partnerships in Higher education.	
2021	Progetti di ricerca universitari 2021; Sapienza, 24 months <i>“Nanotechnology and supramolecular-based electrochemical biosensors for mycotoxins detection”</i>	71.787
2022	Progetti di ricerca universitari 2022; Sapienza, 24 months <i>“Drug-like dual action compounds against cancer and neurodegeneration through proteasomal and lysosomal degradation”</i>	71.890
2022	Progetti di ricerca universitari 2022; Sapienza <i>“PREPNAT: Improving the isolation and synthesis of naturally occurring bioactive compounds using preparative High-Performance Liquid Chromatography (prep-HPLC)”</i>	99.700

Part VII – Research Activities

Keywords Organic synthesis
 Organometallic chemistry

Homogeneous catalysis
Heterogeneous catalysis
Heterocycles
C-H activation

Brief Description Antonella Goggiamani carries her research activity in the *Department of "Chimica e Tecnologia del Farmaco"* of the *University of Rome "La Sapienza"* in collaboration with Prof. Giancarlo Fabrizi.

The scientific interests are focused on transition metal-catalyzed organic synthesis as testified by her publications in this area.

Taking advantage of palladium, copper, and gold catalysis, she developed new practical and efficient synthetic methods both of general interest in the area of organic synthesis (formation of carbon-heteroatom and carbon-carbon bonds) and directed towards the *de novo* construction of a variety of polyfunctionalized molecules of biological interest, such as indoles, benzofurans, butenolides, quinolines, chromenes, quinolones, carbazoles, oxazolidinones, etc. Her studies allowed her to develop new protocols that were successfully applied to the creation of libraries of compounds. In addition to her expertise in the area of organometallic chemistry, A. Goggiamani can also rely on her strong expertise in structure determination by NMR and in the utilization of GC-MS.

Her main research areas are:

- The regio- and stereo-selective hydroarylation(hydrovinylation) of alkynes with aryl and vinyl halides, triflates and diazonium salts. With alkynes containing proximate nucleophilic and electrophilic centres, the syn carbopalladation step can be followed by a cyclization reaction. Often the cyclization step occurs *in situ* so that domino hydroarylation(hydrovinylation)/cyclization processes can be readily performed. This protocol has been widely used for the preparation of a variety of functionalized heterocycles. [Papers 3, 11, 20, 21, 38, 46]

- The oxy- and aminopalladation/reductive elimination reactions of internal and external alkynes with organic halides, triflates, and arenediazonium salts. These reactions are based on the *trans* addition of an oxygen or nitrogen nucleophile and an organopalladium complex, formed *in situ*, to the carbon-carbon triple bond and have been used to develop new and selective approaches to the construction of a wide variety of functionalized heterocyclic rings. [Papers 2, 16, 17, 27, 29, 30, 31, 39, 40, 53]

- Studies on the Heck reaction and the development of domino Heck reaction/cyclization. [Papers 6, 22-24, 29]

- The development of new C-N, C-S and C-P bond forming reactions involving "soft" non-organometallic nucleophiles. [Papers 1, 4, 5, 8, 13, 15, 19, 28, 31]

- The synthesis of carbonyl derivatives (carboxylic acids, aldehydes, acetophenones, amino ketones). [Papers 9, 10, 12, 18, 35, 50]

- The utilization of new readily reusable heterogeneous catalyst systems, even using solid supported palladium nanoparticles. [Papers 3, 18, 33]

- The utilization of room temperature ionic liquid in palladium and ruthenium catalyzed reactions. In fact, some of the ionic liquid properties (no detectable vapor pressure, possible recycling, easy separation from the products, thermal robustness) make them particularly promising candidates for the development of environmentally friendly synthetic methodologies. [Papers 3, 7, 11, 14]

- A better understanding of the factors (ligands, added salts, bases, solvents, etc.) influencing the regio- and stereo-chemical outcome of the reactions.

- The employment of boronic acids in palladium-catalyzed reactions. [Papers 31, 33, 39, 41, 48, 52, 67]

- The employment of arenediazonium salts in palladium-catalyzed reactions [Papers 20, 21, 23, 24, 26-29, 33]

- The development of new transition metal-catalyzed C-H bond activation processes, a research area of great current interest. Indeed, a process that is capable of forming carbon-carbon, carbon-nitrogen, or carbon-oxygen bonds via the direct functionalization of a carbon-hydrogen bond with transition-metal catalysis avoiding the preparation and use of organometallic reagents is an attractive alternative to "classical" cross-coupling reactions and more straightforward pathway. [Papers 34, 37, 54, 56]
- Gold and Silver catalyzed reactions. [Papers 36, 38, 49, 55, 57, 63, 64, 70]
- Synthesis of 2-(aminomethyl)indoles. [Papers 44, 45, 51, 66]
- Multisubstituted benzo[b]furans and indoles through a copper - and/or palladium-catalyzed assembly and functionalization process. [Papers 31, 40, 48, 60]
- Reactivity of propargylic derivatives in palladium catalyzed reactions. [Papers 35, 43, 47]
- Reactivity of indolylmethylacetates with N, O, S, C soft nucleophiles [Papers 66, 67, 69, 71]
- Development of sustainable processes for the extraction, purification, and concentration of bioactive matrix compounds of plant origin, with particular reference to the side streams of biorefineries. [Paper 65]

Papers
Journal IF*

1. S. Cacchi, G. Fabrizi, A. Goggiamani, G. Zappia, *Org. Lett.* **2001**, 3 (16), 2539-2541
"3-Aryl-2-oxazolidinones through the Palladium-Catalyzed *N*-Arylation of 2-Oxazolidinones"
Journal IF: 3.670
2. S. Cacchi, G. Fabrizi, A. Goggiamani, *Heterocycles* **2002**, 56, 613
"Palladium Catalysis in The Construction of the Benzo[b]furan and Furan Rings from Alkynes and Organic Halides or Triflates."
Journal IF: 0.970
3. S. Cacchi, G. Fabrizi, A. Goggiamani, M. Moreno-Mañas, A. Vallribera, *Tetrahedron Lett.* **2002**, 43 (32), 5537-5540
"The [(*E,E,E*)-1,6,11-tris(*p*-toluenesulfonyl)-1,6,11-triazacyclopentadeca-3,8,13-triene]Pd(0) complex in the Hydroarylation of alkynes in ionic liquids. An Approach to quinolines"
Journal IF: 2.357
4. S. Cacchi, G. Fabrizi, A. Goggiamani, L. M. Parisi, *Org. Lett.* **2002**, 4 (26), 4719-4721
"Unsymmetrical Diaryl Sulfones through Palladium-Catalyzed Coupling of Aryl Iodides and Arenesulfonates"
Journal IF: 3.715
5. S. Cacchi, G. Fabrizi, A. Goggiamani, *Heterocycles* **2003**, 61, 505-512
"Copper-Catalyzed *N*-Arylation of 2-Oxazolidinones. An Expedient Route to Toloxatone"
Journal IF: 1.083
6. S. Cacchi, G. Fabrizi, A. Goggiamani, *ARKIVOC* **2003**, 8, 58-66
"Phosphine ligands and Nitrogen Bases in the Solvent-Free Heck Reaction of Butenone with Aryl Iodides. A Highly Selective Synthesis of Benzalacetones"
Journal IF: 0.392
7. R. Bernini, A. Coratti, G. Fabrizi, A. Goggiamani, *Tetrahedron Lett.* **2003**, 44 (50), 8991-8994
"CH₃ReO₃/H₂O₂ in Room Temperature Ionic Liquids: an Homogeneous Recyclable Catalytic System for the Baeyer-Villiger Reaction"
Journal IF: 2.326
8. S. Cacchi, G. Fabrizi, A. Goggiamani, L. M. Parisi, *Synlett* **2003**, 3, 361-364
"An Efficient Palladium-Catalysed Synthesis of Unsymmetrical Diaryl Sulfones from Aryl

