

Curriculum Vitae

Roberto Tonelli, MD, PhD

Date of birth: February 15th 1988

Place of birth: Modena (Italy)

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EDUCATION

- | | |
|-------------|--|
| 2019 – 2023 | PhD Degree in Clinical and Experimental Medicine
University of Modena and Reggio Emilia (Italy) |
| 2014 – 2019 | Post-Doctoral School in Respiratory Diseases
Respiratory Disease Unit, University Hospital of Modena (Italy) |
| 2014 | Medical License
University of Modena e Reggio Emilia (Italy) |
| 2013 | Medical Doctor Degree
University of Modena e Reggio Emilia (Italy) |

PROFESSIONAL EXPERIENCES

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|------------------|--|
| 2025 - present | Adjunct Professor
University Vita Salute San Raffaele, Milan, (Italy) |
| 2023 – present | Assistant Professor in Respiratory Medicine
University of Modena and Reggio Emilia (Italy) |
| 2023 (March–May) | Research Associate
Amsterdam University Medical Center, Amsterdam (The Netherlands) |
| 2022 – 2023 | Senior Research Fellow
University of Modena and Reggio Emilia (Italy) |

- 2022 – present **Co-founder of IREC ltd (VAT 02959080355)**
- 2020 – present **Member of the Experimental Pneumology Lab**
(<http://www.experimentalpneumology.unimore.it/site/home.html>)

University Hospital of Modena (Italy)
- 2020 – present **Member of the COvid Neural Self-Triage App – National**
Telemedicine Interdisciplinary Network (CONSTANTINE) task force
(<https://www.constantinetaskforce.com>) for the development of
COVID-GUIDE chatbot
(<https://covidguide.smass.ch/#/pathfinder/chatbot>)
University Hospital of Modena (Italy)
- 2019 - 2023 **Respiratory Physician – Consultant**
Respiratory Diseases Unit, University Hospital of Modena (Italy)
- 2014 – 2019 **Resident in Respiratory Diseases**
Respiratory Diseases Unit, University Hospital of Modena (Italy)
- 2013 (August-
September) **Visiting Scholar**

Interstitial Lung Disease Program, Division of Pulmonary, Critical Care,
Allergy and Sleep Medicine, Lung Transplant Program, University of
California San Francisco di San Francisco (CA, USA)
- 2013 **University Tutor for Medical Students**

University of Modena and Reggio Emilia – Faculty of Medicine,
Modena (Italy)
- 2012 (August) **Medical Student Observer**

Respiratory Disease Unit, Royal Brompton Hospital, London (UK)

GRANT AND AWARDS

- 2025 **National Scientific Qualification in the Disciplinary Sector MEDS-**
07/A(Cardiovascular Diseases and Respiratory System Diseases) for
the position of Full Professor
Italian Ministry of University and Research

- 2023 **National Scientific Qualification in the Disciplinary Sector MEDS-07/A** (Cardiovascular Diseases and Respiratory System Diseases) for the position of Associate Professor
Italian Ministry of University and Research
- 2023 Abstract entitled “Physiological effects of lung protective ventilation in patients with lung fibrosis and usual interstitial pneumonia pattern versus primary ARDS: a preliminary matched-control study” selected for **“ERS Best Abstract Grant in ARDS”**
(<https://www.ersnet.org/the-society/awards-and-fellows/award-winners-2023/#IndustrysponsoredAbstractGrants-1>)
European Respiratory Society
- 2022 Title of Subject Expert (Cultore della Materia) in Scientific-Disciplinary Sector MED/10,
University of Modena and Reggio Emilia, Modena, Italy
- 2019 Certificate of Merit for Outstanding Contributions to National and International Research
University of Modena e Reggio Emilia (Italy)
- 2019 Abstract entitled “Role of lung elastance on diaphragmatic dysfunction in exacerbated COPD patients who failed NIV” selected for **“ERS Grant for best abstract in noninvasive ventilatory support for chronic lung diseases”**
(<https://old.erscongress.org/funding-awards-2019/grant-recipients-and-sponsored-delegates.html>)
European Respiratory Society
- 2013 **“Fondazione Cassa di Risparmio di Carpi Award” for the Best Thesis in Medicine**
University of Modena e Reggio Emilia (Italy)
- 2013 **Degree with Honor (110/110 cum laude) in Medicine and Surgery**
University of Modena e Reggio Emilia (Italy)
- 2007 **Honorific Title of “Alfiere del Lavoro” of the Italian Republic**
Presidency of the Italian Republic, Rome (Italy)
- 2007 **First Place at the “Certamen Ciceronianum Arpinas” (World Latin Translation Championship)**

Arpino (Frosinone, Italy)

2003

First Place at the “Certamen Carolinum”

Modena (Italy)

