White Rose Research Online

eprints@whiterose.ac.uk
https://eprints.whiterose.ac.uk
Universities of Leeds, Sheffield and York

Deposited via The University of Sheffield.

White Rose Research Online URL for this paper:
https://eprints.whiterose.ac.uk/id/eprint/171529/

Version: Accepted Version

Article:
Thyssen, J.P., Vestergaard, C., Barbarot, S. et al. (2021) European Task Force on Atopic Dermatitis (ETFAD): position on vaccination of adult patients with atopic dermatitis against COVID-19 (SARS-CoV-2) being treated with systemic medication and biologics. Journal of the European Academy of Dermatology and Venereology, 35 (5). e308-e311. ISSN: 0926-9959

https://doi.org/10.1111/jdv.17167

This is the peer reviewed version of the following article: Thyssen, J.P., Vestergaard, C., Barbarot, S., de Bruin-Weller, M.S., Bieber, T., Taieb, A., Seneschal, J., Cork, M.J., Paul, C., Flohr, C., Weidinger, S., Trzeciak, M., Werfel, T., Heratizadeh, A., Darsow, U., Simon, D., Torrelo, A., Chernyshov, P.V., Stalder, J.-F., Gelmetti, C., Szalai, Z., Svensson, Å., von Kobyletzki, L.B., De Raeve, L., Fölster-Holst, R., Christen-Zaech, S., Jan Hijnen, D., Gieler, U., Gutermuth, J., Bangert, C., Spuls, P.I., Kunz, B., Ring, J., Wollenberg, A. and Deleuran, M. (2021), European Task Force on Atopic Dermatitis (ETFAD): position on vaccination of adult patients with atopic dermatitis against COVID-19 (SARS-CoV-2) being treated with systemic medication and biologics. Journal of the European Academy of Dermatology and Venereology, which has been published in final form at https://doi.org/10.1111/jdv.17167. This article may be used for non-commercial purposes in accordance with Wiley Terms and Conditions for Use of Self-Archived Versions.

Reuse
Items deposited in White Rose Research Online are protected by copyright, with all rights reserved unless indicated otherwise. They may be downloaded and/or printed for private study, or other acts as permitted by national copyright laws. The publisher or other rights holders may allow further reproduction and re-use of the full text version. This is indicated by the licence information on the White Rose Research Online record for the item.

Takedown
If you consider content in White Rose Research Online to be in breach of UK law, please notify us by emailing eprints@whiterose.ac.uk including the URL of the record and the reason for the withdrawal request.

UNIVERSITY OF LEEDS
University of Sheffield
UNIVERSITY of York

Check for updates

DR. JACOB PONTOPPIDAN THYSSEN (Orcid ID : 0000-0003-3770-1743)
DR. CHRISTIAN VESTERGAARD (Orcid ID : 0000-0001-6485-3158)
DR. SEBASTIEN BARBAROT (Orcid ID : 0000-0002-6629-9100)
DR. ALAIN TAIEB (Orcid ID : 0000-0002-0928-8608)
DR. JULIEN SENESCHAL (Orcid ID : 0000-0003-1139-0908)
DR. ANNICE HERATIZADEH (Orcid ID : 0000-0002-9231-9865)

Article type : Letter to Editor

Article type: Letter to the editor

Title: European Task Force on Atopic Dermatitis (ETFAD): position on vaccination of adult patients with atopic dermatitis against COVID-19 (SARS-CoV-2) being treated with systemic medication and biologics

Jacob P. Thyssen[1] Christian Vestergaard[2], Sebastien Barbarot[3] , Marjolein S. de Bruin-Weller[4], Thomas Bieber[5], Alain Taieb[6], Julien Seneschal[6], Michael J Cork[7], Carle Paul[8], Carsten Flohr[9], Stephan Weidinger[10], Magdalena Trzeciak[11], Thomas Werfel[12], Annice Heratizadeh[12], Ulf Darsow[13], Dagmar Simon [14] Antonio Torrelo[15], Pavel V. Chernyshov[16], Jean-Francois Stalder[17], Carlo Gelmetti[18], Zsuzsanna Szalai[19], Åke Svensson[20], Laura B von Kobyletzki[21,22], Linda De Raeve[23], Regina Fölster-Holst[24], Stéphanie Christen-Zaech[25], Dirk Jan Hijnen[26], Uwe Gieler[27], Jan Gutermuth[23], Christine Bangert[28], Phyllis I. Spuls[29], Barbara Kunz[30], Johannes Ring[31], Andreas Wollenberg[32,33], Mette Deleuran[2]