Bromides/Triflates and Arenesulfonates"

Journal IF: 2.741

9. S. Cacchi, G. Fabrizi, F. Gavazza, A. Goggiamani, *Org. Lett.* **2003**, 5 (3), 289-291
"Palladium-Catalyzed Reaction of Aryl Iodides with Acetic Anhydride. A Carbon Monoxide-Free Synthesis of Acetophenones"

Journal IF: 4.092

10. S. Cacchi, G. Fabrizi, A. Goggiamani, *Org. Lett.* **2003**, 5 (23), 4269-4272
"Palladium-Catalyzed Hydroxycarbonylation of Aryl and Vinyl Halides or Triflates by Acetic Anhydride and Formate Anions"

Journal IF: 4.092

11. S. Cacchi, G. Fabrizi, A. Goggiamani, *J. Mol. Catal. A: Chem.* **2004**, 214 (1), 57-64
"The Palladium-Catalyzed Hydroarylation of Propargylic Alcohols in Room Temperature Ionic Liquids"

Journal IF: 3.615

12. S. Cacchi, G. Fabrizi, A. Goggiamani, *J. Comb. Chem.* **2004**, 6 (5), 692-694
"Palladium-Catalyzed Synthesis of Aldehydes from Aryl Iodides and Acetic Formic Anhydride"

Journal IF: 4.197

13. S. Cacchi, G. Fabrizi, A. Goggiamani, L. M. Parisi, R. Bernini, *J. Org. Chem.* **2004**, 69 (17), 5608-5614
"Unsymmetrical Diaryl Sulfones and Aryl Vinyl Sulfones Through Palladium-Catalyzed Coupling of Aryl and Vinyl Halides or Triflates with Sulfinic Acid Salts"

Journal IF: 3.462

14. R. Bernini, A. Coratti, G. Fabrizi, A. Goggiamani, *Tetrahedron Lett.* **2005**, 46(36), 6169-6170

Addendum to "CH₃ReO₃/H₂O₂ in Room Temperature Ionic Liquids: an Homogeneous Recyclable Catalytic System for the Baeyer-Villiger Reaction"

Journal IF: 2.477

15. S. Cacchi, G. Fabrizi, A. Goggiamani, E. Licandro, S. Maiorana, D. Perdicchia, *Org. Lett.* **2005**, 7 (8), 1497-1500
"Synthesis of *N,N*-Dialkyl-*N'*-arylhydrazines via Palladium-Catalyzed *N*-Arylation by Using *N,N*-Dialkylhydrazines/2LiCl Adducts"

Journal IF: 4.368

16. S. Cacchi, G. Fabrizi, A. Goggiamani, *Curr. Org. Chem.* **2006**, 10 (12), 1423-1455
"The Palladium-Catalyzed Assembly and Functionalization of Benzo[*b*]furans."

Journal IF: 3.232

17. S. Cacchi, G. Fabrizi, A. Goggiamani, *Adv. Synth. Catal.* **2006**, 348, 1301-1305
"2,3-Disubstituted Indoles through the Palladium-Catalyzed Reaction of Aryl Chlorides with *o*-Alkynyltrifluoroacetanilides"

Journal IF: 4.762

18. S. Cacchi, C. Cotet, G. Fabrizi, G. Forte, A. Goggiamani, L. Martin, S. Martinez, Molins, Elies; M. Moreno-Mañas, F. Petrucci, A. Roig, A. Vallribera, *Tetrahedron* **2007**, 63(11), 2519-2523

"Efficient Hydroxycarbonylation of Aryl Iodides Using Recoverable and Reusable Carbon Aerogels Doped with Palladium Nanoparticles as Catalyst"

Journal IF: 2.869

19. S. Cacchi; G. Fabrizi; A. Goggiamani, S. Sgalla, *Adv. Synth. Catal.* **2007**, 349 (3), 453-458
"Palladium-catalyzed *N*-arylation of *N,N*-Dialkylhydrazines with Aryl Chlorides"
Journal IF: 4.977
20. G. Bartoli, S. Cacchi; G. Fabrizi; A. Goggiamani, *Synlett* **2008**, (16), 2508-2512
"Aryl Norbornanes and Analogues via Palladium-Catalyzed Hydroarylation with Arenediazonium Tetrafluoroborates"
Journal IF: 2.659
21. S. Cacchi; G. Fabrizi; A. Goggiamani, D. Persiani, *Org. Lett.* **2008**, 10 (8), 1597-1600
"Palladium-Catalyzed Hydroarylation of Alkynes with Arenediazonium Salts"
Journal IF: 5.128
22. Ambrogio, S. Cacchi, G. Fabrizi, A. Goggiamani, S. Sgalla, *Synlett* **2009**, (4), 620-624
"Regio- and Stereoselective Heck α -Arylation of Cinnamyl Alcohols"
Journal IF: 2.718
23. S. Cacchi, G. Fabrizi, A. Goggiamani, A. Sferrazza, *Synlett* **2009**, (6), 973-977
"Palladium-Catalyzed Arylation of the THP Derivative of (*Z*)-2-Butene-1,4-diol with Arenediazonium Salts and the Synthesis of β -Aryl- γ -butyrolactones"
Journal IF: 2.718
24. S. Cacchi, G. Fabrizi, A. Goggiamani, A. Sferrazza, *Synlett* **2009**, (8), 1277-1280
"Palladium-Catalyzed Reaction of Arenediazonium Tetrafluoroborates with Methyl 4-Hydroxy-2-butenolate: An Approach to 4-Aryl Butenolides and an Expedient Synthesis of Rubrolide E"
Journal IF: 2.718
25. L. Bagnoli, S. Cacchi, G. Fabrizi, A. Goggiamani, C. Scarponi, M. Tiecco, *J. Org. Chem.* **2010**, 75 (6), 2134-2137
"Diastereoselective Synthesis of Hexahydro-3*H*-pyrrolyzin-3-ones through Pd-Catalyzed Carboamination"
Journal IF: 4.002
26. G. Fabrizi, A. Goggiamani, A. Sferrazza, S. Cacchi, *Angew. Chem.Int. Ed.* **2010**, 49 (24), 4067-4070
"Sonogashira Cross-coupling of Arenediazonium Salts"
Journal IF: 12.730
27. S. Cacchi, G. Fabrizi, A. Goggiamani, A. Perboni, A. Sferrazza, P. Stabile, *Org. Lett.* **2010**, 12 (14), 3279-3281
"2,3-Disubstituted Indoles via Palladium-Catalyzed Reaction of 2-Alkynyltrifluoroacetanilides with Arenediazonium Tetrafluoroborates"
Journal IF: 5.250
28. R. Berrino, S. Cacchi, G. Fabrizi, A. Goggiamani, P. Stabile, *Org. Biomol. Chem.* **2010**, 8 (20), 4518-4520
"Arenediazonium Tetrafluoroborates in Palladium-Catalyzed C-P Bond-forming Reactions. Synthesis of Arylphosphonates, -phosphine oxides, and -phosphines"
Journal IF: 3.451
29. S. Cacchi, G. Fabrizi, A. Goggiamani, A. Sferrazza, *Org. Biomol. Chem.* **2011**, 9 (6), 1727-1730
"Heck Reaction of Arenediazonium Salts with *N,N*-Diprotected Allylamines. Synthesis of

