



Curriculum Vitae

Personal information **Violette Dirix**

Work experience

1. Employer: Federal agency of medicines and health products
 - Start date: 04/2018
 - End date: present
 - Position: Clinical assessor
 - Activities: Assessment of new prophylactic vaccines for EMA marketing authorization, scientific and regulatory advice on prophylactic vaccines' clinical development plans, assessment of clinical trials' design and clinical trials' immunogenicity, efficacy and safety data.
 - Country: Belgium
2. Employer: Université Libre de Bruxelles
 - Start date: 10/2008
 - End date: 03/2018
 - Position: Postdoctoral researcher
 - Activities: Analyses of human immune responses induced by the natural infection or the vaccination against *B. pertussis* and *M. tuberculosis*. Identification of biomarkers in tuberculosis and development of assays for the diagnosis of active tuberculosis and latent tuberculosis infection in immunocompromised and immunocompetent patients in Belgium and in high endemic countries
 - Country: Belgium
3. Employer: Université Libre de Bruxelles
 - Start date: 10/2004
 - End date: 09/2008
 - Position: PhD in Biomedical and Pharmaceutical Sciences
 - Activities: PhD thesis : « Study of the regulation of the cellular immune response of infants to *Bordetella pertussis* antigens»
 - Country: Belgium

Education and training

1. Subject: Tropical Medicine Institute
 - Start date: 2003
 - End date: 2004
 - Qualification: Degree in Tropical Medicine
 - Organisation: Institute of Tropical Medicine (ITM)
 - Country: Belgium
2. Subject: Université de Namur
 - Start date: 1999
 - End date: 2003
 - Qualification: Master of Biological Sciences (biomedical orientation)
 - Organisation: Université de Namur
 - Country: Belgium

Additional information

Publications

- o Dirix V, Dauby N, Hites M, Watelet E, Van Praet A, Godefroid A, Petit E, Singh M, Loch C, Mascart F, Corbière V. Optimal Detection of Latent Mycobacterium tuberculosis Infection by Combined Heparin_Binding Hemagglutinin (HBHA) and Early Secreted Antigenic Target 6 (ESAT_6) Whole_Blood Interferon Gamma Release Assays. *J Clin Microbiol.* 2022 May 18;60(5):e0244321. doi: 10.1128/jcm.02443_21.
- o Dirix V, Collart P, Van Praet A, Hites M, Dauby N, Allard S, Racapé J, Singh M, Loch C, Mascart F, Corbière V. Immuno_Diagnosis of Active Tuberculosis by a Combination of Cytokines/Chemokines Induced by Two Stage_Specific Mycobacterial Antigens: A Pilot Study in a Low TB Incidence Country. *Front Immunol.* 2022 Mar 10;13:842604. doi: 10.3389/fimmu.2022.842604.
- o Albayrak N, Dirix V, Aerts L, Van Praet A, Godefroid A, Dauby N, Windey P, Muylle I, Mascart F, Corbière V. Differential expression of maturation and activation markers on NK cells in patients with active and latent tuberculosis. *J Leukoc Biol.* 2021 Dec 10. doi: 10.1002/JLB.4A1020_641RR.
- o Dreesman A, Corbière V, Libin M, Racapé J, Collart P, Singh M, Loch C, Mascart F, Dirix V. Specific Host Signatures for the Detection of Tuberculosis Infection in Children in a Low TB Incidence Country. *Front Immunol.* 2021 Mar 15;12:575519. doi: 10.3389/fimmu.2021.575519.
- o Benhadou F, Dirix V, Domont F, Willaert F, Van Praet A, Loch C, Mascart F, Corbière V. Tuberculosis Risk Stratification of Psoriatic Patients Before Anti_TNF_α Treatment. *Front Immunol.* 2021 Jun 3;12:672894. doi: 10.3389/fimmu.2021.672894.
- o Bonkain, F., De Clerck, D., Dirix, V., Singh, M., Loch, C., Mascart, F., Corbière, V. Early diagnosis of miliary tuberculosis in a hemodialysis patient by combining two interferon_γ_release assays: a case report. *BMC Nephrol.* 2020 Jun 4;21(1):214. doi: 10.1186/s12882_020_018
- o Debulpaep, S., Dreesman, A., Dirix, V., Toppet, V., Wanlin, M., Geysens, L., Arrazola de Oñate, W., Fauville, M., Mascart, F., Levy, J., Mouchet, F. Tuberculosis Transmission in a Primary School and a Private Language School. *An*

Estimation of Infectivity. *Front Pediatr.* 2020 Feb 7;8:10. doi: 10.3389/fped.2020.00010.