1. Department of Dermatology and Venereology, Bispebjerg Hospital.
2. Department of Dermatology, Aarhus University Hospital, Aarhus, Denmark.
3 Department of Dermatology, Nantes Université, CHU Nantes, UMR 1280 PhAN, INRAE, F-44000 Nantes, France
4. National Expertise Center of Atopic Dermatitis, Department of Dermatology and Allergology, University Medical Center Utrecht, The Netherlands.
5. Department of Dermatology and Allergy, University Hospital of Bonn, Germany.
6. Department of Adult and Pediatric Dermatology, CHU Bordeaux, University of Bordeaux, France.

This article has been accepted for publication and undergone full peer review but has not been through the copyediting, typesetting, pagination and proofreading process, which may lead to differences between this version and the Version of Record. Please cite this article as doi: 10.1111/JDV.17167

This article is protected by copyright. All rights reserved

Accepted Article

7. Sheffield Dermatology Research. Department of Infection, Immunity and Cardiovascular Disease. The University of Sheffield, Sheffield, UK.
8. Department of Dermatology, Toulouse University, Toulouse, France
9. St John's Institute of Dermatology, King's College London and Guy's & St Thomas' NHS Foundation Trust, London, UK
10. Department of Dermatology and Allergy, University Hospital Schleswig-Holstein, Kiel, Germany.
11. Department of Dermatology, Venereology and Allergology, Medical University of Gdansk, Poland.
12. Department of Dermatology and Allergy, Hannover Medical School, Germany
13. Department of Dermatology and Allergy Biederstein, School of Medicine, Technical University of Munich, Germany
14. Department of Dermatology, Inselspital, Bern University Hospital, University of Bern, Bern, Switzerland
15. Department of Dermatology, Hospital Infantil Niño Jesús, Madrid, Spain
16. Department of Dermatology and Venereology, National Medical University, Kiev, Ukraine
17. Department of Dermatology, CHU, Nantes-FRANCE
18 Dept. of Pathophysiology and Transplantation- University of Milan, Head, Unit of Pediatric Dermatology, Milan, Italy.
19. Department of Dermatology of Heim Pál National Children's Institute Budapest, Hungary.
20. Department of Dermatology, Skane University hospital, Malmö, Sweden
21. University Healthcare Research Center, Faculty of Medicine, Lund University, Sweden
22. Department of Occupational and Environmental Dermatology, Lund University, Skåne University Hospital, Malmö, Sweden
23. Department of Dermatology, Universitair Ziekenhuis Brussel (UZB), Free University of Brussels (VUB), Brussels, Belgium.
24. Department of Dermatology, Venereology and Allergology, University clinics of Schleswig-Holstein, Campus Kiel, Kiel, Germany.
25. Pediatric Dermatology Unit, Departments of Dermatology and Pediatrics, Lausanne University Hospital and University of Lausanne, Switzerland
26. Department of Dermatology, Erasmus MC University Medical Center, Rotterdam, The Netherlands
27. Department of Dermatology and Allergology, University of Giessen, Germany
28. Department of Dermatology, Medical University of Vienna, Austria

29. Department of Dermatology. Amsterdam Public Health/Infection and Immunology, Location AMC, Amsterdam, The Netherlands

This article is protected by copyright. All rights reserved

Accepted Article

30. Dermatologikum Hamburg, Hamburg, Germany
31.Department of Dermatology and Allergy, Technical University of Munich, Germany.
32. Department of Dermatology and Allergy, Ludwig-Maximilian University, Munich, Germany
33. Dept. of Dermatology I, München Klinik Thalkirchner Strasse, Munich, Germany

Corresponding author:

Jacob P. Thyssen
Dept. of Dermatology and Venereology, Bispebjerg Hospital
Bispebjerg Bakke 23, 2400 Copenhagen, Denmark
Telephone: (+45) 5155 9789
Email: jacob.pontoppidan.thyssen@regionh.dk

Funding sources: No funding was obtained for this work.