Cinnamylamines and Indoles”

Journal IF: 3.696

30. S. Cacchi, G. Fabrizi, A. Goggiamani, *Org. Biomol. Chem.* **2011**, 9 (3), 641-652
“Copper Catalysis in the Construction of Indole and Benzo[b]furan Rings”

Journal IF: 3.696

31. A. Arcadi, F. Blesi, S. Cacchi, G. Fabrizi, A. Goggiamani *Tetrahedron Lett.* **2011**, 52 (40), 5149-5152

“2,5,7-Trisubstituted Benzo[b]furans through a Copper - and/or Palladium-Catalyzed Assembly and Functionalization Process”

Journal IF: 2.683

32. S. Cacchi, G. Fabrizi, A. Goggiamani, A. Iazzetti, D. Madec, G. Poli, G. Prestat, *Org. Biomol. Chem.* **2011**, 9 (24), 8233-8236

“Functionalized 2,3-Dihydrofurans via Palladium-Catalyzed Oxyarylation of α -Allyl-ketoesters”

Journal IF: 3.696

33. S. Cacchi, E. Caponetti, M. A. Casadei, A. Di Giulio, Giancarlo Fabrizi, G. Forte, A. Goggiamani, S. Moreno, P. Paolicelli, F. Petrucci, A. Prastaro, M. L. Saladino, *Green Chem.* **2012**, 14 (2), 317-320

“Suzuki-Miyaura Cross-Coupling of Arenediazonium Salts Catalyzed by Alginate/Gellan-stabilized Palladium Nanoparticles under Aerobic Conditions in Water”

Journal IF: 6.828

34. R. Berrino, S. Cacchi, G. Fabrizi, A. Goggiamani, *J. Org. Chem.* **2012**, 77 (5), 2537-2542

“4-Aryl-2-quinolones from 3,3-Diarylacrylamides through Intramolecular Copper-Catalyzed C-H Functionalization/C-N Bond Formation”

Journal IF: 4.564

35. S. Cacchi, G. Fabrizi; E. Filisti, Eleonora; A. Goggiamani; A. Iazzetti; L. Maurone, *Org. Biomol. Chem.* **2012**, 10 (24), 4699-4703

“Palladium-Catalyzed Synthesis of 2-Amino Ketones from Propargylic Carbonates and Secondary Amines”

Journal IF: 3.568

36. G. Cera, S. Piscitelli, M. Chiarucci, G. Fabrizi, A. Goggiamani, R. S. Ramón, S.P. Nolan, M. Bandini, *Angew. Chem. Int. Ed.* **2012**, 51 (39), 9891-9895

“One-Pot Gold-Catalyzed Synthesis of Azepino[1,2-*a*]indoles”

Journal IF: 13.730

37. S. Cacchi, G. Fabrizi, A. Iazzetti, A. Goggiamani,* *Org. Biomol. Chem.* **2012**, 10 (46), 9142-9147

“Dibenzo[*a,c*]carbazoles from 2-(2-Bromoaryl)-3-arylindoles via a Palladium-Catalyzed Intramolecular C-H Functionalization/C-C Bond Formation Process”

Journal IF: 3.568

38. A. Arcadi, F. Blesi, S. Cacchi, G. Fabrizi, A. Goggiamani, F. Marinelli, *Org. Biomol. Chem.* **2012**, 10 (48), 9700-9708

“Gold versus Silver Catalyzed Intramolecular Hydroarylation Reactions of [(3-Arylprop-2-ynyl)oxy]benzene Derivatives”

Journal IF: 3.568

39. A. Arcadi,* S. Cacchi, G. Fabrizi, A. Goggiamani,* A. Iazzetti, F. Marinelli, *Org.*

Biomol. Chem. **2013**, *11*(4), 545-548

"2-Substituted 3-Arylindoles Through Palladium-Catalyzed Arylative Cyclization of 2-Alkynyltrifluoroacetanilides with Arylboronic Acids under Oxidative Conditions"

Journal IF: 3.487

40. A. Arcadi, F. Blesi, S. Cacchi, G. Fabrizi, A. Goggiamani, F. Marinelli, *Tetrahedron* **2013**, *69* (7), 1857-1871

"Multisubstituted Benzo[*b*]furans through a Copper - and/or Palladium-Catalyzed Assembly and Functionalization Process"

Journal IF: 2.817

41. 41a: A. Arcadi, F. Blesi, S. Cacchi, G. Fabrizi, A. Goggiamani, F. Marinelli, *J. Org. Chem.* **2013**, *78*, 4490-4498

"Palladium- Catalyzed Cascade Reactions of 1-(3-Arylprop-2-ynyloxy)-2-bromo Benzene Derivatives with Organoboron Compounds"

41b: Erratum, *J. Org. Chem.* **2013**, *78* (12), 6356

Journal IF: 4.638

42. S. Cacchi, G. Fabrizi, A. Goggiamani,* A. Iazzetti, R. Verdiglione, *Synthesis* **2013**, *45* (12), 1701-1707

"Copper Catalyzed Oxidation of Deoxybenzoins to Benzyls Under Aerobic Conditions"

Journal IF: 2.443

43. Ambrogio, A. Arcadi, S. Cacchi, G. Fabrizi, A. Goggiamani,* F. Marinelli, *Tetrahedron* **2013**, *69* (45), 9494-9498

"Sequential Alkylation/Cyclization/Isomerization of Ethyl 3-(*o*-Trifluoroacetamidoaryl)-1-propargylic esters: A New Route to 2-Acyl and 2-Ethoxycarbonyl-3-alkenyl indoles"

Journal IF: 2.817

44. S. Cacchi, G. Fabrizi, A. Goggiamani,* C Molinaro, R. Verdiglione *J. Org. Chem.* **2014**, *79* (1), 401-407

"Palladium-Catalyzed Synthesis of 2-(Aminomethyl)indoles from 3-(*o*-Trifluoroacetamidoaryl)-1-propargylic Alcohols and Amines"

Journal IF: 4.721

45. S. Cacchi, G. Fabrizi, A. Iazzetti, C Molinaro, R. Verdiglione, A. Goggiamani*, *Adv. Synth. Cat.* **2015**, *357* (5), 1053-1059

"Synthesis of Free NH 2-(Aminomethyl)indoles through Copper-Catalyzed Reaction of 3-(*o*-Trifluoroacetamidophenyl)-1-propargylic Alcohols with Amines and Palladium/Copper-Cocatalyzed Domino Three-Component Sonogashira Cross-Coupling/Cyclization/Substitution Reactions"