PUBLICATIONS

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Research ID: AAB-7569-2022

1. Tonelli, R., Turchiano, M.G., Moretti, A. *et al.* Efficacy and tolerability of generic pirfenidone after switch from Esbriet® in idiopathic pulmonary fibrosis: a real-world observational study. *Intern Emerg Med* (2026). <https://doi.org/10.1007/s11739-026-04343-9>
2. Pastoressa L, Pivetti V, Valente M, Beghè B, Clini E, Tonelli R, Cerri S. Alpha-1 Antitrypsin Deficiency Beyond COPD and Emphysema: A Narrative Review. *Med Sci (Basel)*. 2026 Feb 22;14(1):106. doi: 10.3390/medsci14010106.
3. Tirsina I, Rizzoni R, Tonelli R, Marchioni A, Raffa ML. Modeling ventilation heterogeneity in lung fibrosis. *Med Biol Eng Comput*. 2026 Apr 1. doi: 10.1007/s11517-026-03536-w
4. Tonelli R, Michelacci S, Verduri A, Clini E. Physiopathology of Exacerbation of Chronic Obstructive Pulmonary Disease. *Semin Respir Crit Care Med*. 2026 Feb 24. doi: 10.1055/a-2811-3019.
5. Tabbi L, Marchioni A, Moretti A, Clini E, Tonelli R. Multiperspective ultrasonography in COPD exacerbations: insights into inspiratory muscle recruitment and clinical outcomes. Author's reply. *Eur J Intern Med*. 2026 Feb 27:106790. doi: 10.1016/j.ejim.2026.106790. Epub ahead of print. PMID: 41763923.
6. Yu, H., Saffaran, S., Ali, A. *et al.* In-hospital testing of NIVPredict - an AI tool for early prediction of non-invasive ventilation outcome in acute respiratory failure. *Crit Care* (2026). <https://doi.org/10.1186/s13054-026-05894-1>
7. Stanghellini I, Bonora E, Sebastiani M, Salvarani C, Gozzi F, Andrisani D, Tonelli R, Rizzardì N, Bergamini C, Isidori F, *et al.* Idiopathic Pulmonary Fibrosis: Analysis of Predisposing Variants in Patients with Familial Forms. *Biomedicines*. 2026; 14(1):138. <https://doi.org/10.3390/biomedicines14010138>.
8. Ricci, A., Andolfi, F., Sabbatini, D. *et al.* Genome-wide association for sarcoidosis identifies novel risk loci and genetic heritability in African and European ancestries: a meta-analysis from the Finngen, Million Veteran Program, UK Biobank, and Biobank Japan datasets. *Orphanet J Rare Dis* **20**, 638 (2025). <https://doi.org/10.1186/s13023-025-04097-1>
9. Marchioni A, Moretti A, Tabbi L, Livrieri F, Tartaglia M, Gentile M, Scorsone A, Mattioli F, Tonelli R and Clini EM (2026) The forgotten airway: central airway pathology in the ICU. *Front. Med*. 12:1712110. doi: 10.3389/fmed.2025.1712110
10. Yu H, Saffaran S, Tonelli R, Laffey JG, Zhang Q, Esquinas AM, de Lima LM, Kawano-Dourado L, Maia IS, Cavalcanti AB, Clini E, Bates DG. Evaluating the effect of heart and respiratory rate measurement errors on the ability to predict the outcome of high flow nasal cannula therapy: a multi-centre study. *Crit Care*. 2025 Nov 22;29(1):535. doi: 10.1186/s13054-025-05765-1.
11. Marchioni A, Moretti A, Tonelli R, Puggioni D, Baroncini S, Basso M, Serafini E, Livrieri F, Tabbi L, Piazza C, Ghidini A, Peretti G, Filauro M, Lancini D, Clini E, Daniels JMA, Marchioni

- D, Mattioli F. Stent and Resection Anastomosis in Patients with Complex Tracheal Stenosis: The Stars Retrospective Multicenter Trial. *Interdiscip Cardiovasc Thorac Surg.* 2025 Dec 1;40(12):ivaf261. doi: 10.1093/icvts/ivaf261. PMID: 41390154.
12. Shamohammadi H, Mauri T, Bates DG; HFNC-BiFlow study group. Digital twins of acute hypoxemic respiratory failure and sepsis patients suggest potential benefits of bi-level high flow nasal cannula therapy. *Intensive Care Med.* 2025 Dec 10. doi: 10.1007/s00134-025-08172-w.
 13. Tabbì L, Marchioni A, Messina J, Bombelli S, Puggioni D, Fantini R, Bruzzi G, Cerri S, Beghè B, Clini E, Tonelli R; MUSE-COPD study group. Ultrasound-based evaluation of inspiratory muscle effort in patients with type 2 respiratory failure secondary to exacerbation of chronic obstructive pulmonary disease. *Eur J Intern Med.* 2025 Dec 16:106649. doi: 10.1016/j.ejim.2025.106649.
 14. R. Rizzoni, R. Tonelli, and A. Marchioni, "Modelling the Squishy Effect in Interstitial Pulmonary Fibrosis," *International Journal for Numerical Methods in Biomedical Engineering* 41, no. 12 (2025): e70130, <https://doi.org/10.1002/cnm.70130>.
 15. Salmaso A, Samarelli AV, Moscatiello GY, Raineri G, Cagnotto A, Bigini P, Clini E, Tonelli R, Morelli A. Optimization of intranasal bleomycin dose for effective pulmonary fibrosis induction in mice with minimal animal distress. *BMC Pulm Med.* 2025 Nov 24;25(1):543. doi: 10.1186/s12890-025-04001-4.
 16. Raineri G, Samarelli AV, Tonelli R, Masciale V, Aramini B, Petrachi T, Bruzzi G, Gozzi F, Trasforini E, Esposito A et al. Predicting and Treating Pulmonary Fibrosis with Proteomic Biomarker Investigations. *Biomedicines* 2025, 13, 2656. <https://doi.org/10.3390/biomedicines13112656>
 17. Retini M, Gobbi M, Jin BR, Cho J, Cantoni O, Zito E. Pyrazolone-based ERO1 inhibitors in ERO1-driven Triple-Negative Breast Cancer and SEPN1-Related Myopathy: Structure-activity relationship and therapeutic potential. *Pharmacol Res.* 2025 Nov 19:108037. doi: 10.1016/j.phrs.2025.108037.
 18. Mattioli F, Miglio M, Serafini E, Tonelli R, Meneguzzi E, D'Angelo E, Depenni R, Napolitano M, Dominici M, Marchioni D, Bertolini F. Other Than Complete Response in Oropharyngeal Carcinoma: Patient and Tumor-Related Factors, *Laryngoscope Investigative Otolaryngology* 2025 10 (5) e70258, <https://doi.org/10.1002/lio2.70258>.
 19. Tonelli R, Protti A, Spinelli E, Grieco DL, Yoshida T, Jonkman AH, Akoumianaki E, Telias I, Docci M, Rodrigues A, Perez J, Piquilloud L, Beitler J, Liu L, Roca O, Pisani L, Goligher E, Carteaux G, Bellani G, Clini E, Zhou JX, Grasselli G, Jaber S, Demoule A, Talmor D, Heunks L, Brochard L, Mauri T. Assessing inspiratory drive and effort in critically ill patients at the bedside. *Crit Care.* 2025 Jul 31;29(1):339. doi: 10.1186/s13054-025-05526-0.
 20. Mattioli F, Miglio M, Basso M, Papi G, Tonelli R, Martinelli G, Dominici M, Marchioni D, Depenni R. Surgery versus immunotherapy in locally advanced cutaneous carcinoma of the external ear: A multicenter study. *Surg Oncol.* 2025 Jul 20;62:102271. doi: 10.1016/j.suronc.2025.102271.
 21. Yu H, Saffaran S, Maia IS, Clini E, Bates DG; NIVPredict study group. Early prediction of non-invasive ventilation outcome using the TabPFN machine learning model: a multi-centre validation study. *Intensive Care Med.* 2025 Jul 10. doi: 10.1007/s00134-025-08025-6.
 22. Shamohammadi H, Saffaran S, Tonelli R, Chiavieri V, Grasselli G, Clini E, Mauri T, Bates DG. Digital twins suggest a mechanistic basis for differing responses to increased flow rates during high-flow nasal cannula therapy. *Intensive Care Med Exp.* 2025 Jun 26;13(1):66. doi: 10.1186/s40635-025-00773-5.
 23. Andolfi F, Caffarri L, Neviani M, Rubini S, Andrisani D, Gozzi F, Beghè B, Clini E, Tonelli, R.;