Declaration of interests:

Dr. Thyssen has attended advisory boards for Eli-Lilly, Regeneron, Pfizer, LEO Pharma, Abbvie and Sanofi-Genzyme, received speaker honorarium from LEO Pharma, Abbvie, Regeneron, and Sanofi-Genzyme, and received research grants from Regeneron and Sanofi-Genzyme.

Dr. Vestergaard has been investigator, speaker, or consultant for Novartis, Abbvie, Sanofi, LeoPharma and Eli Lilly.

Dr Barbarot has been a principal investigator, advisory board member, or consultant for Pierre Fabre Laboratory, Bioderma, Laboratoire La Roche Posay, Sanofi-Genzyme, Abbvie, Novartis, Janssen, Leo-Pharma, Pfizer, Amgen, Lilly

Dr. de Bruin-Weller has been a consultant, advisory board member, and/or speaker for AbbVie, Almirall, Arena, Eli Lilly, Galderma, Janssen, Leo Pharma, Pfizer, Regeneron, and Sanofi-Genzym

Dr. Bieber has been a principal investigator, advisory board member, or consultant for Regeneron, Sanofi, GSK, Celgene, Abbvie, AnaptysBio, MedImmune, Chugai, Pierre Fabre, Novartis, Asana Biosciences, LEO, Galapagos/MorphoSys, BioVerSys, Galderma, Kymab, Glenmark, Astellas, Daiichi-Sankyo, Lilly, Pfizer, MenloTx, Dermavant, Allmiral.

This article is protected by copyright. All rights reserved

Accepted Article

Dr. T. Bieber was speaker, and/or consultant and/or Investigator for AbbVie, Allmiral, AnaptysBio, Arena, Asana Biosciences, Astellas, BioVerSys, Böhringer-Ingelheim, Celgene, Daichi-Sankyo, Dermavant/Roivant, DermTreat, DS Pharma, RAPT/FLX Bio, Galapagos/MorphoSys, Galderma, Glenmark, GSK, Incyte, Kymab, LEO, Lilly, L´Oréal, MenloTx, Novartis, Pfizer, Pierre Fabre, Sanofi/Regeneron, UCB. T. Bieber is founder of the non-profit biotech company "Davos Biosciences"

Dr. Gutermuth has been a consultant, advisory board member and/or speaker for AbbVie, Almirall, Eli Lilly, Galderma, Janssen, Leo Pharma, Pfizer, Regeneron, and Sanofi-Genzyme

Dr Taïeb has been consultant or investigator for Pierre Fabre, Galderma, Novartis, Johnson and Johnson, Incyte, Abbvie, Modilac, Pfizer, Lilly, Arena, Bioderma, Sanofi.

Dr. Seneschal has been investigator, speaker, or consultant for Novartis, Abbvie, Sanofi, LeoPharma and Eli Lilly.

Dr. Weidinger has received institutional research grants from LEO Pharma and L'Oreal, has performed consultancies for Sanofi-Genzyme, Regeneron, LEO Pharma, Incyte, Lilly, Abbvie and Novartis, has lectured at educational events sponsored by Sanofi-Genzyme, Regeneron, LEO Pharma, Abbvie and Galderma, and is involved in performing clinical trials with pharmaceutical industries that manufacture drugs used for the treatment of atopic dermatitis.

Dr. Trzeciak has been a speaker, consultant, investigator or advisory board member for LEO Pharma, Pierre Fabre, Pfizer, La Roche Posay, Sanofi Genzyme, Novartis, Bioderma, Mead Johnson.

Dr. Cork is an Investigator and/or consultant Consultant for Regeneron, Sanofi Genzyme, Pfizer, LEO, Galapagos, Novartis, Boots, L'Oreal,Reckitt Benckiser, Oxagen, Johnson&Johnson, Hyphens, Kymab, Astellas, Galderma, Procter&Gamble, Abbvie, Lilly, Galderma, Menlo, Perrigo

Dr Paul has received grants and been consultant for Allmiral, Amgen, Abbvie, Boehringer, Celgene, Eli Lilly & Co, Novartis, Janssen, Pfizer, LEO Pharma, Merck, UCB pharma, Pierre Fabre, Regeneron, Sanofi-Genzyme.