Journal IF: 6.453

46. A. Arcadi, S. Cacchi, G. Fabrizi, A. Goggiamani, F. Marinelli, *J. Org. Chem.* **2015**, *80*, 14, 6986-6995

"Pd- and Rh-Catalyzed Hydroarylation of γ -(2-Methoxycarbonylphenyl)propargylic Alcohols: Approaches to 4- or 5-Substituted Seven-Membered Benzolactones and 3,3-Disubstituted Phthalides"

Journal IF: 4.785

47. I. Ambrogio, S. Cacchi, G. Fabrizi, A. Iazzetti; A. Goggiamani,* *European Journal of Organic Chemistry*, **2015**, *14*, 3147-3151

"Palladium-catalyzed nucleophilic substitution of propargylic carbonates and Meldrum's acid derivatives"

Journal IF: 3.068

48. S. Cacchi, G. Fabrizi, A. Goggiamani,* A. Iazzetti, R. Verdiglione, *Tetrahedron* **2015**, *71(49)*, 9346-9356

“A facile palladium-catalyzed route to 2,5,7-trisubstituted indoles”

Journal IF: 2.645

49. S. Cacchi, G. Fabrizi, A. Goggiamani,* A. Iazzetti, *Org. Lett.* **2016**, *18*, 3511.

“Construction of the 1,5-Benzodiazepine Skeleton from *o*-Phenylendiamine and Propargylic Alcohols via a Domino Gold-Catalyzed Hydroamination/Cyclization Process”

Journal IF: 6.579

50. R. Alfonsi, B. Botta, S. Cacchi, L. Di Marcotullio, G. Fabrizi, R. Faedda, A. Goggiamani,* A. Iazzetti, M. Mori, *J. Med. Chem.* **2017**, *60 (4)*, 1469-1477

“Design, Palladium-Catalyzed Synthesis, and Biological Investigation of 2-Substituted 3-Aroylquinolin-4(1*H*)-ones as Inhibitors of the Hedgehog Signaling Pathway”

Journal IF: 6.253

51. S. Cacchi, G. Fabrizi, A. Goggiamani,* A. Iazzetti, R. Verdiglione, *Synthesis*, **2017**, *49*, 4163-4172

“2-(Aminomethyl)-3-arylindoles from 3-(*o*-Trifluoroacetamidoaryl)-1-propargylic Alcohols, Aryl Halides, and Amines: A Domino Palladium-Catalyzed Three-Component Approach”

Journal IF: 2.722

52. A. Arcadi, S. Cacchi, G. Fabrizi, F. Ghirga, A. Goggiamani, A. Iazzetti, F. Marinelli, *Beilstein J. Org. Chem.*, **2018**, *14*, 2411-2417

“Synthesis of indolo[1,2-*c*]quinazolines from 2-alkynylaniline derivatives through Pd-catalyzed indole formation/cyclization with *N,N*-dimethylformamide dimethyl acetal.”

Journal IF: 2.595

53. A. Arcadi, S. Cacchi, G. Fabrizi, F. Ghirga, A. Goggiamani, A. Iazzetti, F. Marinelli, *Synthesis*, **2018**, *50(05)*, 1133-1140

“Palladium-Catalyzed Cascade Approach to 12-(Aryl)Indolo [1,2-*c*]Quinazolin-6(5*H*)-ones.”

Journal IF: 2.867

54. S. Cacchi, A. Ciogli, N. Demitri, G. Fabrizi, F. Ghirga, A. Goggiamani, A. Iazzetti, D. Lamba, *Synthesis*, **2018**, *50(05)*, 3513-3519

“Copper-Catalyzed C-N Bond Formation via C-H Functionalization: Facile Synthesis of Multisubstituted Imidazo[1,2-*a*]pyridines from *N*-(2-Pyridinyl)enaminones.”

Journal IF: 2.867

55. S. Cacchi, G. Fabrizi, A. Fochetti, F. Ghirga, A. Goggiamani, A. Iazzetti, *Org. Biomol. Chem.*, **2019**, *17*, 527-532

“Stereo- and Regioselective Gold(I)-Catalyzed Hydroamination of 2-(Arylethynyl)Pyridines with Anilines.”

Journal IF: 3.412

56. A. Arcadi, S. Cacchi, G. Fabrizi, A. Fochetti, F. Ghirga, A. Goggiamani,* A. Iazzetti,* F. Marinelli, *Synthesis*, **2019**, *51*, 3287-3294

“Palladium-Catalyzed C12-Selective Direct Arylation of [1,2-*c*]Quinazolin-6(5*H*)-ones.”

Journal IF: 2.675

57. A. Arcadi, A. Ciogli, G. Fabrizi, A. Fochetti, R. Franzini, F. Ghirga, A. Goggiamani,* A. Iazzetti,* *Org. Biomol. Chem.*, **2019**, *17*, 10065-10072

“Synthesis of pyrano[2,3-*f*] chromen-2-ones vs. pyrano[3,2-*g*] chromen-2-ones through

site controlled gold-catalyzed annulations.”

Journal IF: 3.412

58. B. Casciaro, L. Mangiardi, F. Cappiello, I. Romeo, M. R. Loffredo, A. Iazzetti, A. Calcaterra, A. Goggiamani, F. Ghirga, M. L. Mangoni, B. Botta, D. Quaglio, *Molecules*, **2020**, *25*, 3619.

“Naturally-Occurring Alkaloids of Plant Origin as Potential Antimicrobials Against Antibiotic-Resistant Infections”

Journal IF: 4.412

59. V. Marsicano, A. Arcadi, M. Chiarini, Giancarlo Fabrizi, A. Goggiamani, A. Iazzetti, *Org. Biomol. Chem.*, **2021**, *19*, 421-438

“Synthesis of functionalised 2,3-dihydroquinolin-4(1H)-ones vs. quinoline or N-alkenylindole derivatives through sequential reactions of 2-alkynylanilines with ketones”

Journal IF: 3.890

60. A. Arcadi, G. Fabrizi, A. Fochetti, F. Ghirga, A. Goggiamani,* A. Iazzetti,* F. Marrone, G. Mazzocanti, A. Serraiocco, *RSC Advanced.*, **2021**, *11*, 909 - 917

“Palladium-Catalyzed Tsuji–Trost-Type Reaction of benzofuran-2-ylmethyl acetates with nucleophiles”

Journal IF: 4.036

61. F. Ghirga, D. Quaglio, M. Mori, S. Cammarone, A. Iazzetti, A. Goggiamani, C. Ingallina, B. Botta, A. Calcaterra, *Organic Chemistry Frontiers*, **2021**, *8*, 996-1025

“A unique high-diversity natural products collection as a reservoir of new therapeutic leads”

Journal IF: 5.465

62. V. Marsicano, A. Arcadi, M. Chiarini, G. Fabrizi, A. Goggiamani, A. Iazzetti, *Org. Biomol. Chem.* **2021**, *19*, 5177-5190

“Sequential condensation/biannulation reactions of β -(2-aminophenyl)- α,β -ynones with 1,3-dicarbonyls”

Journal IF: 3.890

63. A. Arcadi, G. Fabrizi, A. Fochetti, R. Franzini, F. Ghirga, A. Goggiamani,* Antonia Iazzetti,* Federico Marrone, A. Serraiocco, *Eur. J. Org. Chem.* **2021**, 1676-1687