o Dreesman, A., Dirix, V., Smits, K., Corbière, V., Van Praet, A., Debulpaep, S., De Schutter, I., Felderhof, M.K., Malfroot, A., Singh, M., Locht, C., Mouchet, F., Mascart, F. Identification of Mycobacterium tuberculosis Infection in Infants and Children With Partial Discrimination Between Active Disease and Asymptomatic Infection. *Front Pediatr.* 2019 Jul 25;7:311. doi: 10.3389/fped.2019.00311.

o Akinola, F., Muloiswa, R., Hussey, G.D., Dirix, V., Kagina, B., Amponsah_Dacosta, E. Assessment of humoral and cell-mediated immune responses to pertussis vaccination: a systematic review protocol. *BMJ Open.* 2019 Jun 9;9(6):e028109. doi: 10.1136/bmjopen_2018_028109.

o Henrard, S., Corbière, V., Schandené, L., Ducarme, M., Van Praet, A., Petit, E., Singh, M., Locht, C., Dirix, V., Mascart, F. Proportions of interferon- γ -producing ascites lymphocytes in response to mycobacterial antigens: A help for early diagnosis of peritoneal tuberculosis in a low TB incidence country. *PLoS One.* 2019 Apr 4;14(4):e0214333. doi: 10.1371/journal.pone.0214333.

o Aerts, L., Selis, E., Corbière, V., Smits, K., Van Praet, A., Dauby, N., Petit, E., Singh, M., Locht, C., Dirix, V., Mascart, F. HBHA-Induced Polycytotoxic CD4+ T Lymphocytes Are Associated with the Control of Mycobacterium tuberculosis Infection in Humans. *J Immunol.* 2019 Jan 15;202(2):421-427. doi: 10.4049/jimmunol.1800840.

o Ouni, R., Gharsalli, H., Dirix, V., Braiek, A., Sendi, N., Jarraya, A., Douik El Gharbi, L., Barbouche, M.R., Benabdessalem, C. Granzyme B induced by Rv0140 antigen discriminates latently infected from active tuberculosis individuals. *J Leukoc Biol.* 2019 Feb;105(2):297-306. doi: 10.1002/JLB.MA0318_117R.

o Wyndham_Thomas, C., Dirix, V., Goffard, J.C., Henrard, S., Wanlin, M., Callens, S., Mascart, F., Van Vooren, J.P. 2018 Belgian guidelines for the screening for latent tuberculosis in HIV-infected patients. *Acta Clin Belg.* 2019 Aug;74(4):242-251. doi: 10.1080/17843286.2018.1494669.

o Dirix, V., Corbière, V., Wyndham_Thomas, C., Selis, E., Allard, S., Hites, M., Aerts, L., Giese, T., Mascart, F. Blood tolerogenic monocytes and low proportions of dendritic cell subpopulations are hallmarks of human tuberculosis. *J Leukoc Biol.* 2018 May;103(5):945-954. doi: 10.1002/JLB.4A1117_448R.

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o Meyerovich, K., Violato, N.M., Fukaya, M., Dirix, V., Pachera, N., Marchetti, P., Strasse, A., Eizirik, D.L., Cardozo, A.K. Mcl-1 is a key anti-apoptotic protein in human and rodent pancreatic β -cells. *Diabetes, Sep;66(9):2446-2458* doi: 10.2337/db16_1252

o Wyndham_Thomas, C., Corbière, V., Selis, E., Payen, M.C., Goffard, J.C., Van Vooren, J.P., Mascart, F., Dirix, V. Immune activation by Mycobacterium tuberculosis in HIV-infected and -uninfected subjects. *J Acquir Immune Defic Syndr.* 2017 Jan 1;74(1):103-111

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o Wyndham_Thomas, C., Schepers, K., Dirix, V., Mascart, F., Van Vooren, J.P., Goffard, J.C. Implementation of latent tuberculosis screening in HIV care centres: evaluation in a low tuberculosis incidence setting. *Epidemiol Infect.* 144(4):703-11. doi: 10.1017/S0950268815001594

o Smits, K., Corbière, V., Dirix, V., Mekkaoui, L., Wyndham_Thomas, C., Libin, M., Dreesman, A., Loyens, M., Payen, M.C., Singh, M., Locht, C., Mascart, F. Immunological signatures identifying different stages of latent Mycobacterium tuberculosis infection and discriminating latent from active tuberculosis in humans. *Journal of Clinical & Cellular Immunology*, doi/10.4172/2155_9899.1000341

