

Curriculum vitae

ALDIERI ELISABETTA

Personal details

Born in Torino, Italy

Nationality: Italian

Website: https://www.oncology.unito.it/do/docenti.pl/Show?_id=ealdieri#tab-profilo

Email: elisabetta.aldieri@unito.it

ORCID ID: 0000-0002-0236-6175; Scopus ID: 6603346183; Researcher ID: AAX-7129-2020

Educations

- Master's degree in Biological Sciences, University of Torino, Italy.
- **PhD** in Biochemistry and Cellular Biotechnology, Dept. of Genetic, Biology and Biochemistry University of Torino, Italy
- Post-degree **Medical Specialization** in Clinical Biochemistry, School of Medicine, University of Torino, Italy

Professional experiences and current position

- **2022-today**: Associate Professor of Biochemistry (BIO/10), School of Medicine, Dept. of Oncology, University of Torino, Italy
- **2005-2022**: Assistant Professor of Biochemistry (BIO/10), School of Medicine, Dept. of Genetics, Biology and Biochemistry/Dept. of Oncology, University of Torino, Italy
- **2000-2004**: 2 Post-doc fellowship in the Clinical and Experimental Medical Sciences Area, Dept. of Genetics, Biology and Biochemistry, University of Torino, Italy
- **1996-2000**: PhD student in Biochemistry and Cellular Biotechnology Doctorate at the Dept. of Genetic, Biology and Biochemistry University of Torino, Italy

Participation to Directive Boards of Scientific Societies and/or Institutions

- Senior Member of **SIB** (Italian Society of Biochemistry)/**FEBS** (Federation of the Societies of Biochemistry and Molecular Biology) - "*Tumor Biochemistry*" SIB Group
- Member of Directive and Scientific Boards of **Interdepartmental Center for Studies on Asbestos and Other Toxic Particulates "G. Scansetti"**, University of Torino, Italy
- Member of **Trialect** Society (Thousand Oaks, CA, USA)
- Member of the **AICC** (Italian Association for Cell Cultures)/**ETCS** (European Tissue Culture Society)
- Tutor of the **Doctorate in Molecular Medicine**, School of Medicine, University of Torino, Italy

Honors

- Ad hoc **Reviewer** for: Cancer Research, Cancers, Cells, Apoptosis, Antioxidants & Redox Signaling, Journal of Immunology, The Journal of Cellular Biochemistry, FEBS, IUBMB Life, Particle and Fibre Toxicology, American Journal of Physiology, Nanotoxicology, Biochimica et Biophysica Acta, ACS Chemical Biology, International Journal of Molecular Sciences, Scientific Reports, Journal of Cellular and Molecular Medicine, Journal of Clinical Medicine.
- **Guest Editor** of a Special Issue for "Cancers": TGF- β Signaling and Its Roles in Cancers
- **Guest Editor** of a Special Issue for "Cancers": Molecular Mechanisms of the Toxicity and Carcinogenicity of Particulates

Teaching activity

- **2005-present**: **lectures of Biochemistry** at School of Medicine, University of Torino, courses: Medicine, Dietitians, Nutrition; post-degree specializations in: Occupational Medicine
- **Tutor** in the PhD program in Molecular Medicine, University of Torino
- **Supervisor** of 5 bachelor students, 6 master students, 2 PhD students, 4 post-doc research fellows, 1 research fellow of International Exchange program (ERACOL)

Research main topics

- Identification of predictive and therapeutic markers in malignant pleural mesothelioma (MPM)
- Role of oxidative stress in asbestos fibrosis and MPM carcinogenesis
- Molecular mechanisms in MPM development/metastasis: Epithelial Mesenchymal Transition (EMT)
- Metabolic effects of nitric oxide (NO) and oxidative stress in murine and human cancer models
- Metabolic and pro-carcinogenic effects of asbestos fibers, NO and SV40 virus on human lung cancer, mesothelial and MPM cells (partly from patients)
- Evaluation of toxicity and biocompatibility of nanomaterials as carriers of drugs used in nanomedicine (i.e. carbon nanotubes)
- "Nanosafe" projects: toxicological and carcinogenic effects of nanoparticles and/or nanofibers in human and mouse cell models
- Molecular basis of genesis and reversion of multidrug resistance (MDR) in human cancer cells: role of pH, hypoxia, intracellular iron and calcium

Main projects as PI

1. 2019-2021:

Project title: Identification of new molecular markers and pharmacological targets in malignant pleural mesothelioma diagnosis and treatment