“Synthesis of Polycyclic Chromene Cores through Gold (I)-Catalyzed Intramolecular Hydroarylation Reaction (IMHA)”

Journal IF: 3.261

64. A. Arcadi, A. Calcaterra, G. Fabrizi, A. Fochetti, A. Goggiamani,* A. Iazzetti,* F. Marrone, V. Marsicano, G. Mazzocanti, A. Serraiocco, *Molecules* **2021**, *26*, 3366-33

“Synthesis of 4-Substituted-1,2-Dihydroquinolines by Means of Gold-Catalyzed Intramolecular Hydroarylation Reaction of N-Ethoxycarbonyl-N-Propargylanilines”

Journal IF: 4.927

65. F. Cairone, S. Cesa, A. Ciogli, G. Fabrizi, A. Goggiamani, A. Iazzetti, G. Di Lena, J. Sanchez del Pulgar, M. Lucarini, L. Cantò, G. Zengin, Petra Ondrejčková, *Foods* **2022**, *11*, 153-167

“Valorization of By-Products from Biofuel Biorefineries: Extraction and Purification of Bioactive Molecules from Post-Fermentation Corn Oil”

Journal IF: 5.2

66. A. Arcadi, G. Berden, A. Ciogli, D. Corinti, M. E. Crestoni, M. De Angelis, G. Fabrizi, A. Goggiamani,* A. Iazzetti,* F. Marrone, V. Marsicano, J. Oomens, A. Serraiocco, *Eur. J.*

Org. Chem. **2022**, e202201166

“Reactivity of Indolylmethylacetates with N, O, and S Soft Nucleophiles: Evidence of 2-Alkylideneindolenines and 3-Alkylideneindoleninium Generation by ESI-MS and IRMPD Spectroscopy”

Journal IF: 2.8

67. A. Arcadi, A. Calcaterra, M. Chiarini, G. Fabrizi, A. Fochetti, A. Goggiamani,* A. Iazzetti,* F. Marrone, V. Marsicano, A. Serraiocco, *Synthesis* **2022**, *54*, 741-753

“Synthesis of Indole/Benzofuran-Containing Diarylmethanes through Palladium-Catalyzed Reaction of Indolylmethyl or Benzofuranyl-methyl Acetates with Boronic Acids”

Journal IF: 2.6

68. A. Arcadi, A. Calcaterra, G. Fabrizi, A. Fochetti, A. Goggiamani, A. Iazzetti, F. Marrone, G. Mazzocanti, A. Serraiocco, *Org. Biomol. Chem.* **2022**, *20*, 3160-3173

“One-pot synthesis of dihydroquinolones by sequential reactions of o-aminobenzyl alcohol derivatives with Meldrum’s acids”

Journal IF: 3.2

69. A. Iazzetti, A. Arcadi, S. Dessalvi, G. Fabrizi, A. Goggiamani,* F. Marrone, A. Serraiocco, A. Sferrazza,* K. Ullah, *Catalysts* **2022**, *12*, 1516-1533

“Synthesis of Polysubstituted 1,2-dihydro-3H-pyrrolo[1,2-a]indol-3-ones through Domino Palladium-Catalyzed Reactions of Indol-2-ylmethyl Acetates with 1,3-Dicarbonyl Derivatives”

Journal IF: 3.9

70. A. Iazzetti, D. Allevi, A. Calcaterra, G. Fabrizi, A. Goggiamani, G. Mazzocanti, A. Sferrazza, R. Verdiglione, V. Vergine, *Molecules* **2023**, *28*, 300-313

“Highly Efficient and Mild Gold (I) Catalyzed Synthesis of 3,8-Diarylidene-2,7-dioxaspiro[4.4]nonane-1,6-diones”

Journal IF (2022): 4.6

71. A. Goggiamani,* A. Arcadi, A. Ciogli, M. De Angelis, S. Dessalvi, G. Fabrizi, F. Iavarone, A. Iazzetti, A. Sferrazza,* R. Zoppoli, *RSC Adv.*, **2023**, *13*, 10090

“Synthesis of 3-substituted 2,3-dihydropyrazino[1,2-a]indol-4(1H)-ones by sequential reactions of 2-indolylmethyl acetates with α -amino acids”

Journal IF (2022): 3.9

72. V. Marsicano, A. Arcadi, M. Aschi, M. Chiarini, G. Fabrizi, A. Goggiamani, F. Marinelli, and A. Iazzetti, *J. Org. Chem.* **2023**, *88*, 6857 “Direct Regioselective Hydro(hetero)arylation/Cyclocondensation Reactions of β -(2-Aminophenyl)- α,β -ynones by Means of Transition-Metal Catalysis/Brønsted Acid Synergism: Experimental Results and Computational Insights”

Journal IF (2022): 3.6

*IF calculated on the basis of the publication year (when available), *InCites J. Cit. Reports*; Data Base: Scopus.

Part VIII – International and National Collaborations

International Collaborations	COST ACTION D12: New Trends in Catalysis Prof. Adelina Vallribera, <i>Department of Chemistry, Universitat Autònoma de Barcelona</i> [<i>Papers 2, 18</i>] COST Action D40: Innovative Catalysis: New Processes and Selectivities
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Prof. Giovanni Poli, *UPMC Univ Paris 06, Institut Parisien de Chimie Moléculaire* [Paper 32]

COST CM1407: Challenging organic syntheses inspired by nature: from natural products chemistry to drug discovery

Progetti di ricerca universitari, bando professori visitatori per la ricerca 2019

Prof. Markus Kalesse, *Leibniz Universität Hannover*

Institute for Molecules and Materials, Felix Laboratory

Prof. Giel Berden, Prof. Jos Oomens, *Radboud University* [Paper 66]

Project Horizon 2020, *Separation, fractionation, and isolation of biologically active natural substances from corn oil and other side streams* – ExCornsEED

Prof. Gokhan Zengin, *Department of Biology, Science Faculty, Selcuk University* [Paper 65]

National
Collaborations
(national
projects)

Progetto PRIN 2007: Stereoselezione in Sintesi Organica. Metodologie ed Applicazioni

Prof. Marcello Tiecco, Prof. Luana Bagnoli, *Università di Perugia* [Paper 25]

Progetto FIRB Futuro in Ricerca 2008: Metodologie di sintesi innovative e sostenibili per processi di attivazione del legame C-H

Prof. Marco Bandini, *Dipartimento di Chimica "G. Ciamician" Alma Mater Studiorum, Università di Bologna* [Paper 36]

Progetto PRIN 2012: Identificazione, sintesi sostenibile e studio dell'efficacia di nuovi farmaci molecolari nei tumori del sistema nervoso e Progetto PRIN 2017: Targeting Hedgehog pathway: Virtual screening identification and sustainable synthesis of novel Smo and Gli inhibitors and their pharmacological drug delivery strategies for improved therapeutic effects in tumors

Prof. Lucia Di Marcotullio, *Dipartimento di Medicina Molecolare, Sapienza, Università di Roma*; Prof.ssa Luciana Marinelli, *Dipartimento di Chimica Farmaceutica e Tossicologica, Università degli Studi di Napoli "Federico II"*; Prof. Bruno Botta, *Dipartimento di Chimica e Tecnologie del Farmaco, Sapienza, Università di Roma*; Prof. Daniele Passarella, *Dipartimento di Chimica, Università degli Studi di Milano*; Prof. Gianluigi Broggin, *Dipartimento di Scienza e Alta Tecnologia, Università degli Studi dell'Insubria* [Papers 50, 58, 61]

