those with a significantly raised IgG this does not appear to translate to a greater need for IV ABX therapy. In addition, giving long term antifungal therapy with steroids does not appear to result in better clinical disease markers and may be associated with greater side effects.

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Prevalence of *Aspergillus* species in respiratory tract samples of patients with cystic fibrosis in the University Hospital Virgen del Rocío (Andalusia, Spain)

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Objectives: to analyze the distribution of *Aspergillus* spp. in respiratory tract samples of patients with CF in the Hospital Virgen del Rocío during a 2-years period.
Methods:
Strains: all strains isolated from respiratory tract samples of *Aspergillus* spp. isolated from patients with CF, received at the hospital over a 2-years period (2014/2015) were included in the study.
Morphological identification: according to macroscopic and microscopic morphology.
Molecular identification: was performed by PCR amplification and DNA sequencing of the partial beta-tubulin gene and a BLAST search analysis for species identification from the NCBI genomic database was conducted.
Results: Aspergillus spp. were cultured from 108 samples belonging to 48 patients (21 males and 27 females). Attending to their characteristics, the isolates were identified as: 71 *A. fumigatus* complex, 10 *A. flavus* complex, 3 *A. niger* complex, 12 *A. terreus* complex, 1 *A. versicolor* complex and 11 *Aspergillus* spp.
DNA sequencing allowed us to detect cryptic species belonging to 4 different sections. *Aspergillus* section *Fumigati* included 76 strains: 74 *A. fumigatus,* 1 *A. lentulus* and 1 *A. fischeri; Aspergillus* section *Nigri* included 3 strains: 1 *A. niger* and 2 *A. tubingensis; Aspergillus* section *Nidulantes* included 2 strains: 1 *A. nidulans* and 1 *A. quadrilineatus,* and *Aspergillus* section *Versicolores* was represented by 1 *A. tabacinus* strain. Others sections represented were *Aspergillus* section *Flavi* with 10 strains of *A. flavus* and *Aspergillus* section *Terrei* with 16 *A. terreus* strains.
The 11 *Aspergillus* spp. strains were identified as: 4 *A. fumigatus*, 1 *A. fisheri*, 4 *A. terreus*, 1 *A. nidulans* and 1 *A. quadrilineatus*.
Conclusion: *A. fumigatus* has been the main isolated specie in more than half of the samples of this kind of patients.
DNA sequencing allowed us to detect cryptic species belonging to 4 different sections and to classify 6 (5.56%) isolates of a total of 108 *Aspergillus* as cryptic species.

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Deciphering the adaptive mechanisms implemented by *Scedosporium apiospermum* to cope with environmental conditions in cystic fibrosis-modified lung mucus: a transcriptomic analysis

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Objectives: The five-member species complex *Scedosporium apiospermum* ranks the second among the filamentous fungi colonizing the respiratory tract of CF patients. Nevertheless, the pathogenesis of *Scedosporium* infections remains poorly understood. Notably, the mechanisms developed by the fungus to establish within the respiratory tract of the patients are still unknown. In this study, we aimed at identifying the key molecular mechanisms underlying the ability of *Scedosporium* to establish within the respiratory tract of CF patients and to cause chronic colonization of the airways.
Methods: RNA of the *S. apiospermum* reference strain (IHEM14462) were extracted from 7 different growth conditions in triplicate and sequenced with Illumina HiSeq v4 technology. The genes differentially expressed were identified as compared to reference growth conditions.
Results: While hypercapnia, increased lactate or low osmolarity modified the expression of a limited number of genes, the transcriptome of *S. apiospermum* was greatly influenced by hypoxia, acidification or growth in cystic fibrosis synthetic medium.
Conclusion: The transcriptomic changes observed during *S. apiospermum* exposure to the physico-chemical conditions encountered in the respiratory tract of cystic fibrosis patients would allow us to define the crucial mechanisms allowing this opportunistic pathogen to adapt to the CF bronchial mucus.

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Preliminary experience of the use of oral posaconazole and terbinafine to treat *Lomentospora prolificans* and *Scedosporium apiospermum* in children with cystic fibrosis

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Itraconazole and voriconazole are the drugs of choice for *Lomentospora prolificans* and *Scedosporium apiospermum*. Posaconazole, is often substituted when there is intolerance or lack of efficacy to first line agents. Terbinafine, an allylamine antifungal, is recommended with an azole for the treatment of *L. prolificans*, though there is no published use of this combination in children with cystic fibrosis (CF).
Objectives: To evaluate the safety, tolerability and efficacy of this regimen in CF children.
Methods: Retrospective case note review of CF children receiving terbinafine and posaconazole, from Nov 2015 to Nov 2016. Children were identified from pharmacy records and clinical data collected from case notes and laboratory records.
Results: There were 4 children (all girls), median age 15 years (range 10–16), with a median FEV1% predicted of 70.5% (range 55–88%). 2 children chronically isolated *L. prolificans*, 2 isolated *S. apiospermum*. 3 also had CF related diabetes and chronic *Pseudomonas aeruginosa* infection. 1 child received treatment for 6 weeks. 3 children are taking long-term treatment (median 50 weeks; range 35–59). 2 children improved FEV1% predicted with treatment by 14% & 15%; one was stable. Importantly the trend graphs for lung function in these 3 children appear to stabilise post initiation of treatment. One child did not improve her lung function but also had recurrent MRSA infections and significant nutritional complications. No adverse effects from the combination were reported. Posaconazole levels were therapeutic (>1 mgLl) in all children (range 1.22–3.85 mg/L). Terbinafine levels were not measured.
Conclusion: In this small case series, combination treatment with posaconazole and terbinafine was well tolerated and a positive clinical effect on lung function was evident. This is the first report on the use of this regimen for this indication in CF children and we will continue to use it, whilst gathering safety and efficacy data.

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The importance of pre-analytic in the detection of nasal colonization

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Objectives: The paranasal sinuses are a known reservoir for lung infection in cystic fibrosis patients. *Staphylococcus aureus, Haemophilus influenzae* and *Pseudomonas aeruginosa* are the most common potential pathogens for colonization and re-colonization of the lungs. Despite these facts there exists no standard for pathogen detection. In a prospective ethical approved (E-36–15) pilot study we used three different sample collection methods, sampling from 20 adult volunteers.
Methods: 20 patients (8f, Ø25a, ØFEV1 42.7%) Samples were taken in the following order; 1: Nasopharyngeal swab cotton/2mL NaCl. 2: Nasopharyngeal swab flocked nylon/2 mL Amies. 3: Nasal lavage using 5 mL NaCl 0.9%. Swabs and nasal lavage were vortexed. 100 µL of each sample were applied to COS/BM Macconkey/BD, Chocolate II/BM and SAID/BM for 3 days, BCSA/BM for 5 days and OFPBL/BD and Sabouraud/BD for 10 days. All bacteria were determined by MALDI TOF/BM.