- Cerri S. Drug-Induced Sarcoid-like Reactions Associated to Targeted Therapies and Biologic Agents. *Diagnostics* 2025, 15, 1658. <https://doi.org/10.3390/diagnostics15131658>
24. Zhu A, Jia Y, Hou D, Ferrari PA, Tonelli R, Homma T, Zhong C, Yang H, Yao F. Perioperative outcomes of median sternotomy for intrathoracic tracheal malignancies: a 15-year retrospective analysis. *J Thorac Dis* 2025;17(5):3345-3356. doi: 10.21037/jtd-2025-773.
 25. Tonelli R, Fantini R, Tabbì L, Castaniere I, Marchioni A, Clini E. Refining the predictive value of nasal pressure swing in acute hypoxemic respiratory failure management. Author's reply. *Eur J of Int Med* 2025.
 26. Tonelli R, Pischiutta F, Elice F, Zanier ER, Grisendi G, Astori G, Samarelli AV, Bruzzi G, Manicardi L, Spano C, Nattino G, Signorini F, Bernardi M, Catanzaro D, Merlo A, Lisi I, Pasetto L, Bonetto V, Fiammenghi L, Boschi L, Guidi S, Candini O, Zoerle T, Dander E, D'Amico G, De Pierri F, Maur M, Pettorelli E, Ruggieri V, Cerri S, Mari G, De Berardis G, Mighali P, Baschieri MC, Lazzari L, Bambi F, Ciccocioppo R, Clini E, Dominici M; RESCAT study group. Impact of mesenchymal stromal/stem cell infusions on circulating inflammatory biomarkers in COVID-19 patients: analysis of a phase I-IIa trial. *Cytotherapy*. 2025 Apr 7:S1465-3249(25)00677-2. doi: 10.1016/j.jcyt.2025.04.059.
 27. Patsoura, A, Baldini, G, Puggioni, D, Delle Vergini, M, Castaniere, I, Andrisani, D, Gozzi, F, Samarelli, A.V, Raineri, G, Michelacci, S et al. The Link Between Sleep-Related Breathing Disorders and Idiopathic Pulmonary Fibrosis: Pathophysiological Mechanisms and Treatment Options—A Review. *J. Clin. Med.* 2025, 14, 2205. <https://doi.org/10.3390/jcm14072205>
 28. Volpi S, Kaleci S, Franceschini E, Cantergiani S, Orlando G, Cervo A, Bedini A, Casolari S, Esperti S, Chemello D, Albertini M, Cancian L, Buonadonna P, Baldi J, Tonelli R, Busani S, Serio L, Brugioni L, Pietrangelo A, Melegari G, Pinelli G, Venturelli C, Venturelli I, Girardis M, Sarti M, Mussini C, Meschiari M, Comparison of COVID-19 vs non-COVID-19 patients without hematological malignancies treated for invasive pulmonary aspergillosis: a 5-year retrospective cohort study with propensity-based adjustment, *Open Forum Infectious Diseases*, 2025;, ofaf159, <https://doi.org/10.1093/ofid/ofaf159>
 29. Tonelli R, Bruzzi G, Fantini R, Tabbì L, Moretti A, Livrieri F, Castaniere I, Cerri S, Puggioni D, Guidotti F, Bellesia G, Marchioni A, Clini E. Assessment of nasal pressure swing predicts respiratory support dependency in patients with hypoxic respiratory failure. *Eur J Intern Med.* 2025
 30. Yu, H., Saffaran, S., Tonelli, R. et al. Machine learning models compared with current clinical indices to predict the outcome of high flow nasal cannula therapy in acute hypoxemic respiratory failure. *Crit Care* 29, 101 (2025).
 31. Spagnolo, P, Tonelli, R, Mura, M, Reisman, W, Sotiropoulou, V, & Tzouveleakis, A Investigational gene expression inhibitors for the treatment of idiopathic pulmonary fibrosis. *Expert Opinion on Investigational Drugs*, 34(1–2), 61–80. <https://doi.org/10.1080/13543784.2025.2462592>, 2025.
 32. Mattioli, F, Galloni, C, Alberti, C, Bonali, M, Lo Manto, A, Baraldi, S, Tonelli, R, Nizzoli, F, Reggiani, E, Barbazza, A. et al. Facial Nerve Graft in Malignant Tumors: The Role of Facial Rehabilitation. *J. Clin. Med.* 2025, 14, 968. <https://doi.org/10.3390/jcm14030968>.
 33. Verduri, A, Tonelli, R, Donatelli, P, Hewitt, J, Guaraldi, G, MiliLc, J, Ruggieri, V, Mussini, C, Clini, E, Beghè, B, Respiratory Muscle Dysfunction and Associated Risk Factors Following COVID-19-Related Hospitalisation. *Life* 2025, 15, 194. <https://doi.org/10.3390/life15020194>.
 34. Shamohammadi H, Weaver L, Saffaran S. et al. Airway pressures generated by high flow nasal cannula in patients with acute hypoxemic respiratory failure: a computational study.