National
Collaborations

Prof. Roberta Bernini, *Dipartimento di Scienze Agrarie e Forestali, Università degli Studi della Tuscia* [Paper 7, 13, 14]

Prof. Emanuela Licandro e Prof. Stefano Maiorana, *Dipartimento di Chimica Organica e Industriale, Università degli Studi di Milano* [Paper 15]

Proff. Antonio Arcadi e Fabio Marinelli, *Dipartimento di Scienze Fisiche e Chimiche, Università degli Studi di L'Aquila* [Papers 31, 38, 39, 41, 43, 46, 52, 53, 56, 57, 59, 60, 62-64, 66-69, 71-72]

Prof. Maria Antonietta Casadei, *Dipartimento di Chimica e Tecnologie del Farmaco, University of Rome "La Sapienza"* [Paper 33]

Prof. Alessia Ciogli *Dipartimento di Chimica e Tecnologie del Farmaco, University of Rome "La Sapienza"* [Papers 54, 65, 66, 71]

Prof. Marco Chiarini *Dipartimento di Bioscienze e Tecnologie Agro-alimentari e Ambientali, Università di Teramo* [Papers 59, 62, 67, 72]

Prof. Massimiliano Aschi *Dipartimento di Scienze Fisiche e Chimiche, Università degli Studi*

di L'Aquila [Paper 72]

Collaborations with private institutions
GlaxoSmithKline, *Chemical Development Department*
Project: Aryldiazonium Salts in Palladium-Catalyzed Reactions [*Papers 20, 21, 23, 24, 26-29, 33*]
Project Horizon 2020, *Separation, fractionation, and isolation of biologically active natural substances from corn oil and other side streams* – ExCornsEED
Dr. Denis Gonzales, Procter & Gamble Services Company Nv – Belgio;
Dr. Gaetano Galeppi Dr.Lauranne srl – Italia;
Dr. Petra Ondrejčíková, Enviral-Slovacchia

Part IX – Summary of Scientific Achievements (May 2001-July 2023, last update 27/07/2023)

Product type	number	Data Base
Papers [international]	72	Scopus
	72	Web of Science (paper 2 has been added including in the Author Search “Goggiamani”, typo error in publication)
Papers [national]	1	Web of Science, <i>La Chimica e l' Industria</i> , maggio 2012 , “Copper catalyzed Synthesis of Heterocycle Derivatives: Use of β -Enaminones”
Corresponding Author	20	Papers 37, 39, 42-45, 47-51, 56, 57, 60, 63, 64, 66, 67, 69, 71
Book [chapters, monographs]	2	1) S. Cacchi, G. Fabrizi, A. Goggiamani, “Indoles via Palladium-catalyzed Cyclization”, <i>Organic Reactions</i> 2012 , 76, 281-534 HOBOKEN, NJ:Jonh Wiley & Sons 2) S. Cacchi, G. Fabrizi, A. Goggiamani, “Copper catalysis in arene and heteroarene functionalization through C-H bond activation”, 2012 , Andersson, Pher G. (Ed.). <i>Innovative Catalysis in Organic Synthesis: Oxidation, Hydrogenation, and C-X Bond Forming Reactions</i> . P. 211-232, Weinheim:Wiley-VCH Verlag GmbH & Co. KgaA.
Patents	2	1) S. Cacchi, G. Fabrizi, A. Goggiamani; “Sintesi catalizzata di acidi carbossilici insaturi” patent n° RM2002A000412 (01.08.2002) 2) S. Maiorana, D. Perdicchia, M. Licandro, S. Cacchi, G. Fabrizi, A. Goggiamani; “Processo di arilazione di idrazine” patent n° RM2002002771 (24.12.2002)
“top accessed articles”	1	S. Cacchi, G. Fabrizi, A. Goggiamani, “Copper catalysis in the construction of indole and benzo[b]furan rings”, <i>Organic & Biomolecular Chemistry</i> 2011 , 9, 641-652
Highlights	3	1) S. Cacchi, G. Fabrizi, A. Goggiamani, A. Perboni, A. Sferrazza, P. Stabile, “Palladium-Catalyzed Synthesis of 2,3-di-substituted Indoles from Aryldiazonium Salts”, <i>Synfacts</i> 2010 , 9, 0989 2) G. Fabrizi, A. Goggiamani, A. Sferrazza, S. Cacchi, “Sonogashira Cross-Coupling of Arene-diazonium Salts”, <i>Synfacts</i> 2010 , 9, 1061 3) S. Cacchi, G. Fabrizi, A. Goggiamani, A. Iazzetti “Gold-Catalyzed Synthesis

of 1,5-Benzodiazepines”, *Synfacts* **2016**, 12(10), 1025

Oral Communications by invitation	2	<ol style="list-style-type: none">1) “Direct Transition Metal-Catalyzed Functionalization Reactions of Arenes and Heteroarenes through C-H Bond Activation”, workshop metal- and organocatalysis: a powerful arsenal for organic synthesis, Salerno 13-04-20162) “Recent advances in metal-assisted heterocycles synthesis”, COST ACTION CM140, 2nd, Training School: Synthesis, isolation and structural elucidation of bioactive compounds, 18-20/09/2017, Lisbon
Oral Communications	8	<ol style="list-style-type: none">1) “Palladium Catalysis in Room Temperature Ionic Liquids”, COST ACTION D12/0011/98 Meeting “New Trends in Catalysis”, Roma, 28-29 settembre 2001.2) “La reazione di idroarilazione degli alchini catalizzata dal palladio nei liquidi ionici”, XXVII Scuola A. Corbella, giugno 2002.3) “Copper-Catalyzed <i>N</i>-arylation of 2-Oxazolidinones. An expeditious route to Toloxatone”, 4th INTERNATIONAL SCHOOL OF ORGANOMETALLIC CHEMISTRY - ISOC'03 – Camerino 6-9-2003.4) “Palladium-catalyzed synthesis of carboxylic acids and aldehydes from acetic formic anhydride and aryl and vinyl halides or triflates”, Congresso del Gruppo Interdivisionale di Chimica Organometallica - VI Co.G.I.C.O-Cetraro 30-9-20045) "Palladium-Catalyzed Carbonylation of Aryl and Vinylic Halides with Formic Acetic Anhydride" COST Meeting 2004, 2-5 september, Lyngby6) “New Synthetic Applications of the Palladium-Catalyzed Reaction of Soft, non-Organometallic Nucleophiles with Aryl Halides and Triflates” COST Meeting 2004, 15-17 January, Barcelona7) “New Perspectives in Palladium-Catalyzed Reactions with Arenediazonium salts”, SISOC7, 7-9-2008, Oviedo8) “Recent Advances in Heterocyclic Synthesis via Direct C-H Bond Activation” Organic Synthesis Workshop FIRB Day 24-01-2012 Bologna
Poster Communications	8	<ol style="list-style-type: none">1) S. Cacchi, G. Fabrizi, A. Goggiamani, G. Zappia, “Aryl-2-oxazolidinones through the Palladium-Catalyzed <i>N</i>-Arylation of 2-Oxazolidinones”. 3rd INTERNATIONAL SCHOOL OF ORGANOMETALLIC CHEMISTRY - ISOC'01 – Camerino 10-9-2001.2) A. Goggiamani, “La reazione di idroarilazione degli alchini catalizzata dal palladio nei liquidi ionici” XXVII Scuola A. Corbella, giugno 2002.3) G. Fabrizi, F. Gavazza, A. Goggiamani, L. M. Parisi, “Synthesis of 2,3-Disubstituted Indoles via Pd-Catalyzed Reaction of Aryl Bromides and Triflates with <i>o</i>-Alkynyltrifluoroacetanilides”, 23rd IUPAC – 2002 Int. Symp. on the Chemistry of Natural Products. Firenze 28/7-2/8 2002.4) S. Cacchi, G. Fabrizi, A. Goggiamani: “Alcoli Allilici Sostituiti attraverso la reazione di idroarilazione di alcoli propargilici primari e secondari catalizzata dal palladio”, XXVIII Convegno Nazionale della Divisione di Chimica Organica Roma, 16 - 20 Settembre 2002.5) S. Cacchi, G. Fabrizi, A. Goggiamani: “Copper-Catalyzed <i>N</i>-arylation of 2-Oxazolidinones. An expeditious route to Toloxatone”, 4th INTERNATIONAL