Source: Italian Ministry of University and Research (EX60% Funding 2019)

2. 2015-2018:

Project title: Project ABP "Amiante et Bonnes Pratiques" - University of Torino (Unit PI)

Source: University of New Caledonia

3. 2012-2013:

Project title: Role of oxidative stress in asbestos related malignant pleural mesothelioma carcinogenesis

Source: Italian Ministry of University and Research (EX60% Funding 2012)

Bibliometry (1997-present) (www.scopus.com)

- 52 papers on indexed-journals subjected to peer-review (first/co-first author: 7; last/co-last author: 7; H-index = 25)
- 1 book chapter
- 50 abstracts of oral communication/posters; invited speaker at national and international congresses
- 8 invited lectures at national/international meetings

10 best publications

1. Ramundo, V., Zanirato, G., **Aldieri, E.** The epithelial-to-mesenchymal transition (EMT) in the development and metastasis of malignant pleural mesothelioma. (2021) *International Journal of Molecular Sciences*, 22 (22): 12216-12228. DOI: 10.3390/ijms222212216
2. Ramundo, V., Giribaldi, G., **Aldieri, E.** Transforming growth factor- β and oxidative stress in cancer: A crosstalk in driving tumor transformation. (2021) *Cancers*, 13 (12): 3093-3105. DOI: 10.3390/cancers13123093
3. Schiavello, M., Gazzano, E., Bergandi, L., Silvagno, F., Libener, R., Riganti, C., **Aldieri, E.** Identification of redox-sensitive transcription factors as markers of malignant pleural mesothelioma. (2021) *Cancers*, 13 (5): 1-15. DOI: 10.3390/cancers13051138
4. Turini, S., Bergandi, L., Gazzano, E., Prato, M., **Aldieri, E.** Epithelial to mesenchymal transition in human mesothelial cells exposed to asbestos fibers: Role of TGF- β as mediator of malignant mesothelioma development or metastasis via EMT event. (2019) *International Journal of Molecular Sciences*, 20 (1): 150-161. DOI: 10.3390/ijms20010150
5. Casalone, E., Allione, A., Viberti, C., Pardini, B., Guarrera, S., Betti, M., Dianzani, I., **Aldieri, E.**, Matullo, G. DNA methylation profiling of asbestos-treated met5a cell line reveals novel pathways implicated in asbestos response. (2018) *Archives of Toxicology*, 92 (5): 1785-1795. DOI: 10.1007/s00204-018-2179-y
6. Polimeni, M., Gulino, G.R., Gazzano, E., Kopecka, J., Marucco, A., Fenoglio, I., Cesano, F., Campagnolo, L., Magrini, A., Pietroiusti, A., Ghigo, D., **Aldieri, E.** Multi-walled carbon nanotubes directly induce epithelial-mesenchymal transition in human bronchial epithelial cells via the TGF- β -mediated Akt/GSK-3 β /SNAIL-1 signalling pathway. (2016) *Particle and Fibre Toxicology*, 13 (1): 27-45. DOI: 10.1186/s12989-016-0138-4
7. Gulino, G.R., Polimeni, M., Prato, M., Gazzano, E., Kopecka, J., Colombatto, S., Ghigo, D., **Aldieri, E.** Effects of chrysotile exposure in human bronchial epithelial cells: Insights into the pathogenic

- mechanisms of asbestos-related diseases. (2016) *Environmental Health Perspectives*, 124 (6): 776-784. DOI: 10.1289/ehp.1409627
8. Riganti, C., Gazzano, E., Polimeni, M., **Aldieri, E.**, Ghigo, D. The pentose phosphate pathway: An antioxidant defense and a crossroad in tumor cell fate. (2012) *Free Radical Biology and Medicine*, 53 (3): 421-436. DOI: 10.1016/j.freeradbiomed.2012.05.006
 9. **Aldieri, E.**, Riganti, C., Silvagno, F., Orecchia, S., Betta, P.G., Doublier, S., Gazzano, E., Polimeni, M., Bosia, A., Ghigo, D. Antioxidants prevent the RhoA inhibition evoked by crocidolite asbestos in human mesothelial and mesothelioma cells. (2011) *American Journal of Respiratory Cell and Molecular Biology*, 45 (3): 625-631. DOI: 10.1165/rcmb.2010-0089OC
 10. **Aldieri, E.**, Orecchia, S., Ghigo, D., Bergandi, L., Riganti, C., Fubini, B., Betta, P.G., Bosia, A. Simian virus 40 infection down-regulates the expression of nitric oxide synthase in human mesothelial cells. (2004) *Cancer Research*, 64 (12): 4082-4084. DOI: 10.1158/0008-5472.CAN-04-0486