- Respir Res 26, 9 (2025). <https://doi.org/10.1186/s12931-025-03096-x>.
35. Cerri, S.; Manzini, E.; Nori, O.; Pacchetti, L.; Rossi, L.; Turchiano, M.G.; Samarelli, A.V.; Raineri, G.; Andrisani, D.; Gozzi, F.; et al. Genetic Risk Factors in Idiopathic and Non-Idiopathic Interstitial Lung Disease: Similarities and Differences. *Medicina* 2024, 60, 1967. <https://doi.org/10.3390/medicina60121967>
 36. Tonelli, R., Smit, M.R., Castaniere, I. *et al.* Quantitative CT-analysis of over aerated lung tissue and correlation with fibrosis extent in patients with idiopathic pulmonary fibrosis. *Respir Res* **25**, 359 (2024). <https://doi.org/10.1186/s12931-024-02970-4>
 37. Mocellin A, Guidotti F, Rizzato S, Tacconi M, Bruzzi G, Messina J, Puggioni D, Patsoura A, Fantini R, Tabbì L, Castaniere I, Marchioni A, Clini E, Tonelli R. Monitoring and modulation of respiratory drive in patients with acute hypoxemic respiratory failure in spontaneous breathing. *Intern Emerg Med.* 2024 Aug 29. doi: 10.1007/s11739-024-03715-3. Epub ahead of print. PMID: 39207721.
 38. Cantaffa C, Donvito S, Manto AL, Serafini E, Caffagni R, Luppi MP, Tonelli R, Marchioni D and Mattioli M, 2024, Effect of Aging on Long-Term Functional Outcomes After Open Partial Laryngectomy. *Otolaryngol Head Neck Surg.* <https://doi.org/10.1002/ohn.863>.
 39. Samarelli AV, Tonelli R, Raineri G, Mastrolia I, Costantini M, Fabbiani L, Catani V, Petrachi T, Bruzzi G, Andrisani D, Gozzi F, Marchioni A, Masciale V, Aramini B, Ruggieri V, Grisendi G, Dominici M, Cerri S, Clini E. Expression of HOXB7 in the Lung of Patients with Idiopathic Pulmonary Fibrosis: A Proof-of-Concept Study. *Biomedicines.* 2024 Jun 13;12(6):1321. doi: 10.3390/biomedicines12061321. PMID: 38927528; PMCID: PMC11201217.
 40. Protti A, Tonelli R, Dalla Corte F, Grieco DL, Spinelli E, Spadaro S, Piovani D, Menga LS, Schifino G, Vega Pittao ML, Umbrello M, Cammarota G, Volta CA, Bonovas S, Cecconi M, Mauri T, Clini E. Development of clinical tools to estimate the breathing effort during high-flow oxygen therapy: A multicenter cohort study. *Pulmonology.* 2024 May 16:S2531-0437(24)00054-0. doi: 10.1016/j.pulmoe.2024.04.008.
 41. Tonelli, R, Rizzoni, R, Grasso, S. *et al.* Stress–strain curve and elastic behavior of the fibrotic lung with usual interstitial pneumonia pattern during protective mechanical ventilation. *Sci Rep* **14**, 13158 (2024). <https://doi.org/10.1038/s41598-024-63670-z>
 42. Weaver, L, Shamohammadi, H, Saffaran, S, Tonelli, R, Laviola, M, Laffey, JG, Camporota, L, Scott, TE, Hardman, G, Clini, E, Bates, DG. Digital Twins of Acute Hypoxemic Respiratory Failure Patients Suggest a Mechanistic Basis for Success and Failure of Noninvasive Ventilation. *Critical Care Medicine* (>):10.1097/CCM.0000000000006337, May 29, 2024. | DOI: 10.1097/CCM.0000000000006337
 43. Marchioni A, Manicardi L, Tonelli R, Tabbì L, Andrisani D, Lamesta A, Mocellin A, Bruzzi G, Cappiello G, Andreani A, Mattioli F, Filosso P, Clini E. Integrated endoscopic treatment of primitive unresectable tracheal tumor: the INTACT retrospective cohort study. *J Thorac Dis* 2024.
 44. Moretti A, Bruzzi G, Andrisani A, Gozzi F, Costantini C, Tonelli R, Clini E, Cerri S. When Sarcoidosis Hits Down: A Case of Prostatic Sarcoidosis". 2024. *Multidisciplinary Respiratory Medicine* 19.
 45. Samarelli AV, Tonelli R, Raineri G, Bruzzi G, Andrisani D, Gozzi F, Marchioni A, Costantini M, Fabbiani L, Genovese F, Pinetti D, Manicardi L, Castaniere I, Masciale V, Aramini B, Tabbì L, Rizzato S, Bettelli S, Manfredini S, Dominici M, Clini E and Cerri S (2024) Proteomic profiling of formalin-fixed paraffine-embedded tissue reveals key proteins related to lung dysfunction in idiopathic pulmonary fibrosis. *Front. Oncol.* 13:1275346. doi: 10.3389/fonc.2023.1275346
 46. Tonelli R, Fantini R, Bruzzi G, Tabbì L, Cortegiani A, Crimi C, Pisani L, Moretti A, Guidotti F,

