



Mahidol University
Faculty of Medicine Siriraj Hospital
Department of Dermatology ✨ ✨ ✨

Siriraj Resident/Fellow Exchange
Program

University of Miami Miller School of Medicine
Unites States

Period of visit from 02 /01/19 to 02/28/19





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Introduction



- My name is Lillada Anuntarumporn.
- 2nd year of pediatric dermatology fellowship training at Siriraj Hospital.
- One of my dream achievement is to be the best pediatric dermatologist.



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Medical School



UNIVERSITY OF MIAMI
MILLER SCHOOL
of MEDICINE



Why I choose this hospital?

- The biggest health system in the United states.
- Professor Lawrence A Schachner is a world authorities and best known in pediatric dermatology field.
- This might be an opportunity for my faculty to contact and get research connection.



Objective and expectation of exchange

- To learn how to manage pediatric dermatology patients in the different way.
- To see innovations and bring back any new medications or new way of treatment.
- To make connection in research area with worldwide professors.
- Learn more about health system within United States, benefits and drawback from this system.
- Explore Health data and patient management system in the US.



UHEALTH/MILLER MEDICAL CAMPUS

1. University of Miami Hospital
2. Mailman Center
3. Debbie School
4. Sewell Building
5. University of Miami Hospital and Clinics
6. Sylvester Comprehensive Cancer Center
7. Medical Training and Simulation Laboratory
8. Applebaum MRI Center
9. International Health Center
10. Professional Arts Center
11. 14th Street Parking Garage (CRB)
12. Wellness Center
13. Clinical Research Building
14. Bachelor Children's Research Institute
15. Lois Pope LIFE Center
16. Dominion Tower Parking Garage
17. Rosenstiel Medical Science Building
18. Gauntier Building
19. Schoningher Research Quadrangle
20. Papanicolaou Building
21. Diabetes Research Institute
22. McKnight Center
23. Glosier Research Building
24. Fox Building
25. Dominion Tower
26. AIDS Clinical Research Center (Elliott Building)
27. Bascom Palmer Eye Institute/ Anne Bates Leach Eye Hospital
28. Retter Education Center (Berrocal Auditorium)
29. Calder Library
30. Biomedical Research Building
31. Center for Family Studies
32. Research Laboratory
33. National Parkinson Foundation
34. 15th Street Parking Garage and Energy Center
35. Sickle Cello Center (Zanetti Building)
36. Viciana Warehouse
37. Life Science & Technology Park (Building 1)
38. Life and Science Technology Park
- 39.



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Research Institute





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Miller School of medicine Faculty of dermatology and cutaneous surgery

Entrance located on
2nd floor of Medical
school building







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Jackson Memorial Hospital





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Holtz Children Hospital ✨



Holtz
Children's
Hospital

UM/JACKSON MEMORIAL MEDICAL CENTER





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Comparison between host institute and Siriraj Hospital

- Education

- Pediatric dermatology is part of dermatology faculty
- Education base on textbooks, journals and guidelines from American academy of dermatology
- Consultation run from seniority aspect same as Siriraj hospital
- Noon conference start at 12am including interactive session delivered by senior residences and professors