More relevant publications in the last years

- Gazzano, E., Petriglieri, J.R., **Aldieri, E.**, Fubini, B., Laporte-Magoni, C., Pavan, C., Tomatis, M., Turci, F. Cytotoxicity of fibrous antigorite from New Caledonia. (2022) *Environmental Research*, 12:115046. DOI: 10.1016/j.envres.2022.115046
- Ramundo, V., Zanirato, G., **Aldieri, E.** The epithelial-to-mesenchymal transition (EMT) in the development and metastasis of malignant pleural mesothelioma. (2021) *International Journal of Molecular Sciences*, 22 (22): 12216-12228. DOI: 10.3390/ijms222212216
- Ramundo, V., Giribaldi, G., **Aldieri, E.** Transforming growth factor- β and oxidative stress in cancer: A crosstalk in driving tumor transformation. (2021) *Cancers*, 13 (12): 3093-3105. DOI: 10.3390/cancers13123093
- Schiavello, M., Gazzano, E., Bergandi, L., Silvagno, F., Libener, R., Riganti, C., **Aldieri, E.** Identification of redox-sensitive transcription factors as markers of malignant pleural mesothelioma. (2021) *Cancers*, 13 (5): 1-15. DOI: 10.3390/cancers13051138
- Marucco, A., **Aldieri, E.**, Leinardi, R., Bergamaschi, E., Riganti, C., Fenoglio, I. Applicability and limitations in the characterization of poly-dispersed engineered nanomaterials in cell media by Dynamic Light Scattering (DLS). (2019) *Materials*, 12 (23): 3833-3851. DOI: 10.3390/ma12233833
- Bergandi, L., Giuggia, B., Alovise, M., Comba, A., Silvagno, F., Maule, M., **Aldieri, E.**, Scotti, N., Scacciarella, P., Conrotto, F., Berutti, E., Pasqualini, D. Endothelial Dysfunction Marker Variation in Young Adults with Chronic Apical Periodontitis before and after Endodontic Treatment. (2019) *Journal of Endodontics*, 45 (5): 500-506. DOI: 10.1016/j.joen.2019.01.018
- Ricca, C., Aillon, A., Viano, M., Bergandi, L., **Aldieri, E.**, Silvagno, F. Vitamin D inhibits the epithelial-mesenchymal transition by a negative feedback regulation of TGF- β activity. (2019) *Journal of Steroid Biochemistry and Molecular Biology*, 187: 97-105. DOI: 10.1016/j.jsbmb.2018.11.006
- Turini, S., Bergandi, L., Gazzano, E., Prato, M., **Aldieri, E.** Epithelial to mesenchymal transition in human mesothelial cells exposed to asbestos fibers: Role of TGF- β as mediator of malignant mesothelioma development or metastasis via EMT event. (2019) *International Journal of Molecular Sciences*, 20 (1): 150-161. DOI: 10.3390/ijms20010150
- Casalone, E., Allione, A., Viberti, C., Pardini, B., Guarrera, S., Betti, M., Dianzani, I., **Aldieri, E.**, Matullo, G. DNA methylation profiling of asbestos-treated met5a cell line reveals novel pathways implicated in asbestos response. (2018) *Archives of Toxicology*, 92 (5): 1785-1795. DOI: 10.1007/s00204-018-2179-y
- Polimeni, M., Gulino, G.R., Gazzano, E., Kopecka, J., Marucco, A., Fenoglio, I., Cesano, F., Campagnolo, L., Magrini, A., Pietroiusti, A., Ghigo, D., **Aldieri, E.** Multi-walled carbon nanotubes directly induce epithelial-mesenchymal transition in human bronchial epithelial cells via the TGF- β -mediated Akt/GSK-3 β /SNAIL-1 signalling pathway. (2016) *Particle and Fibre Toxicology*, 13 (1): 27-45. DOI: 10.1186/s12989-016-0138-4
- Gulino, G.R., Polimeni, M., Prato, M., Gazzano, E., Kopecka, J., Colombatto, S., Ghigo, D., **Aldieri, E.** Effects of chrysotile exposure in human bronchial epithelial cells: Insights into the pathogenic mechanisms of asbestos-related diseases. (2016) *Environmental Health Perspectives*, 124 (6): 776-784. DOI: 10.1289/ehp.1409627