

Team name: PAT-U-PAMI  
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S1: Title & Elevator Pitch/Headline	<ul style="list-style-type: none"> <li>● Asthma is the most prevalent chronic respiratory disease worldwide, affecting more than 300 million people. It is the most common chronic disease in children, affecting 8-10% worldwide.</li> <li>● Asthma treatment needs a repetitive injection (once in 2/3 weeks) of the Omalizumab drug. Hence, Our microneedle patch can perform better compared to existing hypodermic needles.</li> <li>● On the other hand, the inhalation technology is great but it is difficult to optimize in case of infants/children.</li> </ul>
S2: The problem and who has it	<ul style="list-style-type: none"> <li>● No permanent solution to treat or cure childhood asthma and symptoms can just be controlled with the right chronic treatment plan.</li> <li>● The current hypodermic needle-based system for the new treatment, omalizumab, is painful and injection is susceptible to human error, infection and dosage error.</li> <li>● Controlled delivery is difficult.</li> </ul>
S3: The solution	<ul style="list-style-type: none"> <li>● Microneedles are potentially easy to produce, allow self-administration and high patient compliance as they cause no pain and no bleeding.</li> <li>● Painless and safe drug administration, minimizing the risk of bleeding, infections, injuries.</li> <li>● This delivery system favors therapy acceptance among children and also parents.</li> </ul>
S4: Product (how it addresses the problem)	<ul style="list-style-type: none"> <li>● Microneedle can able to deliver precisely in a painless manner.</li> <li>● Well suitable for the kids/infants with needle phobia.</li> <li>● Microneedle-based omalizumab administration increases the effectiveness of targeting skin resident immune cells could reduce the drug dose as well as the period of treatment.</li> </ul>
S5: Technology	<ul style="list-style-type: none"> <li>● Microneedle fabrication.</li> <li>● Testing suitability of the system for infant skin.</li> <li>● Study of drug dosage requirements.</li> </ul>
S6: Competing approaches	<ul style="list-style-type: none"> <li>● Providing an infant/kid acceptable approach to delivering the drug precisely.</li> <li>● Reduced needed omalizumab dosing.</li> <li>● Continuous drug delivery.</li> </ul>
S7: Traction	<ul style="list-style-type: none"> <li>● Increasing number of patents related with the fabrication of microneedle arrays for the painless drug delivery.</li> <li>● 54 microneedle-related with clinical trials.</li> <li>● Microneedles are objects of research since the mid-90's.</li> </ul>
S8: Team	<ul style="list-style-type: none"> <li>● Vinaya Kumar K B</li> <li>● Veronica Miguel</li> </ul>
S9: Closing	<ul style="list-style-type: none"> <li>● Microneedle-based omalizumab delivery is a safer promising strategy for the treatment of infant asthma.</li> <li>● The effect of drug dissolution/effectiveness in skin layers (microneedle-based delivery) is the same compared to hypodermic needle-based delivery.</li> <li>● Acceptance among the doctors and patients for microneedle based-omalizumab delivery.</li> </ul>