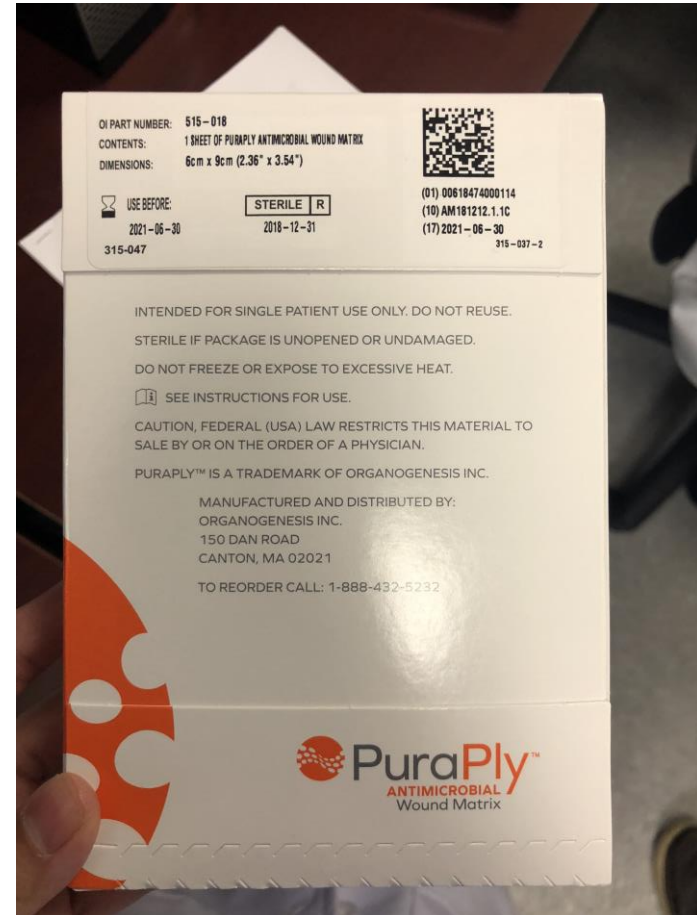
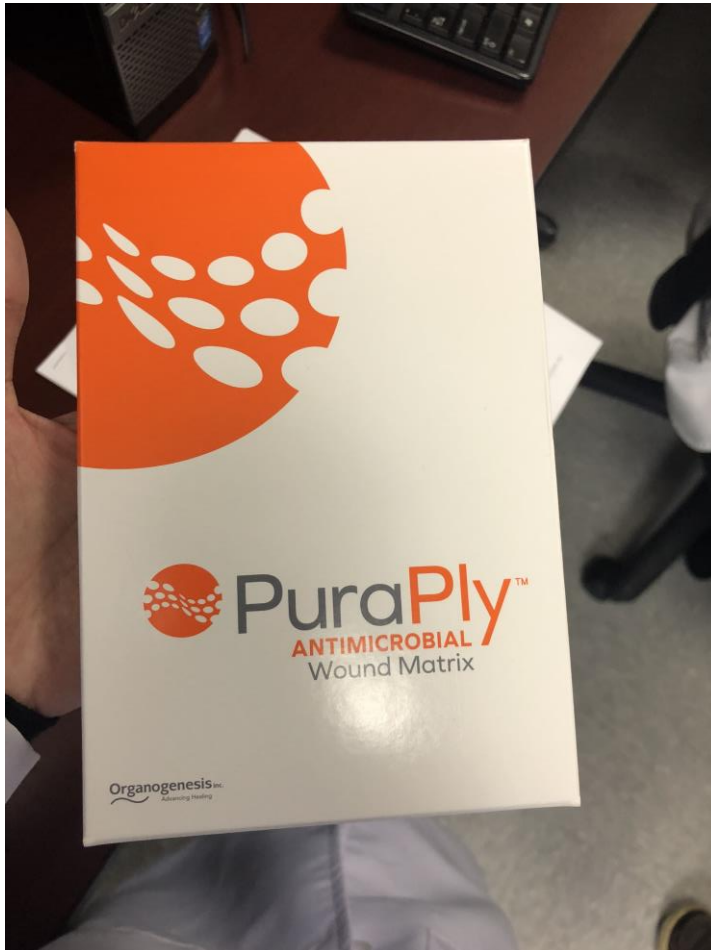
- The conference is held in non-stressful atmosphere and open freely for student to get involved, express and share ideas.
- Any doctors in the faculty can bring inpatients or outpatients to register and discuss in management conference.
- Positive reinforcement are used in every sessions.



- **Medical technique**
 - Biopsy usually done in the same visit in the exam room after doctor discussion.
 - Using non painful technique and distraction technique to calm pediatric patient down before and during procedures.
 - Punch biopsy 3 mm instead of 4 mm, small wound and no need suture.
 - In Epidermolysis bullosa, Wound matrix has been used to prevent stricture and promote wound healing.
 - Patient photos link to EMR directly.



