

and the National Allergy Research Centre. Development has been funded by the Candys Foundation. The Foundation for Development in private practice and the Aage Bangs Foundation. Allergyapp has been in full function since January 2015. It has been further developed, and an English version is expected in June 2016. This may enhance its impact, as the mandatory European Union (EU) labelling of cosmetic products allows Allergyapp to reach 500 million EU citizens. We present the experiences from 1 year of Allergyapp function in Denmark.

## P075

### Gallates, as well as hydroperoxides of limonene and linalool, are more frequent and relevant sensitizers than any cosmetic ingredient included in the European Baseline Series

R. Spiewak,<sup>1</sup> Z. Samochocki,<sup>2</sup> E. Grubska-Suchanek,<sup>3</sup> E. Czarnobilska,<sup>1</sup> M. Pasnicki,<sup>4</sup> M. Czarnecka-Operacz,<sup>5</sup> M. Bukiel,<sup>6</sup> A. Ciszowska,<sup>7</sup> K. Jedrzejewska-Jurga,<sup>8</sup> A. Krakowski<sup>9</sup> and B. Niklasson<sup>10</sup>

<sup>1</sup>Jagiellonian University Medical College, Krakow, Poland;

<sup>2</sup>Warsaw Medical University, Warsaw, Poland; <sup>3</sup>Medical University of Gdansk, Gdansk, Poland; <sup>4</sup>NZOZ Allergicus-Dent, Zary, Poland;

<sup>5</sup>Medical University of Poznan, Poznan, Poland; <sup>6</sup>NZOZ

Alergologia-Pulmonologia, Stargard Szczecinski, Poland;

<sup>7</sup>Dermatology Practice, Kamienna Gora, Poland; <sup>8</sup>Lower-Silesian

Centre for Occupational Medicine, Wroclaw, Poland; <sup>9</sup>NZOZ

Krak-Med, Kolbuszowa, Poland and <sup>10</sup>Chemotechnique

Diagnostics, Vellinge, Sweden

The diagnostic effectiveness of a baseline series depends directly on the selection of haptens to be tested. In the present study, we have used a baseline series supplemented with additional cosmetic ingredients, three of which occurred more frequent and are more relevant than any of those listed in the European Baseline Series (EBS). The aim of the present study was to assess the sensitization rates and relevance of emerging cosmetic ingredients that are not included in the European Baseline Series. 'KRAK2' is a multicentre collaboration of 10 dermatology and allergy clinics in Poland. From 2013 to 2014, for routine patch testing the centres used the Extended Polish Baseline Series (Chemotechnique), which included all haptens present in the EBS plus 20 additional substances. Out of the total 50 haptens or hapten mixes, the Polish series included 22 cosmetic ingredients. In total 1608 patients with chronic or recurrent eczema participated in the testing: 1154 female and 454 male, aged 0.5–90 years (median 42). Patch tests were applied on the patient's back in IQ Ultra Chambers (Chemotechnique) with an occlusion time of 48 h and at least two readings during the observation time of at least 5 days (7 days preferably). Positive patch-test reactions were assessed by the treating doctors as to their relevance to current eczema. The most frequent sensitizers among all cosmetic ingredients tested were substances not present in the EBS: gallate mix 5% in petrolatum (sensitization rate 16.0%; clinically relevant 6.2%), followed by hydroperoxides of linalool 1% in petrolatum (9.8% and 4.7%, respectively) and hydroperoxides of limonene 0.3% in petrolatum (7.7%; 3.2%). A first 'representative' of the EBS – Fragrance Mix I 8% in petrolatum – occupied only rank 4 (7.0%; 5.3%), equal with methylisothiazolinone (MI) 0.02% aqueous (7.0%; 5.3%), followed by *para*-phenylenediamine base 1% in petrolatum (3.1%; 1.7%), MI/methylchloroisothiazolinone (2.8%; 2.1%), Fragrance Mix II 14% in petrolatum (2.6%; 2.2%) and

hydroxyisohexyl 3-cyclohexenecarboxaldehyde (2.4%; 1.7%). Other haptens not in the EBS that came out relatively high were propolis cera 10% in petrolatum (3.3%; 1.8%) and carvone 5% in petrolatum (1.6%; 0.8%). Formaldehyde 1% in petrolatum/sorbitan sesquioleate yielded significantly higher positivity and relevance (5.2%; 2.6%) than formaldehyde 1.0% aqueous (1.3%; 0.5%). In conclusion, cosmetic ingredients are relevant causes of eczema; however, the most frequent ones are not included in the EBS. In order to improve the diagnosis of eczema in children, routine patch-test series should reflect the current data on exposures and frequency of sensitizations.

## P076

### Patch testing with the Swedish baseline series supplemented with a textile dye mix and gold in Vilnius, Lithuania and Malmö, Sweden

L. Malinauskiene,<sup>1</sup> M. Isaksson<sup>2</sup> and M. Bruze<sup>2</sup>

<sup>1</sup>Vilnius University, Center of Pulmonology and Allergology,

Vilnius, Lithuania and <sup>2</sup>Department of Occupational

and Environmental Dermatology, Skåne University Hospital, Lund

University, Malmö, Sweden

Lithuania and southern Sweden are close neighbours separated only by the Baltic Sea. Patch testing has a longer tradition in Sweden than in Lithuania. In this study the aims were determination of contact allergy rates at a Lithuanian patch-test clinic and comparison with corresponding contact allergy rates at a Swedish centre when patch testing was performed during the same time period. Testing was performed with the Swedish baseline patch-test series supplemented with petrolatum preparations of gold sodium thiosulfate at 2.0% and a textile dye mix (TDM) at 6.6% consisting of eight disperse dyes. Contact allergy rates depend on factors such as indications for patch testing, the age and sex of those tested, exposure conditions, and technical aspects concerning the patch-test methodology. The study was therefore conducted under highly standardized conditions. The test method and doses of applied test preparations were the same, with all test preparations made from the same batches from one manufacturer. The occlusion times and reading times were the same. The classification of the test reactions used was the same and the test readers were calibrated in their readings. In Vilnius 214 patients were tested, 26 male and 188 female. The contact allergy rates of these patients were compared with those of 428 age- and sex-matched patients randomly selected from age and sex groups tested during the same time period in Malmö. For sensitizers in the baseline series, positive patch-test reactions to at least one allergen were observed in 115 of 214 patients (53.7%) in Lithuania and in 237 of 428 (55.4%) in Sweden. Statistically relevant differences were seen in sensitization to preservatives (3.7% in Lithuania and 1.8% in Sweden,  $P < 0.001$ ) and metals (13.1% in Lithuania and 9.3% in Sweden,  $P = 0.03$ ). For the two sensitizers not present in the Swedish baseline series when the study was performed, the contact allergy rate for gold was significantly higher in Vilnius compared with Malmö (23.8% vs. 13.6%,  $P = 0.002$ ) while the rates for TDM were similar (2.8% in Vilnius and 3.1% in Malmö). In Vilnius three of the six TDM-allergic individuals tested positively to *para*-phenylenediamine and one person tested positively to black rubber mix. Contact allergy is as common in Vilnius as in Malmö. Contact allergy is significantly more common in Vilnius than in Malmö for metals including gold and for preservatives. The differences are most likely explained by exposure differences.