

## LETTER TO THE EDITOR

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

Editor,

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.<sup>1</sup> At the start of the pandemic, the European Task Force on Atopic Dermatitis (ETFAD) shared their position on continuation of systemic immune-modulating treatments, including immunosuppressive therapy, in atopic dermatitis (AD) patients during the time of the pandemic.<sup>2</sup>

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 immunosuppressive 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.<sup>3</sup>

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.
- Atopic dermatitis 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.<sup>4</sup>
- Systemic immunosuppressants and JAK-inhibitors used to treat AD may attenuate the vaccination response,<sup>5</sup> but no attenuation is expected for dupilumab.<sup>6</sup>

Based on the listed uncertainties and AD disease characteristics,<sup>3,7</sup> 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,<sup>5</sup> 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, for example 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 favourable 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](http://www.secure-derm.com)), which also captures AD patients' experiences of SARS-CoV-2 vaccination.<sup>8</sup>

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### Conflicts of interest

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, Leo Pharma 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 and Allmiral. Dr. T. Bieber was speaker, and/or consultant and/or Investigator for AbbVie, Allmiral, AnaptysBio, Arena, Asana Biosciences, Astellas, BioVerSys, Böhringer-Ingelheim, Celgene, Daiichi-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. Guterth 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 and Sanofi. Dr. Seneschal has been investigator, speaker, or consultant for Novartis, Abbvie, Sanofi, Leo Pharma and Eli Lilly. Dr. Weidinger has received institutional research grants from LEO Pharma and L'Oréal, 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 and Mead

Johnson. Dr. Cork is an Investigator and/or consultant Consultant for Regeneron, Sanofi-Genzyme, Pfizer, LEO, Galapagos, Novartis, Boots, L'Oréal, Reckitt Benckiser, Oxagen, Johnson&Johnson, Hyphens, Kymab, Astellas, Galderma, Procter&Gamble, Abbvie, Lilly, Galderma, Menlo and 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 and 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 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, and Sanofi-Genzyme. Dr. Torrelo has acted as advisor and/or participant in clinical trials for Sanofi, Lilly, Pfizer, Abbvie and Mylan. 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. von Kobyletzki has been investigator, speaker, or consultant for Pfizer, Sanofi, Leo Pharma 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. 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 and Sanofi-Aventis. Dr. Christen-Zaechs has been an advisor, speaker or investigator for Galderma, L'Oréal, La Roche Posey, Pierre Fabre, Procter and Gamble and Sanofi-Genzyme. Dr. Hijnen has been investigator, speaker, or consultant for Abbvie, Eli Lilly, Incyte, Leo Pharma, MedImmune/Astrazeneca, Pfizer, Sanofi and Thermo Fisher. Dr. Gieler has received institutional research grants from Galderma, has

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