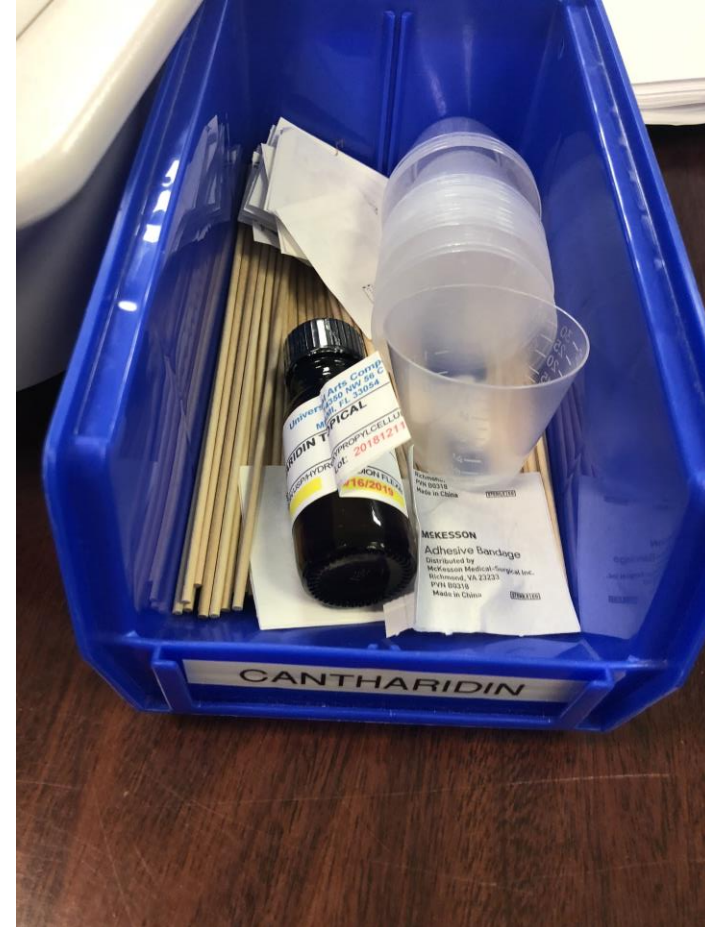
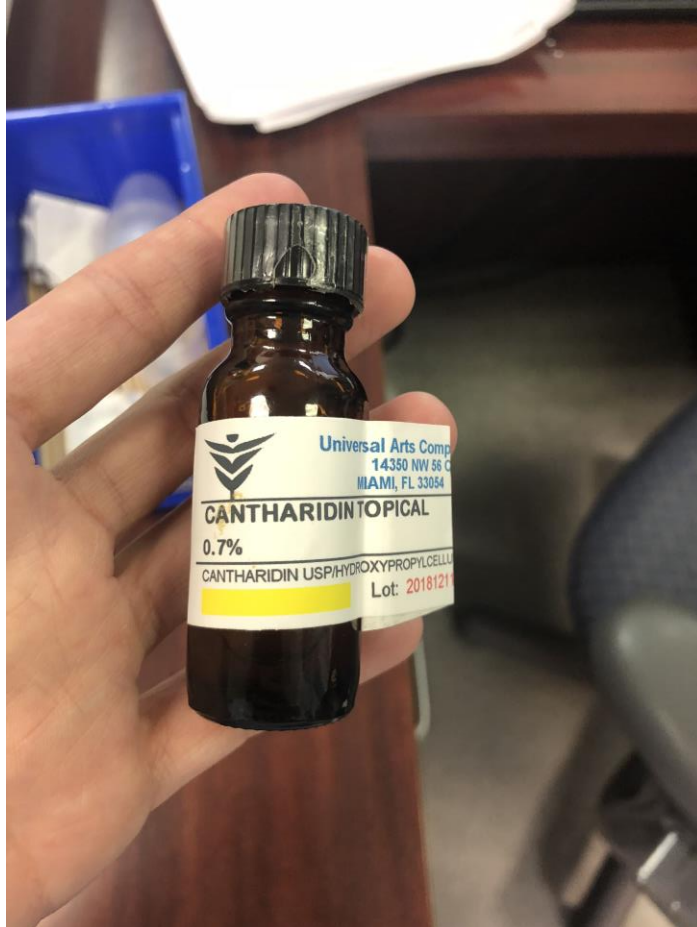
PuraPly – wound matrix