Dr Flohr is chief investigator of the UK National Institute for Health Research-funded TREAT (ISRCTN15837754) and SOFTER (Clinicaltrials.gov: NCT03270566) trials as well as the UK-Irish Atopic eczema Systemic Therapy Register (A-STAR; ISRCTN11210918) and a principal investigator in the

This article is protected by copyright. All rights reserved

Accepted Article

European Union Horizon 2020-funded BIOMAP Consortium (http://www.biomap-imi.eu/). His department has also received investigator-led funding from Sanofi-Genzyme.

Dr. Heratizadeh reports personal fees from Leo Pharma, personal fees from Novartis, personal fees from Pierre Fabre, personal fees from Sanofi-Genzyme, personal fees from Beiersdorf, personal fees from Hans Karrer, personal fees from Nutricia, personal fees from Meda, personal fees from Lilly, grants from Janssen, outside the submitted work.

Dr. Darsow gave advice to or received an honorarium for talks or research grant from the following companies: ALK-Abello, Bencard, Meda, Novartis, and Sanofi-Regeneron outside the submitted work.

Dr. Simon has been an investigator, advisory board member, or consultant for AbbVie, AstraZeneca, Galderma, Lilly, Pfizer, Roche Pharma, Sanofi Genzyme.

Dr. Torrelo has acted as advisor and/or participant in clinical trials for Sanofi, Lilly, Pfizer, Abbvie, and Mylan

Dr. Chernyshov reports no conflict of interest.

Dr. Stalder reports no conflict of interest.

Dr. Gelmetti has acted as advisor and/or participant in clinical trials for: Bayer, Sanofi/Regeneron, Galderma and has lectured at educational events sponsored by Pfizer and Leo Pharma.

Dr Szalai has performed consultancies for Sanofi-Genzyme, Regeneron, LEO Pharma, Novartis, has lectured at educational events sponsored by Nutricia, is involved in performing clinical trials with pharmaceutical industries that manufacture drugs used for the treatment of psoriasis and atopic dermatitis.

Dr. Svensson reports no conflict of interest.

Dr. von Kobyletzki has been investigator, speaker, or consultant for Pfizer, Sanofi, LeoPharma and Eli Lilly.

Dr. De Raeve is a consultant, member of scientific advisory boards and/ or received personal fees and non-financial support from LEO Pharma, Pierre Fabre, Sanofi-Genzyme and Bioderma.

This article is protected by copyright. All rights reserved

Accepted Article

Dr. Fölster-Holst reports being consultant/Advisor for Beiersdorf AG, Johnson&Johnson, LEO Pharma, Neubourg, Novartis Pharma AG, Nutricia, Pfizer Inc., Regeneron, Sanofi-Aventis as well as speaker for Beiersdorf AG, LEO Pharma, Neubourg, Novartis Pharma AG, Pierre Fabre Laboratories, Pfizer, Procter&Gamble, Regeneron, Sanofi-Aventis.

Dr Christen-Zaechs has been an advisor, speaker or investigator for Galderma, L'Oreal, La Roche Posey, Pierre Fabre, Procter and Gamble and Sanofi-Genzyme

Dr. Hijnen has been investigator, speaker, or consultant for Abbvie, Eli Lilly, Incyte, LeoPharma, MedImmune/Astrazeneca, Pfizer, Sanofi, ThermoFisher.

Dr. Gieler has received institutional research grants from Galderma,has performed consultancies for Sanofi-Genzyme, Regeneron, LEO Pharma, Lilly, Abbvie and Novartis, has lectured at educational events sponsored by Sanofi-Genzyme, Abbvie, Novartis, Sebamed and Galderma, and is involved in the organization of atopic dermatitis education programs in Germany for the treatment of atopic dermatitis.

Dr. Bangert has been consultant or speaker for Bayer, Mylan, LEO Pharma, Pfizer, Sanofi Genzyme, Eli Lilly, Novartis, Celgene and AbbVie and principal investigator for Merck, Novartis, Sanofi, Abbvie, Elli Lilly, and Galderma.

