

Curriculum Vitae: Peter Molnár

Born: October 2, 1967, in Uddevalla, Sweden

Contact information

Västra Götalandsregionens miljömedicinska centrum (VMC),
Sahlgrenska universitetssjukhuset
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Education:

PhD in medicine, especially occupational medicine, University of Gothenburg, 2007.

Title: Elemental composition of fine particles: exposure in the general population and influence from different sources.

Supervisor: Associate professor Gerd Sällsten

PhLic in Environmental Science with focus on Physics, University of Gothenburg, 2002.

BSc in Physics, University of Gothenburg, 1995.

Current post:

Senior Occupational Hygienist, Environmental Physicist, Sahlgrenska University hospital, Västra Götalandsregionen. 2007-04-01 – present. (Time assigned for research ~50 %.).

Associate Professor at Institute of Medicine, Sahlgrenska Academy, University of Gothenburg (from May, 2019).

Previous employments (after undergraduate studies):

Postdoctoral grant financed by FAS (Swedish Council for Working Life and Social Research), 2009-02-01 – 2011-09-30 at Institute of Medicine, University of Gothenburg.

Radiation Physicist, Sahlgrenska University hospital, Västra Götalandsregionen. 2006-05-01 – 2007-03-31.

Assistant researcher, Occupational medicine, University of Gothenburg. 2003-07-01 – 2006-04-30.

Guidance counsellor, Physics and Engineering Physics, Chalmers University of Technology. 2002-08 – 2003-06.

Teacher, institute of Physics and Engineering Physics, University of Gothenburg. 2002-01-01 – 2002-06-30.

PhD student, institute of Physics and Engineering Physics, University of Gothenburg. 1997-06-20 – 2001-12-18.

Large grants:

Source	Title	Year	Sum
FAS	Postdoc	2009-11	1.36 MSEK

Scientific assignments

Faculty opponent at the dissertation for Ralf Rittner, Department of Laboratory Medicine, Lund University, Sep 2020.

Member of the dissertation evaluation committee for Malin Alsved, Division of Ergonomics and Aerosol Technology, Lund University, Sep. 2020.

Evaluator half-time seminar, Helena Eriksson, Department of Occupational and Environmental Medicine, University of Gothenburg, Nov 2017

Evaluator pre-dissertation, Ebba Malmqvist, Department of Occupational and Environmental Medicine, Lunds University, Nov. 2013.

Member of the dissertation evaluation committee for Andreas Dahl, Division of Ergonomics and Aerosol Technology, Lund University, Feb. 2011.

Member of the half-time evaluation committee for Santosh Dahgam, Department of Occupational and Environmental Medicine, University of Gothenburg, Mars 2011.

Board member of the Nordic Society for Aerosol Research (NOSA)

Board member of Gothenburg Air and Climate Network, (GAC)

Member of Gesellschaft für Aerosolforschung (GAeF)" -Association for Aerosol Research

Member of the International Woodsmoke Research Network (organized by NIWA, the National Institute of Water and Atmospheric Research, New Zealand)

Supervisor

Co-supervisor for three PhD students, Adeyemi Adewale Adekunle, University of Pretoria, South Africa (PhD exam spring 2020). Helena Hasslöf, Department of Occupational and Environmental Medicine, University of Gothenburg (2018-2020). Therese Klang, Department of Occupational and Environmental Medicine, University of Gothenburg (2021-).

Co-supervisor for a Master student, Nandi Sisasenkoski Mwase, University of Pretoria, South Africa (exam date January 2020), and Alicia Ekström, medical student at University of Gothenburg, Sweden (exam date January 2019).