Bovine Type I collagen – improving chronic wound healing in EB



Cantharidin topical



For treating molluscum contagiosum



Using of Aluminum Chloride instead of Ferric chloride



Bioengineering – bilayer with bovine type I collagen and foreskin-derived keratinocytes and fibroblasts

● pioneers

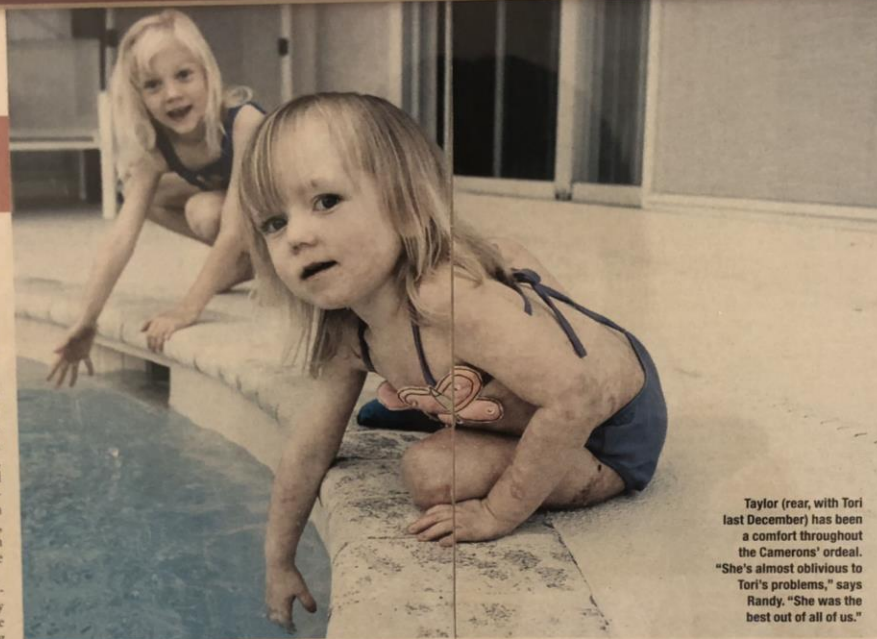
TORI CAMERON, 2

New skin brought her a vital second chance

Moments after giving birth, Lorraine Cameron knew something had gone terribly wrong. Her newborn, later named Tori, was covered from head to toe with blisters and angry raw spots. "I started crying as soon as I saw her," recalls Cameron, 38, a mental health counselor.

As doctors quickly realized, Tori had been born with a rare, often disfiguring and sometimes deadly congenital skin disease called epidermolysis bullosa. Affecting roughly 100,000 Americans, EB is caused by abnormalities in proteins that help hold the skin together. Tori had a serious form, so that even the gentlest touch could bring on blisters, which quickly turned to excruciating open wounds. Her condition was so severe that the next day she was rushed from Boca Raton Community Hospital to Jackson Children's Hospital, part of the University of Miami School of Medicine and a research center for treating EB. "It's a vicious disorder," says Dr. Lawrence Schachner, 56, who, with Dr. William Eaglstein, 61, and Dr. Anna Falabella, 36, handled Tori's case. "It's potentially fatal, especially in the first year of life, primarily because it opens up the skin to infections."

With 80 percent of her tiny body suffering the equivalent of second-degree burns, Tori was at alarmingly high risk. "For several weeks, we thought she might die at any minute," says her father, Randy, 40, a screening



Taylor (rear, with Tori last December) has been a comfort throughout the Camerons' ordeal. "She's almost oblivious to Tori's problems," says Randy. "She was the best out of all of us."