o Wyndham_Thomas, C., Dirix, V., Schepers, K., Martin, C., Hildebrand, M., Goffard, J.C., Domont, F., Libin, M., Loyens, M., Locht, C., Van Vooren, J.P., Mascart, F. Contribution of a heparin-binding haemagglutinin interferon- γ release assay to the detection of Mycobacterium tuberculosis infection in HIV-infected patients: comparison with the tuberculin skin test and the QuantiFERON-TB Gold In-tube. *BMC Infect Dis.* 14;15:59. doi: 10.1186/s12879-015-0796-0

o Schepers, K., Dirix, V., Mouchet, F., Verscheure, V., Lecher, S., Locht, C., Mascart, F. Early cellular immune response to a new candidate mycobacterial vaccine antigen in childhood tuberculosis. *Vaccine*, 18;33(8):1077-83. doi: 10.1016/j.vaccine.2014.12.011

o Dirix, V., Mielcarek, N., Debrie, A.S., Willery, E., Alonso, A., Verscheure, V., Mascart, F., Locht, C. Human dendritic cell maturation and cytokine secretion upon stimulation with Bordetella pertussis filamentous haemagglutinin. *Microbes and Infection*, 16(7):562-70. doi: 10.1016/j.micinf.2014.04.003

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o Schepers, K., Mouchet, F., Dirix, V., De Schutter, I., Jotzo, K., Verscheure, V., Geurts, P., Singh, M., Van Vooren, J.P., Mascart, F. Long-incubation time interferon- γ release assays in response to PPD_{RT23}, ESAT-6 and/or CFP₁₀ for the diagnosis of Mycobacterium tuberculosis infection in children. *Clinical and vaccine immunology.* doi:10.1128/CVI.00525_13

o Dirix, V., Vermeulen, F., Mascart, F. Maturation of CD4(+) Regulatory T Lymphocytes and of Cytokine Secretions in Infants Born Prematurely. *Journal of clinical immunology*, 33(6), 1126-1133. doi:10.1007/s10875_013_9911_4

o Vermeulen, F., Dirix, V., Verscheure, V., Damis, E., Vermeylen, D., Locht, C., Mascart, F. Persistence at one year of age of antigen-induced cellular immune responses in preterm infants vaccinated against whooping cough: comparison of three different vaccines and effect of a booster dose. *Vaccine*, 31(15), 1981-1986. doi:10.1016/j.vaccine.2013.02.004

o Dirix, V., Verscheure, V., Vermeulen, F., De Schutter, I., Goetghebuer, T., Locht, C., Mascart, F. Both CD4+ and CD8+ lymphocytes participate in the IFN- γ response to filamentous hemagglutinin from Bordetella pertussis in infants, children and adults. *Clinical and vaccine immunology*, 2012:795958. doi: 10.1155/2012/795958

o Corbière, V., Dirix, V., Norrenberg, S., Cappello, M., Rimmelink, M., Mascart, F. Phenotypic characteristics of human type II alveolar epithelial cells suitable for antigen presentation to T lymphocytes. *Respir Research*, Jan 24;12:15. doi: 10.1186/1465_9921_12_15

o Place, S., Verscheure, V., De San, N., Hougardy, J._M., Schepers, K., Dirix, V., Dediste, A., Michel, O., Drowart, A., Allard, S. D., Doherty, T. M., Lecher, S., Loch, C., Mascart, F. HBHA_specific IFN_{gamma} Synthesis at the Site of Infection during Active Tuberculosis in Humans. *American journal of respiratory and critical care medicine*, 182(6), 848_854. doi:10.1164/rccm.201001_0083OC

o Vermeulen, F., Verscheure, V., Damis, E., Vermeylen, D., Leloux, G., Dirix, V., Loch, C., Mascart, F. Cellular immune responses of preterm infants after vaccination with whole_cell or acellular pertussis vaccines. *Clinical and vaccine immunology*, 17(2), 258_262. doi:10.1128/CVI.00328_09

o Dirix, V., Verscheure, V., Goetghebuer, T., Hainaut, M., Debrie, A._S., Loch, C., Mascart, F. Monocyte_derived interleukin_10 depresses the Bordetella pertussis_ specific gamma interferon response in vaccinated infants. *Clinical and vaccine immunology*, 16(12), 1816_1821. doi:10.1128/CVI.00314_09

o Dirix, V., Verscheure, V., Goetghebuer, T., Hainaut, M., Debrie, A._S., Loch, C., Mascart, F. Cytokine and antibody profiles in 1_year_old children vaccinated with either acellular or whole_cell pertussis vaccine during infancy. *Vaccine*, 27(43), 6042_6047. doi:10.1016/j.vaccine.2009.07.075

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