- Rizzato S, Puggioni D, Vermi M, Tacconi M, Bellesia G, Ragnoli B, Castaniere I, Marchioni A, Clini E. Effect of high flow nasal oxygen on inspiratory effort of patients with acute hypoxic respiratory failure and do not intubate orders. *Intern Emerg Med*. 2023 Dec 29. doi: 10.1007/s11739-023-03471-w.
47. Gandhi S, Tonelli R, Murray M, Samarelli AV, Spagnolo P. Environmental Causes of Idiopathic Pulmonary Fibrosis. *Int J Mol Sci*. 2023 Nov 18;24(22):16481. doi: 10.3390/ijms242216481. PMID: 38003670; PMCID: PMC10671449.
48. Caciagli V, Coloretti I, Talamonti M, Farinelli C, Gatto I, Biagioni E, Sarti M, Franceschini E, Meschiari M, Mussini C, Tonelli R, Clini E, Girardis M, Busani S, Modena Covid-Working Group. Association between Pulmonary Aspergillosis and *Cytomegalovirus* Reactivation in Critically Ill COVID-19 Patients: A Prospective Observational Cohort Study. *Viruses*. 2023 Nov 15;15(11):2260. doi: 10.3390/v15112260. PMID: 38005936; PMCID: PMC10675747.
49. Tonelli R, Grasso S, Cortegiani A, Ball L, Castaniere I, Tabbì L, Fantini R, Andrisani D, Gozzi F, Moretti A, Bruzzi G, Manicardi L, Cerri S, Samarelli AV, Raineri G, Murgolo F, Carzoli A, Di Mussi R, Busani S, Rizzoni R, Grasselli G, Clini E, Marchioni A. Physiological effects of lung-protective ventilation in patients with lung fibrosis and usual interstitial pneumonia pattern versus primary ARDS: a matched-control study. *Crit Care*. 2023 Oct 18;27(1):398. doi: 10.1186/s13054-023-04682-5.
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52. Marchioni A, Tonelli R, Samarelli AV, Cappiello GF, Andreani A, Tabbì L, Livrieri F, Bosi A, Nori O, Mattioli F, et al. Molecular Biology and Therapeutic Targets of Primitive Tracheal Tumors: Focus on Tumors Derived by Salivary Glands and Squamous Cell Carcinoma. *International Journal of Molecular Sciences*. 2023; 24(14):11370. <https://doi.org/10.3390/ijms241411370>
53. Mattioli F, Lo Manto A, Miglio M, Serafini E, Rossi D, Valerini S, Tonelli R, Fermi M, Pugliese G, Bertolini F, D'Angelo E, Depenni R, Dominici M, Lohr FRH, Marchioni D. Oropharyngeal squamous cell carcinoma: Prognostic factors for development of distant metastases and oncological outcomes. *Head Neck*. 2023 Apr 11. doi: 10.1002/hed.27354. Epub ahead of print. PMID: 37040549.
54. Mattioli F, Serafini E, Andreani A, Cappiello G, Marchioni D, Pinelli M, Tonelli R, Clini E and Marchioni A, Endoscopic closure with double stenting and autologous fascia lata graft of large trachea-esophageal fistula, *Front. Surg*. 2023. doi.org/10.3389/fsurg.2023.1107461
55. Biagioni E, Ferrari E, Gatto I, Serio L, Farinelli C, Coloretti I, Talamonti M, Tosi M, Meschiari M, Tonelli R, Role of Selective Digestive Decontamination in the Prevention of Ventilator-Associated Pneumonia in COVID-19 Patients: A Pre-Post Observational Study. *J. Clin. Med*. 2023, 12, x. <https://doi.org/10.3390/xxxxx>
56. Mussini C, Cozzi-Lepri A, Meschiari M, Franceschini E, Burastero G, Faltoni M, Franceschi G, Iadiserchia V, Volpi S, Dessilani A et al. Do All Critically Ill Patients with COVID-19 Disease Benefit from Adding Tocilizumab to Glucocorticoids? A Retrospective Cohort Study. *Viruses* 2023, 15, 294. <https://doi.org/10.3390/v15020294>.

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5. Tonelli R, Castaniere I, Marchioni A, Tabbì L, Fantini R, Andrisani A, Gozzi F, Bruzzi G, Manicardi L, Moretti A, Cerbone C, Vermi M, Biagioni E, Busani S, Girardis M, Clini E. Late Breaking Abstract - Inspiratory Effort And Respiratory Mechanics In Spontaneously Breathing Covid-19 Patients On Hospital Admission. *European Respiratory Journal* 2021 58: OA1632; DOI: 10.1183/13993003.congress-2021.OA1632
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7. Tonelli R, Marchioni A, Fantini R, Tabbì L, Castaniere I, Bedogni S, Pellegrino MR, Trentacosti F, Donatelli P, Gozzi F, Livrieri F, Pisani L, Nava S, Clini E. Role of lung elastance on diaphragmatic dysfunction in exacerbated COPD patients who failed NIV. *European Respiratory Journal* Sep 2019, 54 (suppl 63) OA4923; DOI: 10.1183/13993003.congress-2019.OA4923.
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11. Barbieri C, Tonelli R, Marchioni A, Garofalo M, Ruggieri V, Castaniere I, Fantini R, Luppi F, Clini EM, Cerri S. Effectiveness of chest US in the diagnosis of ILD in an unselected population: a prospective study. *Am J Respir Crit Care Med* 197;2018:A1590.
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13. Morisset J, Vittinghoff E, Lee B, Tonelli R, Hu X, Elicker BM, Ryu JH, Jones KD, Cerri S, Manfredi A, Sebastiani M, Ley BJ, Wolters PJ, King TE, Kim D, Collard HR, Lee JS. Predicting

- Mortality In Patients With Rheumatoid Arthritis Related Interstitial Lung Disease: Expanding The Gap Model. *Am J Respir Crit Care Med* 193;2016:A4288.
14. Tonelli R, Lanini B, Romagnoli I, Florini F, Presi I, Cocconcelli E, Castaniere I, Cerri S, Luppi F, Gigliotti F, Clini EM. Etiology And Level Of Lung Derangement Do Not Affect The Beneficial Effect Of Pulmonary Rehabilitation In Patients With Interstitial Lung Diseases. *Am J Respir Crit Care Med* 193;2016:A2311.
 15. Sebastiani M, Manfredi A, Tonelli R, Spagnolo P, Campomori F, Vacchi C, Cocconcelli E, Cerri S, Colaci M, Luppi F, Della Casa G, Sverzellati N, Torricelli P, Richeldi L, Ferri C. AB0342 Rheumatoid Arthritis Related Interstitial Lung Disease. Radiological Patterns and Correlations with Clinical, Serological and Demographic Features of Disease. *Annals of the Rheumatic Diseases* *Annals of the Rheumatic Diseases* 2014;73:917. DOI 10.1136/annrheumdis-2014-eular.4299).
 16. Lanini B, Romagnoli R, Cocconcelli E, Tonelli R, Presi I, Florini F, Gigliotti F, Clini EM. Effects of limb training in symptomatic patients with interstitial lung disease of different severity and etiology: A pilot study. *European Resp J* 2014; 44 (Suppl 58), P634.
 17. Assayag D, Vittinghoff E, Ryerson CJ, Cocconcelli E, Tonelli R, Elicker B, Golden J, Jones KD, King TE, Koth L, Lee JS, Ley B, Wolters PJ, Collard HR. The Effect Of Bronchodilators On Forced Vital Capacity In Patients With Idiopathic Pulmonary Fibrosis. *Am J Respir Crit Care Med* 189; 2014: A1433.
 18. Cocconcelli E, Cerri S, Spagnolo P, Tonelli R, Ventura P, Abbati G, Vegetti A, Pileri F, Del Giovane C, Balduzzi F, Pietrangelo A, Richeldi L, Luppi F. Prevalence Of Subclinical Liver Fibrosis Among Patients With Idiopathic Pulmonary Fibrosis. *Am J Respir Crit Care Med* 189; 2014: A1496.
 19. Tonelli R, Sverzellati N, Della Casa G, Spagnolo P, Cerri S, Manfredi A, Sebastiani A, Cocconcelli E, Del Giovane C, Balduzzi S, Richeldi L, Torricelli P, Ferri C, Luppi F. HRCT Patterns Of Usual Interstitial Pneumonia In Rheumatoid Lung. *Am J Respir Crit Care Med* 189; 2014:A6418.