Peer reviewer for the following scientific journals:

Atmospheric Environment

Building and Environment

Environmental Engineering Science

Environmental Research

Environmental Science & Technology

Environmental Science: Processes & Impacts (member of the international referee panel)

Indoor Air

Journal of Environmental Monitoring (member of the international referee panel)

X-Ray Spectrometry

Peer reviewed articles:

1. Roswall, N., Pyko, A., Ögren, M., Oudin, A., Rosengren, A., Lager, A., Poulsen, A.H., Eriksson, C., Segersson, D., Rizzuto, D., Andersson, E.M., Aasvang, G.M., Engström, G., Jørgensen, J.T., Selander, J., Christensen, J.H., Thacher, J., Leander, K., Overvad, K., Eneroth, K., Mattisson, K., Barregård, L., Stockfelt, L., Albin, M., Ketzel, M., Simonsen, M.K., Spanne, M., Raaschou-Nielsen, O., Magnusson, P.K.E., Tiittanen, P., **Molnar, P.**, Ljungman, P., Lanki, T., Lim, Y.H., Andersen, Z.J., Pershagen, G. and Sørensen, M., 2021. Long-term exposure to transportation noise and risk of incident stroke: A pooled study of nine scandinavian cohorts. *Environmental Health Perspectives*, 129(10). 10.1289/EHP8949.
2. Adeyemi, A., **Molnar, P.**, Boman, J. and Wichmann, J., 2021. Source apportionment of fine atmospheric particles using positive matrix factorization in Pretoria, South Africa. *Environmental Monitoring and Assessment*, 193(11): 716. 10.1007/s10661-021-09483-3.
3. Nilsson Sommar, J., Andersson, E.M., Andersson, N., Sallsten, G., Stockfelt, L., Ljungman, P.L.S., Segersson, D., Eneroth, K., Gidhagen, L., **Molnar, P.**, Wennberg, P., Rosengren, A., Rizzuto, D., Leander, K., Lager, A., Magnusson, P.K.E., Johansson, C., Barregard, L., Bellander, T., Pershagen, G. and Forsberg, B., 2021. Long-term exposure to particulate air pollution and black carbon in relation to natural and cause-specific mortality: a multicohort study in Sweden. *BMJ Open*, 11(9): e046040. 10.1136/bmjopen-2020-046040.
4. Edlund, K.K., Killman, F., **Molnar, P.**, Boman, J., Stockfelt, L., Wichmann, J., 2021. Health risk assessment of PM_{2.5} and PM_{2.5}-bound trace elements in Thohoyandou, South Africa. *Int. J. Environ. Res. Public Health* 18, 1-12.
5. Mwase, N.S., Ekström, A., Jonson, J.E., Svensson, E., Jalkanen, J.P., Wichmann, J., **Molnar, P.**, Stockfelt, L., 2020. Health Impact of Air Pollution from Shipping in the Baltic Sea: Effects of Different Spatial Resolutions in Sweden. *Int. J. Environ. Res. Public Health* 17.