Dr. Spuls has done consultancies in the past for Sanofi 111017 and AbbVie 041217 (unpaid), received departmental independent research grants from pharmaceutical industries different since December 2019 for the TREAT NL registry, is involved in performing clinical trials with many pharmaceutical industries that manufacture drugs used for the treatment of e.g. psoriasis and atopic dermatitis, for which financial compensation is paid to the department/hospital and, is Chief Investigator (CI) of the systemic and phototherapy atopic eczema registry (TREAT NL) for adults and children and one of the main investigator of the SECURE-AD registry.

Dr. Kunz reports no conflict of interest.

Dr. Ring has been an advisor or speaker for AbbVie, Allergika, Sanofi-Genzyme, Pfizer, Bencard, LEO Pharma, and Mylan.

Dr. Wollenberg has been a principal investigator, advisory board member, or consultant for AbbVie, Almirall, Galderma, Hans Karrer, LEO Pharma, Lilly, MedImmune, Novartis, Pfizer, Regeneron Pharmaceuticals, Inc. and Sanofi Genzyme, and received speaker honoraria from Chugai, Galderma, LEO

This article is protected by copyright. All rights reserved

Pharma, Lilly, Loreal, MedImmune, Pfizer, Pierre Fabre, Regeneron Pharmaceuticals, Inc. and Sanofi Genzyme.

Dr. Deleuran has been a principal investigator, speaker, advisory board member, and/or consultant for LEO Pharma, AbbVie, Almirall, Lilly, Novartis, Pfizer, Regeneron Pharmaceuticals, Inc., Sanofi Genzyme, and Pierre Fabre.

This research was performed independently through the authors' academic university and hospital affiliations.

Manuscript word count: 599 words
References: 6
Figures: 0
Tables: 0

Keywords: atopic dermatitis; covid-19, vaccine, vaccination

Acknowledgement: We thank Dr. Karin Loré, Division of Immunology and Allergy, Karolinska Institute, Stockholm, Sweden for her kind review of this article.

Accepted Article

This article is protected by copyright. All rights reserved

The coronavirus disease 2019 (COVID-19) pandemic is caused by rapid spread of different strains of the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The severity of infection ranges from mild, or even asymptomatic, to very severe. Signs and symptoms include fatigue, fever, exanthemas, upper respiratory illness, loss of smell and taste, pneumonia, severe acute respiratory syndrome, and multi-organ failure. Risk factors for a severe or lethal course include age, male gender, obesity, diabetes, cardiovascular disease, and immune suppression[1]. At the start of the pandemic, the ETFAD shared their position on continuation of systemic immune-modulating treatments, including immuno-suppressive therapy, in atopic dermatitis (AD) patients during the time of the pandemic[2].

Safe and effective vaccines are urgently needed to control the pandemic and achieve herd immunity. More than 50 COVID-19 vaccine candidates are currently in trials. mRNA vaccines lead to production of antigens by host cells, and two (RNA-1273 and BNT162b2) were recently approved in EU member states to vaccinate adults against COVID-19. A viral vector-based vaccine (AZD1222) has been approved in the United Kingdom, but not yet in the EU.

National strategic guidelines and recommendations are being developed and utilized to vaccinate initially those with increased risk factors for a severe course, as well as those being employed in critical positions. This article provides the position of ETFAD members regarding COVID-19 vaccination of adult patients with AD being treated with systemic immuno-suppressive medication and biologics. A separate article discusses how dermatologist may manage allergic issues. Vaccination particularly against pneumococcus and influenza, should be performed as recommended in the guidelines[3].

The ETFAD acknowledges that

- There is currently no evidence to suggest that AD is an independent risk factor for acquiring SARS-CoV-2, or of having a more severe course of COVID-19, above and beyond other important co-morbid conditions, such as obesity, cardiovascular disease, and diabetes.
- AD is not a contraindication to vaccination. It is unclear whether SARS-CoV-2 vaccination could cause brief AD worsening, but this is not suspected since the vaccination response is mainly T helper cell 1 skewed[4].
- Systemic immunosuppressants and JAK-inhibitors used to treat AD may attenuate the vaccination response[5], but no attenuation is expected for dupilumab[6].