PARTECIPATION AT CONFERENCES AND CONGRESSES

1. Congresso Nazionale AIPO, 2025, Verona, Oral presentation “Nuovi metodi per il monitoraggio non invasivo nell’insufficienza respiratoria acuta”.
2. Galizia Next Generation, Modena, 05 Dicembre 2025, Oral presentation “Proprietà elastiche e fibrosi del polmone: può la meccanica spiegare la progressione di malattia?”.
3. IDCCM Kavanagh Physiology Rounds, University of Toronto, 23 Settembre 2025, Invited Lecture “Measuring inspiratory effort in non-intubated patients physiological insights, methods and clinical potential”.
4. Un’ora d’aria, Bologna, 9 Maggio 2025, Oral presentation, “A year in review in respiratory failure”.
5. Heal Italia Road Show, Bologna, 10 Marzo, 2025 con una lettura dal Titolo “Analisi cellulare e molecolare tramite criobiopsia polmonare dei pazienti con Fibrosi Polmonare Idiopatica”

6. Outbreaks in Pulmonology, VI Edizione, Modena, 13 – 14 Marzo 2025, Oral presentation “Monitoraggio della pressione nasale in corso di insufficienza respiratoria acuta”.
7. Galizia Next Generation, Modena, 22 Novembre 2024, Oral presentation “Under pressure. Don’t stress the fibrotic lung!”.
8. XXV Congresso Nazionale della Pneumologia SIP 2024, Milano, **Oral presentation “Monitoraggio invasivo e non-invasivo in corso di NIV”**.
9. Saudi Thoracic Society (STS) International conference 2024. **Oral presentation “Hands on simulation I – NIV in COPD and Asthma”**, Al-Ahsa, Saudi Arabia.
10. Saudi Thoracic Society (STS) International conference 2024. **Oral presentation “Hands on simulation II – NIV in pneumonia and lung fibrosis”**, Al-Ahsa, Saudi Arabia.
11. Saudi Thoracic Society (STS) International conference 2023. **Oral presentation “High flow nasal oxygen in acute respiratory failure”**, Riyadh, Saudi Arabia.
12. Saudi Thoracic Society (STS) International conference 2023. **Oral presentation “Non-Invasive ventilation: pitfalls and challenges”**, Riyadh, Saudi Arabia.
13. SIP Next Generation 2 2023, Roma, **Oral presentation** Ossigenoterapia conservativa e ipercapnia permissiva: i limiti, i benefici e i rischi”.
14. European Respiratory Society International Congress 2023. **Poster presentation**. “Physiological effects of lung protective ventilation in patients with lung fibrosis and usual interstitial pneumonia pattern versus primary ARDS: a preliminary matched-control study”.
15. Outbreaks in Pulmonology, IV Edizione, Virtual, November 25th – 26th, 2022, **Oral presentation** “Tools to monitor the respiratory effort”.
16. American Thoracic Society International Conference May 13th – 18th, 2022. **Poster presentation**: “Nasal Pressure Swings As The Measure Of Inspiratory Effort In Spontaneously Breathing Patients With De Novo Acute Respiratory Failure”, San Francisco (CA, USA),.
17. SMART Milan 5th – 7th May 2022, Oral Presentation in the session DEBATE - MECHANICAL VENTILATION MECHANICAL VENTILATION AND BEYOND with title “How do I monitor ARF patient with NIV?”
18. XXII Congresso Nazionale della Pneumologia Italiana, Milano, November 6th – 8th, 2021, Corso Pratico “Monitoraggio fisiopatologico e clinico dei pazienti con polmonite grave da COVID-19 (ARDS)”, **Oral presentation** “Il monitoraggio invasivo del paziente critico”.
19. Outbreaks in Pulmonology, III Edizione, Virtual, June 11th – 12th, 2021, **Oral presentation** “Management of acute asthma attack: from Emergency Room to Intensive Care Setting”.
20. European Respiratory Society International Congress 2021. **Poster presentation**. “Awake prone position in critical and severe COVID-19 patients undergoing noninvasive respiratory support: a retrospective multicenter cohort study”.
21. European Respiratory Society International Congress 2021. **Oral presentation**. “Inspiratory Effort And Respiratory Mechanics In Spontaneously Breathing Covid-19 Patients On Hospital Admission”.
22. Area Critica Bologna December 2019. **Oral presentation** “Ventilazione meccanica in corso di riacutizzazione di patologie interstiziali polmonari: uno studio preliminare”.
23. Outbreaks in Pulmonology, II Edizione, Modena, November 28th – 30th, 2019, **Oral presentation** “Invasive mechanical ventilation during acute exacerbation of ILD”.
24. European Respiratory Society International Congress. **Oral presentation** “Trans-esophageal and dynamic transpulmonary pressure in patients with de novo respiratory failure undergoing

NIV”, Madrid (Spain), September-October 2019.