SCHOOL OF ORGANOMETALLIC CHEMISTRY - ISOC'03 – Camerino 6-9-2003.

6) R. Bernini, A. Coratti, G. Fabrizi, A. Goggiamani, “Acqua Ossigenata Attivata dal Metiltriossorenio nei liquidi Ionici [bmim]BF₄: un Sistema Catalitico Efficiente, Riciclabile ed Ecocompatibile nella Reazione di Baeyer-Villiger”, XXI Congresso della Società Chimica Italiana, Torino, 22-27 giugno 2003.

7) A. Goggiamani; A. Sferrazza “New perspectives in the palladium-based chemistry of arenediazonium salts”, COST Action D40: Innovative Catalysis: New Processes and Selectivities, Ankara 25-5-2010

8) S. Cacchi, G. Fabrizi, A. Goggiamani and A. Sferrazza “Heck Reaction of Arenediazonium salts with *N,N*-diprotected allylamines. An Approach to Cinnamylamines and Indoles” COST Action D40: Innovative Catalysis - New Processes and Selectivities, Malta 14-06-2011

Part X – Metrics [last update 27/07/2023]

X.A – Metrics (May 2001 - July 2023)

Papers [international]	72 [Scopus] 72 [Web of Science] (paper 2 has been added including in the Author Search “Goggiomani” typo error in publication)
Book [chapters, monographs]	2
Hirsch (H) index	29 [Scopus]; 29 [Web of Science]
Normalized H index*	1,32 [Scopus] 1,32 [Web of Science]
Total Citations	2633 [Scopus] 2559 [Web of Science]
Total Citations (excluded self-citations of all authors)	2390 [Scopus] 2417 [Web of Science]
Total Citations (excluded self-citations of selected authors)	2498 [Scopus]
Average Citations per item	36,57 [Scopus] 35,54 [Web of Science]
Corresponding Author	20 [Papers 37, 39, 42-45, 47-51, 56, 57, 60, 63, 64, 66, 67, 69, 71]
Total Impact factor**	281,296 [InCits J. Cit. Reports]
Average Impact factor**	3,907 [InCits J. Cit. Reports]

*H index divided by the academic seniority (first paper published on web 14th july 2001)

** Calculated on the basis of the publication year

X.B – Metrics* (January 2013 - December 2022) [last update 27/07/2023]

Papers [international]	31 [Scopus] 31 [Web of Science]
Hirsch (H) index	15 [Scopus]

	15 [Web of Science]
Total Citations	435 [Scopus]
	416 [Web of Science]
Total Citations (excluded self-citations of all authors)	358 [Scopus]
Average Citations per item	14,03 [Scopus]
	13,42 [Web of Science]
Corresponding Author	18 [Papers 39, 42-45, 47-51, 56, 57, 60, 63, 64, 66, 67, 69]
Total Impact factor**	118,828 [<i>InCites J. Cit. Reports</i>]
Average Impact factor**	3,833 [<i>InCites J. Cit. Reports</i>]

*Calculated starting from January 1st of the tenth year before the publication year of the competition notice

** Calculated on the basis of the publication year

Part XI– Selected Publications (January 2013 – December 2022)

A list of the publications selected for evaluation [16] is provided below. For each publication, the title, authors, reference data, journal IF (*InCites J. Cit. Reports*, calculated on the basis of the publication year, when available), and citations (Scopus and Web of Science, last update 27/07/2023) are reported.

Six of the selected articles were published starting from January 1st of the fifth year preceding the year of publication of the notice of competition (2018 - 2022)

XI.A – Metrics (Selected Publications)

Selected Publications	16 [Scopus, Web of Science]
Total Citations	255 [Scopus, 16 papers]
	248 [Web of Science, 16 papers]
Total Citations (excluded self-citations of all authors)	204 [Scopus, 16 papers]
Average Citations per item	15,938 [Scopus]
	15,50 [Web of Science]
Total Impact factor*	67,849 [<i>InCites J. Cit. Reports</i>]
Average Impact factor*	4,241 [<i>InCites J. Cit. Reports</i>]
Corresponding Author	13
Hirsch (H) index	10 [Scopus]

* Calculated on the basis of the publication year

XI.B – List of Selected Publications

1. A. Arcadi,* S. Cacchi, G. Fabrizi, A. Goggiamani,* A. Iazzetti, F. Marinelli, *Org. Biomol. Chem.* **2013**, *11*(4), 545-548

“2-Substituted 3-Arylindoles Through Palladium-Catalyzed Arylative Cyclization of 2-Alkynyltrifluoroacetanilides with Arylboronic Acids under Oxidative Conditions”

Journal IF: 3.487; citations: 42 (Scopus), 41 (Web of Science)

DOI: 10.1039/c2ob27125g

2. A. Arcadi, F. Blesi, S. Cacchi, G. Fabrizi, A. Goggiamani, F. Marinelli, *J. Org. Chem.* **2013**, *78*, 4490-

4498

"Palladium- Catalyzed Cascade Reactions of 1-(3-Arylprop-2-ynoxy)-2-bromo Benzene Derivatives with Organoboron Compounds"

Journal IF: 4.638; citations: 30 (Scopus), 30 (Web of Science)

DOI: 10.1021/jo400503f

3. Ambrogio, A. Arcadi, S. Cacchi, G. Fabrizi, A. Goggiamani,* F. Marinelli, *Tetrahedron* **2013**, *69* (45), 9494 - 9498

"Sequential Alkylation/Cyclization/Isomerization of Ethyl 3-(*o*-Trifluoroacetamidoaryl)-1-propargylic esters: A New Route to 2-Acyl and 2-Ethoxycarbonyl-3-alkenyl indoles"

Journal IF: 2.817; citations: 8 (Scopus), 8 (Web of Science)