6. Hasslöf, H., **Molnár, P.**, Andersson, E.M., Spanne, M., Gustafsson, S., Stroh, E., Engström, G., Stockfelt, L., 2020. Long-term exposure to air pollution and atherosclerosis in the carotid arteries in the Malmö diet and cancer cohort. *Environ. Res.* 191.
7. Andersson, E.M., Ögren, M., **Molnár, P.**, Segersson, D., Rosengren, A., Stockfelt, L., 2020. Road traffic noise, air pollution and cardiovascular events in a Swedish cohort. *Environ. Res.* 185.
8. Ljungman, P.L.S., Andersson, N., Stockfelt, L., Andersson, E.M., Sommar, J.N., Eneroth, K., Gidhagen, L., Johansson, C., Lager, A., Leander, K., **Molnár, P.**, Pedersen, N.L., Rizzuto, D., Rosengren, A., Segersson, D., Wennberg, P., Barregard, L., Forsberg, B., Sallsten, G., Bellander, T., Pershagen, G., 2019. Long-Term Exposure to Particulate Air Pollution, Black Carbon, and Their Source Components in Relation to Ischemic Heart Disease and Stroke. *Environ. Health Perspect.* 127.
9. Barregard, L., **Molnár, P.**, Jonson, J.E. and Stockfelt, L., 2019. Impact on Population Health of Baltic Shipping Emissions. *International Journal of Environmental Research and Public Health*, 16(11). 10.3390/ijerph16111954.
10. Olstrup, H., Forsberg, B., Orru, H., Spanne, M., Nguyen, H., **Molnár, P.** and Johansson, C., 2018. Trends in air pollutants and health impacts in three Swedish cities over the past three decades. *Atmos. Chem. Phys. Discuss.*, 2018: 1-30. 10.5194/acp-2018-7.
11. Ögren, M., **Molnár, P.** and Barregard, L., 2018. Road traffic noise abatement scenarios in Gothenburg 2015 – 2035. *Environmental Research*, 164: 516-521. <https://doi.org/10.1016/j.envres.2018.03.011>.
12. Stockfelt, L., Andersson, E.M., **Molnár, P.**, Gidhagen, L., Segersson, D., Rosengren, A., Barregard, L. and Sallsten, G., 2017. Long-term effects of total and source-specific particulate air pollution on incident cardiovascular disease in Gothenburg, Sweden. *Environmental Research*, 158: 61-71. 10.1016/j.envres.2017.05.036.
13. **Molnár, P.**, Tang, L., Sjöberg, K. and Wichmann, J., 2017. Long-range transport clusters and positive matrix factorization source apportionment for investigating transboundary PM_{2.5} in Gothenburg, Sweden. *Environmental Science: Processes & Impacts*, 19(10): 1270-1277. 10.1039/C7EM00122C.
14. Stockfelt, L., Andersson, E. M., **Molnár, P.**, Rosengren, A., Wilhelmsen, L., Sallsten, G., & Barregard, L. (2015). Long term effects of residential NO_x exposure on total and cause-specific mortality and incidence of myocardial infarction in a Swedish cohort. *Environmental research*, 142, 197-206.
15. **Molnár, P.**, Stockfelt, L., Barregard, L., & Sallsten, G. (2015). Residential NO_x exposure in a 35-year cohort study. Changes of exposure, and comparison with back extrapolation for historical exposure assessment. *Atmospheric Environment*, 115(0), 62-69.
16. Tang, L., Haeger-Eugensson, M., Sjöberg, K., Wichmann, J., **Molnár, P.**, Sallsten, G. 2014. Estimation of the long-range transport contribution from secondary inorganic components to urban background PM₁₀ concentrations in south-western Sweden during 1986–2010. *Atmos. Environ.* 89: 93-101.
17. **Molnár, P.**, Johannesson, S., Quass, U., 2014. Source apportionment of PM_{2.5} using positive matrix factorization (PMF) and PMF with factor selection. *Aerosol Air Qual. Res.* 14, 725-733.
18. **Molnár, P.** and Sallsten, G., 2013. Contribution to PM_{2.5} from domestic wood burning in a small community in Sweden. *Environmental Science: Processes & Impacts*, 15(4): 833-838.
19. Janhall, S., **Molnár, P.** and Hallquist, M., 2012. Traffic emission factors of ultrafine particles: effects from ambient air. *Journal of Environmental Monitoring*, 14(9): 2488-2496.
20. Stockfelt, L., Sallsten, G., Olin, A.-C., Almerud, P., Samuelsson, L., Johannesson, S., **Molnár, P.**, Strandberg, B., Almstrand, A.-C., Bergemalm-Rynell, K. and Barregard, L., 2012. Effects on airways of short-term exposure to two kinds of wood smoke in a chamber study of healthy humans. *Inhalation Toxicology*, 24(1): 47-59.