25. European Respiratory Society International Congress. **Oral presentation** “Role of lung elastance on diaphragmatic dysfunction in exacerbated COPD patients who failed NIV”, Madrid (Spain), September-October 2019.
26. VIII Convegno Regionale Emilia-Romagna Pneumogiovani, Parma June 7th, 2019, **Oral presentation** “Esperienze formative nei centri di eccellenza”.
27. Chest Young 2019, Paestum 24 – 25 Maggio 2019, **Oral presentation** “Ventilazione meccanica in corso di riacutizzazione di Malattie Polmonari Interstiziali”.
28. Outbreaks in Pulmonology, I Edizione, Modena, June, 8th – 9th, 2018, **Oral presentation** “Endobronchial valve for bronchopleural fistula”.
29. XIX Congresso Nazionale della Pneumologia, Società Italiana di Pneumologia, Federazione Italiana della Pneumologia. **Oral presentation:** “La valutazione ecografica della funzionalità diaframmatica predice gli outcome clinici nei pazienti con sclerosi laterale amiotrofica (SLA)”, Venice (Italy), October 2018.
30. American Thoracic Society International Conference. **Oral presentation:** “Diaphragm Impairment and failure of Non Invasive Ventilation in Patients With Acute Exacerbation of Chronic Obstructive Pulmonary Disease– DIPANIV study”, San Diego (CA, USA), May 2018.
31. American Thoracic Society International Conference. **Poster presentation:** “Effectiveness of chest US in the diagnosis of ILD in an unselected population: a prospective study”, San Diego (CA, USA), May 2018.
32. European Respiratory Society Congress. **Poster presentation:** “Time course of diaphragmatic ultrasonography and prognosis in patients with ALS”, Milan (Italy), September 2017.
33. American Thoracic Society International Conference. **Poster presentation:** “Etiology And Level Of Lung Derangement Do Not Affect The Beneficial Effect Of Pulmonary Rehabilitation In Patients With Interstitial Lung Diseases”, San Francisco (CA, USA), May 2016.
34. Chest Annual Meeting. **Oral presentation:** “Regenerative medicine in chronic lung diseases: is there space for hope?”, Montreal (Canada), October 2015.
35. Aeolians Chest Workshop. **Oral presentation:** “Fibrosi Polmonare Idiopatica: Telemonitoraggio”, Lipari (Italy), May 2015.
36. European Respiratory Society Congress. **Poster presentation** “Effects of limb training in symptomatic patients with interstitial lung disease of different severity and etiology: A pilot study”, Munich (Germany), September 2014.
37. American Thoracic Society International Conference. **Poster discussion:** “HRCT Patterns Of Usual Interstitial Pneumonia In Rheumatoid Lung”, San Diego (CA USA), 16-21 May 2014.

BOOK CHAPTERS

1. Tonelli R, Crisafulli E, Costi S, Clini E (2020). The multi-morbidity patient. In Pulmonary Rehabilitation (pp. 349-357). CRC Press. . <https://doi.org/10.1201/9781351015592>
2. Vitacca M, Marchioni A, Tonelli R, Clini E . Calderini (2020). Ventilazione meccanica domiciliare.
3. Bonsignore M, Clini E, Confalonieri M, Costi S, Crimi C, Crisafulli E, Longhini F, Marchioni A, Nava S, Navalesi, P, Pisani L, Spanevello, A, Tonelli R (2021), pp. 519-552. Insufficienza

respiratoria acuta e cronica (cap.21) / Rugarli, Medicina Interna Sistematica VIII Edizione.

PATENT

Patent n. 102021000007478 “APPARATO PER IL RILEVAMENTO ED IL MONITORAGGIO DELLA PRESSIONE NASALE” released by the Italian Ministry of Enterprises and Made in Italy, 2023 (https://www.uibm.gov.it/bancadati/Number_search/type_url?type=wpn).

ACADEMIC TEACHING EXPERIENCES

2025 – present	Lecturer International Medical Doctor Program Medical Degree Course University Vita Salute San Raffaele Milan (Italy)
2024 – present	Lecturer Degree in Nursing and Midwifery Sciences (MO) [14-265] University of Modena and Reggio Emilia Modena (Italy)
2024 – present	Lecturer Master's Degree Program in Health and Sport Class LM-67 in Science and Techniques of Preventive and Adapted Motor Activity University of Modena and Reggio Emilia Modena (Italy)
2021 – present	Tutor of Clinical Methodology Medical Degree Course University of Modena and Reggio Emilia Modena (Italy)

TEACHING EXPERIENCES

4 – December 2021	Progetto spiro news. BPCO: nuovi obiettivi, nuove terapie, nuove strategie Modena (Italy)
22 – 23 November 2018	Clinical Course: “Gestione del paziente respiratorio critico in UTIR” Modena (Italy)
28 – 29 June 2018	Clinical Course “Ecografia del torace nell’insufficienza respiratoria acuta corso teorico pratico” Modena (Italy)
21 – 22 June 2018	Clinical Course: “Gestione del paziente respiratorio critico in UTIR” Modena (Italy)

- 23 – 24 November 2017 **Clinical Course “Ecografia del torace nell’insufficienza respiratoria acuta corso teorico pratico”**
Modena (Italy)
- 8 – 9 June 2017 **Clinical Course “Ecografia del torace nell’insufficienza respiratoria acuta corso teorico pratico”**
Modena (Italy)
- 7 – 8 October 2016 **Clinical Course “Ecografia del torace nell’insufficienza respiratoria acuta corso teorico pratico”**
Modena (Italy)

THESIS SUPERVISOR/CO-SUPERVISOR

1. July 2025, Academic Year 2023-2024 – Thesis title “Respiratory effort in ipf patients during unassisted spontaneous breathing: a prospective monocentric study on its quantification and clinical implications at rest and after 6MWDT”. Role: Supervisor. Candidate: Letizia Valentini, Corso di Laurea in Medicina e Chirurgia, Università di Modena e Reggio Emilia.
2. July 2025, Academic Year 2023-2024 – Thesis title “Ultrasound-based evaluation of respiratory muscle effort in patients with type 2 respiratory failure secondary to acute exacerbation of chronic obstructive pulmonary disease”. Role: Supervisor. Candidate Viola Alberti, Corso di Laurea in Medicina e Chirurgia, Università di Modena e Reggio Emilia.
1. November 2025. Academic Year 2023-2024, Thesis title “Ultrasound-based evaluation of inspiratory muscle effort in patients with type 2 respiratory failure secondary to COPD exacerbation”. Supervisor. Candidate: Dott. Daniele Puggioni, Post-doctoral School in Respiratory Medicine, University Hospital of Modena.
2. November 2025. Academic Year 2023-2024, Thesis title “Comparison between lung mechanics in three different ARDS subphenotypes identified through lung ultrasound: a post hoc analysis from PEGASUS study”. Role: Supervisor. Candidate: Dott. Giulia Baldini, Post-doctoral School in Respiratory Medicine, University Hospital of Modena.
3. January 2025, Academic Year 2022-2023, Thesis title “Respiratory muscle activation and inspiratory effort in patients with acute respiratory failure secondary to exacerbation of chronic obstructive pulmonary disease: correlations and clinical implications”. Supervisor. Candidate: Dott. Simone Rizzato, Post-doctoral School in Respiratory Medicine, University Hospital of Modena.
4. January 2025, Academic Year 2022-2023, Thesis title “Splenectomy in chronic thromboembolic pulmonary hypertension”. Supervisor. Candidate: Dott. Anna Mocellin, Post-doctoral School in Respiratory Medicine, University Hospital of Modena
5. January 2025, Academic Year 2022-2023, Thesis title “Expression of HOXB7 in the Lung of Patients with Idiopathic Pulmonary Fibrosis”. Supervisor. Candidate: Dott. Simone Rizzato, Post-doctoral School in Respiratory Medicine, University Hospital of Modena.
6. January 2025, Academic Year 2022-2023, Thesis title “Assessment of nasal pressure swing predicts respiratory support dependency in patients with hypoxic respiratory failure”. Supervisor. Candidate: Dott. Federico Guidotti, Post-doctoral School in Respiratory Medicine, University Hospital of Modena.