This article is protected by copyright. All rights reserved

Based on the listed uncertainties and AD disease characteristics[3, 7], the risk-benefit ratio of all currently approved vaccines appears better than the risk of an infection with SARS-CoV-2, also for AD patients. There is no clear evidence to recommend that systemic AD medication is paused before or after COVID-19 vaccination. Temporary 2-week discontinuation of methotrexate slightly improved the immunogenicity of seasonal influenza vaccination in patients with rheumatoid arthritis[5], but this may not be relevant to mRNA-based vaccines. Clinicians may therefore consider pausing immunosuppressant possible during vaccination, typically from the vaccination day until 1 week after for JAK inhibitors and cyclosporine, or until 2 weeks after for methotrexate and azathioprine, to possibly improve chances or appropriate vaccination response. Alternatively, the lowest dose possible may be used, e.g. 2.5 mg/kg/day cyclosporine, 1 mg/kg/day azathioprine, and 7.5 mg/week methotrexate. The ETFAD recommends to strictly follow guidelines and decisions issued by the local and national health authorities in each country. While patients on immunosuppressive drugs for AD will need a case-by-case approach considering the specific drug and vaccine product, inadequate antibody response in selected individuals is not a major concern and the risk/benefit of vaccination is considered favorable for the overall AD population. At least 3 weeks are recommended between the two COVID-19 vaccine doses, which increases the risk of AD flares and loss of AD control if the systemic AD medication is paused or reduced in dose for longer periods. Measurement of antibodies against SARS-CoV-2 can be done in cases with particular importance of successful immunization. If a live vaccine against COVID-19 is registered in the future, our recommendations for the use of this vaccine may be different. We encourage registration of COVID-19 AD patients in the ETFAD-supported SECURE-AD register (www.secure-derm.com), which also captures AD patients' experiences of SARS-CoV-2 vaccination[8].

References

1. Berlin DA, Gulick RM, Martinez FJ. Severe Covid-19. N Engl J Med. 2020;383(25):2451-60.

2. Wollenberg A, Flohr C, Simon D, Cork MJ, Thyssen JP, Bieber T, et al. European Task Force on Atopic Dermatitis statement on severe acute respiratory syndrome coronavirus 2 (SARS-Cov-2) infection and atopic dermatitis. J Eur Acad Dermatol Venereol. 2020;34(6):e241-e2.

This article is protected by copyright. All rights reserved

3. Wollenberg A, Barbarot S, Bieber T, Christen-Zaech S, Deleuran M, Fink-Wagner A, et al. Consensus-based European guidelines for treatment of atopic eczema (atopic dermatitis) in adults and children: part I. J Eur Acad Dermatol Venereol. 2018;32(5):657-82.

4. Sahin U, Muik A, Derhovanessian E, Vogler I, Kranz LM, Vormehr M, et al. COVID-19 vaccine BNT162b1 elicits human antibody and T(H)1 T cell responses. Nature. 2020;586(7830):594-9.

5. Park JK, Lee YJ, Shin K, Ha YJ, Lee EY, Song YW, et al. Impact of temporary methotrexate discontinuation for 2 weeks on immunogenicity of seasonal influenza vaccination in patients with rheumatoid arthritis: a randomised clinical trial. Ann Rheum Dis. 2018;77(6):898-904.

6. Blauvelt A, Simpson EL, Tyring SK, Purcell LA, Shumel B, Petro CD, et al. Dupilumab does not affect correlates of vaccine-induced immunity: A randomized, placebo-controlled trial in adults with moderate-to-severe atopic dermatitis. J Am Acad Dermatol. 2019;80(1):158-67.e1.

7. Wollenberg A, Christen-Zäch S, Taieb A, Paul C, Thyssen JP, de Bruin-Weller M, et al. ETFAD/EADV Eczema task force 2020 position paper on diagnosis and treatment of atopic dermatitis in adults and children. J Eur Acad Dermatol Venereol. 2020;34(12):2717-44.

8. Mahil SK, Yiu ZZN, Mason KJ, Dand N, Coker B, Wall D, et al. Global reporting of cases of COVID-19 in psoriasis and atopic dermatitis: an opportunity to inform care during a pandemic. Br J Dermatol. 2020;183(2):404-6.

This article is protected by copyright. All rights reserved