21. Boman, J., Pettersson, J.B.C., Gatari, M.J., Wagner, A. and **Molnár, P.**, 2011. Assessing the environment with X-ray fluorescence spectrometry. *Advances in X-ray Analysis*, 54: 266-279.
22. Kliucininkas, L., Martuzevicius, D., Krugly, E., Prasauskas, T., Kauneliene, V., **Molnár, P.** and Strandberg, B., 2011. Indoor and outdoor concentrations of fine particles, particle-bound PAHs and volatile organic compounds in Kaunas, Lithuania. *Journal of Environmental Monitoring*, 13(1): 182-191.
23. Hänninen, O., Hoek, G., Mallone, S., Chellini, E., Katsouyanni, K., Gariazzo, C., Cattani, G., Marconi, A., **Molnár, P.**, Bellander, T. and Jantunen, M., 2011. Seasonal patterns of outdoor PM infiltration into indoor environments: review and meta-analysis of available studies from different climatological zones in Europe. *Air Quality, Atmosphere & Health*, 4(3): 221-233.
24. Johannesson, S., Gustafson, P., **Molnár, P.**, Barregård, L. and Sällsten, G., 2007. Exposure to fine particles (PM_{2.5} and PM₁) and black smoke in the general population: personal, indoor, and outdoor levels. *J Expos Sci Environ Epidemiol*, 17(7): 613-624.
25. **Molnár, P.**, Bellander, T., Sällsten, G. and Boman, J., 2007. Indoor and outdoor concentrations of PM_{2.5} trace elements at homes, preschools and schools in Stockholm, Sweden. *J Environ Monit*, 9(4): 348-57.
26. **Molnár, P.**, Johannesson, S., Boman, J., Barregård, L. and Sällsten, G., 2006. Personal exposures and indoor, residential outdoor, and urban background levels of fine particle trace elements in the general population. *J Environ Monit*, 8(5): 543-51.
27. Sällsten, G., Gustafson, P., Johansson, L., Johannesson, S., **Molnár, P.**, Strandberg, B., Tullin, C. and Barregård, L., 2006. Experimental wood smoke exposure in humans. *Inhalation Toxicology*, 18(11): 855-864.
28. **Molnár, P.**, Gustafson, P., Johannesson, S., Boman, J., Barregård, L. and Sällsten, G., 2005. Domestic wood burning and PM_{2.5} trace elements: Personal exposures, indoor and outdoor levels. *Atmospheric Environment*, 39(14): 2643-2653.
29. Janhäll, S., Jonsson, A.M., **Molnár, P.**, Svensson, E.A. and Hallquist, M., 2004. Size resolved traffic emission factors of submicrometer particles. *Atmospheric Environment*, 38(26): 4331-4340.
30. Janhäll, S., **Molnár, P.** and Hallquist, M., 2003. Vertical distribution of air pollutants at the Gustavii Cathedral in Goteborg, Sweden. *Atmospheric Environment*, 37(2): 209-217.
31. **Molnár, P.**, Janhäll, S. and Hallquist, M., 2002. Roadside measurements of fine and ultrafine particles at a major road north of Gothenburg. *Atmospheric Environment*, 36(25): 4115-4123.

Selected scientific reports etc. related to air pollution:

- **Molnár, P.**, Omstedt, G., Gustafson, P., Sällsten, G. Effekter av vedeldning på partikelhalter i luft i ett bostadsområde på Hisingen. Apr 2010 (in Swedish, English title: Impact of wood burning on particulate concentrations in the air in a residential area in Hisingen.). (VMC-report, available at <http://www.amm.se/>)
- **Molnár, P.**, Sällsten, G. Partikelhalter (PM_{2.5}) och besvär av vedeldning i Gärdesområdet, Tanumshede. Jan. 2009. (In Swedish, English title: Particle concentrations (PM_{2.5}) and disturbance due to burning wood in the Gärdes area, Tanumshede.) (VMC-report, available at <http://www.amm.se/>)
- **Molnár, P.** On urban air pollution measurements: Analysis for identification and classification of sources, 2001. Licentiate thesis at institute of Physics and Engineering Physics, University of Gothenburg.
- Tiitta, P., Tissari, J., Leskinen, A., Yli-Toumi, T., Raunemaa, T., **Molnár, P.** and Öblad, M., 2000. Pienhiukkaskeräinten Tutkimus 143 m³ Ulkokammiossa (In Finnish, English title: Testing of fine particle samplers in a 143 m³ outdoor chamber). University report from University of Kuopio,

Department of Environmental Science, P.O.B. 1627, FIN-70211 Kuopio, Finland. ISSN 0786-4728.

Author/co-author to more than 50 peer reviewed conference abstracts (not listed).

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h-index	18	16
i10-index	24	22