DOI: 10.1016/j.tet.2013.08.048

4. S. Cacchi, G. Fabrizi, A. Goggiamani,* C Molinaro, R. Verdiglione *J. Org. Chem.* **2014**, *79* (1), 401-407
"Palladium-Catalyzed Synthesis of 2-(Aminomethyl)indoles from 3-(*o*-Trifluoroacetamidoaryl)-1-propargylic Alcohols and Amines"

Journal IF: 4.721; citations: 23 (Scopus), 23 (Web of Science)

DOI: 10.1021/jo401456x

5. S. Cacchi, G. Fabrizi, A. Iazzetti, C Molinaro, R. Verdiglione, A. Goggiamani*, *Adv. Synth. Cat.* **2015**, *357* (5), 1053-1059

"Synthesis of Free NH 2-(Aminomethyl)indoles through Copper-Catalyzed Reaction of 3-(*o*-Trifluoroacetamidophenyl)-1-propargylic Alcohols with Amines and Palladium/Copper-Cocatalyzed Domino Three-Component Sonogashira Cross-Coupling/Cyclization/Substitution Reactions"

Journal IF: 6.453; citations: 19 (Scopus), 19 (Web of Science)

DOI: 10.1002/adsc.201400881

6. A. Arcadi, S. Cacchi, G. Fabrizi, A. Goggiamani, F. Marinelli, *J. Org. Chem.* **2015**, *80*, 14, 6986-6995
"Pd- and Rh-Catalyzed Hydroarylation of γ -(2-Methoxycarbonylphenyl)propargylic Alcohols: Approaches to 4- or 5-Substituted Seven-Membered Benzolactones and 3,3-Disubstituted Phthalides"

Journal IF: 4.785; citations: 15 (Scopus), 16 (Web of Science)

DOI: 10.1021/acs.joc.5b00663

7. I. Ambrogio, S. Cacchi, G. Fabrizi, A. Iazzetti; A. Goggiamani,* *European Journal of Organic Chemistry*, **2015**, *14*, 3147-3151

"Palladium-catalyzed nucleophilic substitution of propargylic carbonates and meldrum's acid derivatives"

Journal IF: 3.068; citations: 16 (Scopus), 15 (Web of Science)

DOI: 10.1002/ejoc.201500337

8. S. Cacchi, G. Fabrizi, A. Goggiamani,* A. Iazzetti, *Org. Lett.* **2016**, *18*, 3511-3513.

"Construction of the 1,5-Benzodiazepine Skeleton from *o*-Phenylendiamine and Propargylic Alcohols via a Domino Gold-Catalyzed Hydroamination/Cyclization Process"

Journal IF: 6.579; citations: 32 (Scopus), 29 (Web of Science)

DOI: 10.1021/acs.orglett.6b01720

9. R. Alfonsi, B. Botta, S. Cacchi, L. Di Marcotullio, G. Fabrizi, R. Faedda, A. Goggiamani,* A. Iazzetti, M.

Mori, *J. Med. Chem.*, **2017**, *60* (4), 1469-1477

“Design, Palladium-Catalyzed Synthesis, and Biological Investigation of 2-Substituted 3-Aroylquinolin-4(1*H*)-ones as Inhibitors of the Hedgehog Signaling Pathway”

Journal IF: 6.253; citations: 26 (Scopus), 26 (Web of Science)

DOI: 10.1021/acs.jmedchem.6b01135

10. S. Cacchi, G. Fabrizi, A. Goggiamani,* A. Iazzetti, R. Verdiglione, *Synthesis*, **2017**, *49*, 4163-4172

“2-(Aminomethyl)-3-arylindoles from 3-(*o*-Trifluoroacetamidoaryl)-1-propargylic Alcohols, Aryl Halides, and Amines: A Domino Palladium-Catalyzed Three-Component Approach”

Journal IF: 2.722; citations: 10 (Scopus), 9 (Web of Science)

DOI: 10.1055/s-0036-1589016

11. A. Arcadi, A. Ciogli, G. Fabrizi, A. Fochetti, R. Franzini, F. Ghirga, A. Goggiamani,* A. Iazzetti,* *Org. Biomol. Chem.*, **2019**, *17*, 10065-10072

“Synthesis of pyrano[2,3-*f*] chromen-2-ones vs. pyrano[3,2-*g*] chromen-2-ones through site controlled gold-catalyzed annulations.”

Journal IF: 3.412; citations: 6 (Scopus), 6 (Web of Science)

DOI: 10.1039/c9ob01695c

12. V. Marsicano, A. Arcadi, M. Chiarini, Giancarlo Fabrizi, A. Goggiamani, A. Iazzetti, *Org. Biomol. Chem.*, **2021**, *19*, 421-438

“Synthesis of functionalised 2,3-dihydroquinolin-4(1*H*)-ones vs. quinoline or *N*-alkenylindole derivatives through sequential reactions of 2-alkynylanilines with ketones”

Journal IF: 3.890; citations: 8 (Scopus), 9 (Web of Science)

DOI: 10.1039/d0ob02106g

13. A. Arcadi, G. Fabrizi, A. Fochetti, F. Ghirga, A. Goggiamani,* A. Iazzetti,* F. Marrone, G. Mazzocanti, A. Serraiocco, *RSC Advanced.*, **2021**, *11*, 909 - 917

“Palladium-Catalyzed Tsuji–Trost-Type Reaction of benzofuran-2-ylmethyl acetates with nucleophiles”

Journal IF: 4.036; citations: 4 (Scopus), 3 (Web of Science)

DOI: 10.1039/d0ra09601f

14. A. Arcadi, G. Fabrizi, A. Fochetti, R. Franzini, F. Ghirga, A. Goggiamani,* Antonia Iazzetti,* Federico Marrone, A. Serraiocco, *Eur. J. Org. Chem.* **2021**, 1676-1687

“Synthesis of Polycyclic Chromene Cores through Gold (I)- Catalyzed Intramolecular Hydroarylation Reaction (IMHA)”

Journal IF: 3.261; citations: 11 (Scopus), 9 (Web of Science)

DOI: 10.1002/ejoc.202100092

15. A. Arcadi, A. Calcaterra, G. Fabrizi, A. Fochetti, A. Goggiamani,* A. Iazzetti,* F. Marrone, V. Marsicano, G. Mazzocanti, A. Serraiocco, *Molecules* **2021**, *26*, 3366-33

“Synthesis of 4-Substituted-1,2-Dihydroquinolines by Means of Gold-Catalyzed Intramolecular Hydroarylation Reaction of *N*-Ethoxycarbonyl-*N*-Propargylanilines”

Journal IF: 4.927; citations: 4 (Scopus), 4 (Web of Science)

DOI: 10.3390/molecules26113366

16. A. Arcadi, G. Berden, A. Ciogli, D. Corinti, M. E. Crestoni, M. De Angelis, G. Fabrizi, A. Goggiamani,* A. Iazzetti,* F. Marrone, V. Marsicano, J. Oomens, A. Serraiocco, *Eur. J. Org. Chem.* **2022**, e202201166
“Reactivity of Indolylmethylacetates with N, O, and S Soft Nucleophiles: Evidence of 2-Alkylideneindolenines and 3-Alkylideneindoleninium Generation by ESI-MS and IRMPD Spectroscopy”
Journal IF: 2.8; citations: 1 (Scopus), 1 (Web of Science)
DOI: 10.1002/ejoc.202201166

Roma, July 31st 2023

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