7. January 2025, Academic Year 2022-2023, Thesis title “Nasal pressure swing evaluation and monitoring in fibrosing interstitial lung disease with usual interstitial pneumonia pattern”. Supervisor. Candidate: Dott. Federica Ghinassi, Post-doctoral School in Respiratory Medicine, University Hospital of Modena.
8. October 2023, Academic Year 2021-2022 – Physiological effects of lung protective ventilation in patients with lung fibrosis and usual interstitial pneumonia pattern versus primary ARDS: a matched-control study – Role: Supervisor. Candidate: Dott. Linda Manicardi, Post-doctoral School in Respiratory Medicine, University Hospital of Modena
9. October 2023, Academic Year 2021-2022 – Effect of high flow nasal oxygen on inspiratory effort of patients with acute hypoxic respiratory failure and do not intubate orders – Role: Co-supervisor. Candidate: Dott. Morgana Vermi Post-doctoral School in Respiratory Medicine, University Hospital of Modena.
10. July 2023, Academic Year 2021-2022 – Respiratory mechanics alterations in patients with lung fibrosis and usual interstitial pneumonia pattern vs ARDS from pulmonary cause: a preliminary matched-control study – Role: Co-supervisor. Candidate: Andrea Carzoli, School of Medicine, University of Modena and Reggio Emilia
11. July 2023, Academic Year 2021-2022 – Accuracy of nasal pressure swing to predict failure of high flow nasal oxygen in patients with acute hypoxemic respiratory failure – Role: Co-supervisor. Candidate: Vincenzo Coppola, School of Medicine, University of Modena and Reggio Emilia
12. July 2023, Academic Year 2021-2022 – Expression of HOXB7 and related molecular biomarkers in the lung of patients with idiopathic pulmonary fibrosis: a pilot study – Role: Co-supervisor. Candidate: Eleonora Sovieni, School of Medicine, University of Modena and Reggio Emilia
13. November 2022, Academic Year 2020-2021 – Inspiratory effort and respiratory mechanics in patients with acute exacerbation of idiopathic pulmonary fibrosis: a preliminary matched cohort study – Role: co-supervisor. Candidate: Dott. Chiara Nani, Post-doctoral School in Respiratory Medicine, University Hospital of Modena
14. November 2022, Academic Year 2020-2021 – Risk factor for pulmonary air leaks and clinical prognosis in patient with COVID-19 related acute respiratory failure: a retrospective matched control study – Role: co-supervisor. Candidate: Dott. Fabiana Trentacosti, Post-doctoral School in Respiratory Medicine, University Hospital of Modena
15. November 2022, Academic Year 2020-2021 – Accuracy of nasal pressure swing to predict failure of high flow nasal oxygen in patients with acute hypoxemic respiratory failure – Role: co-supervisor. Candidate: Dott. Giulia Bruzzi, Post-doctoral School in Respiratory Medicine, University Hospital of Modena
16. July 2022, Academic Year 2020-2021 – Anti-IL-5 treatments in patients with severe eosinophilic asthma: efficacy comparison between Benralizumab and mepolizumab in real life – Role: Co-supervisor. Candidate: Luca Borsari, School of Medicine, University of Modena and Reggio Emilia
17. July 2022, Academic Year 2020-2021 – Quantification of inspiratory effort through nasal pressure variation in patients with acute respiratory failure candidate to non-invasive respiratory support – Role: Co-supervisor. Candidate: Matteo Delle Vergini, School of

Medicine, University of Modena and Reggio Emilia

18. December 2021, Academic Year 2019-2020 – Nasal pressure swings as the measure of inspiratory effort in spontaneously breathing patients with de novo respiratory failure. Role: co-supervisor. Candidate: Dott. Maria Rosaria Pellegrino, Post-doctoral School in Respiratory Medicine, University Hospital of Modena
19. December 2021, Academic Year 2019-2020 – Espressione e ruolo di HOXB7 nel polmone di pazienti affetti da fibrosi polmonare idiopatica. Role: co-supervisor. Candidate: Francesco Grottoli, School of Medicine, University of Modena and Reggio Emilia
20. November 2020, Academic Year 2018-2019 – Clinical impact of out-of-ICU non-invasive respiratory support in patients with COVID-19 pneumonia: a multicenter retrospective trial. Role: co-supervisor. Candidate: Dott. Filippo Gozzi, Post-doctoral School in Respiratory Medicine, University Hospital of Modena
21. December 2020, Academic Year 2018-2019 – Incidenza e impatto clinico del delirium in pazienti con insufficienza respiratoria sottoposta a ventilazione non-invasiva. Role: co-supervisor. Candidate: Luca Caffari, School of Medicine, University of Modena and Reggio Emilia

SCIENTIFIC SOCIETIES MEMBERSHIP

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| 2018 – Present | European Respiratory Society |
| 2018 – Present | Società Italiana di Pneumologia |

EDITORIAL EXPERIENCES

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| 2023 – Present | Associate Editor for Internal and Emergency Medicine |
| 2023 – Present | Review In Drugs Outcomes Research and Policies |
| 2022 – Present | Member of the Editorial Board for Pulmonary Therapy |
| 2022 – Present | Associate Editor for Frontiers in Medicine (section Intensive Care Medicine and Anesthesiology) |
| 2022 – Present | Review Editor for Frontiers in Pharmacology |
| 2020 – Present | Guest Editor for International Journal of Molecular Science of Special Issue "Molecular Research on Fibrotic Interstitial Lung Diseases" |

LEADERSHIP EXPERIENCES

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| 2016 – 2017 | Residency Chief Representative
Post-Doctoral School in Respiratory Diseases, University of Modena e Reggio Emilia (Italy) |
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ROBERTO TONELLI, MD

SPOKEN LANGUAGES

- Italian – native speaker
- English – professional level
- French – basic level

Modena, June 18th 2026

Roberto Tonelli