"You don't know how you'll survive," Lorraine Cameron recalls of caring for Tori (with her mother, father Randy and sister Taylor in '98).



Apligraf takes on the natural pigment of the recipient's skin.

contractor. In fact, at first he and his wife thought a quick end might be a blessing compared to 10 or 20 years spent in agony. "I did not want her to live," Lorraine admits, adding, with a measure of guilt, "but how can you wish for your baby to die?"

Fortunately, it never came to that. Now approaching her 3rd birthday, Tori is running and roughhousing with her 7-year-old sister Taylor, the only obvious evidence of her illness a few scattered blotches. She owes her survival to devoted parents, a feisty spirit and Apligraf, a revolutionary bioengineered skin derived from a seemingly unlikely source: the discarded foreskins of newly circumcised infants.

"The foreskin is thrown away, but it's still very good tissue," says Darcy Friedman, a tissue engineering spe-

cialist for Novartis, the firm that markets Apligraf. She explains that cells are harvested from the foreskin to grow patches, 3 in. in diameter, which are laid over the patient's raw spots. Each patch is bandaged and in a few days the patch seamlessly integrates with the patient's skin. "Basically you're putting on an open wound fresh, viable cells," Friedman says. Performed on an outpatient basis, Apligraf grafts are relatively painless and inexpensive compared to traditional skin grafts, which involve cutting patches of skin from a healthy part of the body, then applying them to the injured area, a procedure that usually requires a hospital stay. Tori was the first infant and first EB patient to receive Apligraf, which had previously been used for minor leg ulcers, spider bites and burns. Dramatically improved, she now raises fewer than 10 blisters a day—not that it slows her down. "She comes to you to pop it, and she's back to play," says Randy. "She's a tough little pup."

Not surprisingly, Tori's illness has been rough on her parents. Nine months after the Camerons wed in August 1993, Lorraine gave birth to Taylor. Three miscarriages in three years were then followed by a difficult pregnancy with Tori. "It wasn't like Taylor," says Lorraine. "She was kicking and hurting me. I thought, 'I wonder if something's wrong with her?'" Just hours after Tori's birth, Randy had a friend scour the Internet to learn more about her disorder. Lorraine, too, took a crash course on EB, though at first she was too distraught. "I was out to lunch the first week or two," she says. "I would just bawl and be useless. I finally got to the point where I said, 'I've got to click in, for Tori's sake.'"

Tori was 11 days old when she underwent her first Apligraf graft, performed on a buttock, leg, knee, foot and elbow. For two months the Camerons took her to Miami for weekly treatments. Then, at home, they spent hours draining her blisters with sterilized needles and dressing and redressing her wounds. The stress was horrendous. "I told Randy the divorce rate after losing a child or having a severe disability problem is through the roof," says Lorraine. "We had a big blowup and I said, 'We need to keep watch on this.'"

Dr. Schachner, who has since treated 30 other patients with Apligraf, says that aside from occasional blisters on her palms and feet, like those commonly found in older EB patients, Tori should enjoy a bright outlook. "I think she has a fine prognosis for good growth and development, a good life span," he predicts.

Grateful for the science that brought health and hope to their daughter, the Camerons have focused on helping other families cope with EB. Now a board member of the Dystrophic Epidermolysis Bullosa Research Association, Lorraine has set up a nationwide program through which parents can find specialists as well as seek emotional support from other EB families. "It's the sort of thing we didn't have when Tori was born," says Randy. "We had to feel our way through it."



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Patient self check-in





- Telemedication – application where patient can take photo and send direct consultation to doctors
- Big Data (EHRs) (Dataderm) connect data of millions of patient in the US through dermatologist.
- Using robot in taking photo (drone)
- AI



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South beach Symposium



Concentrated on MOPD (Master of pediatric dermatology)



New PDE4 inhibitor for AD

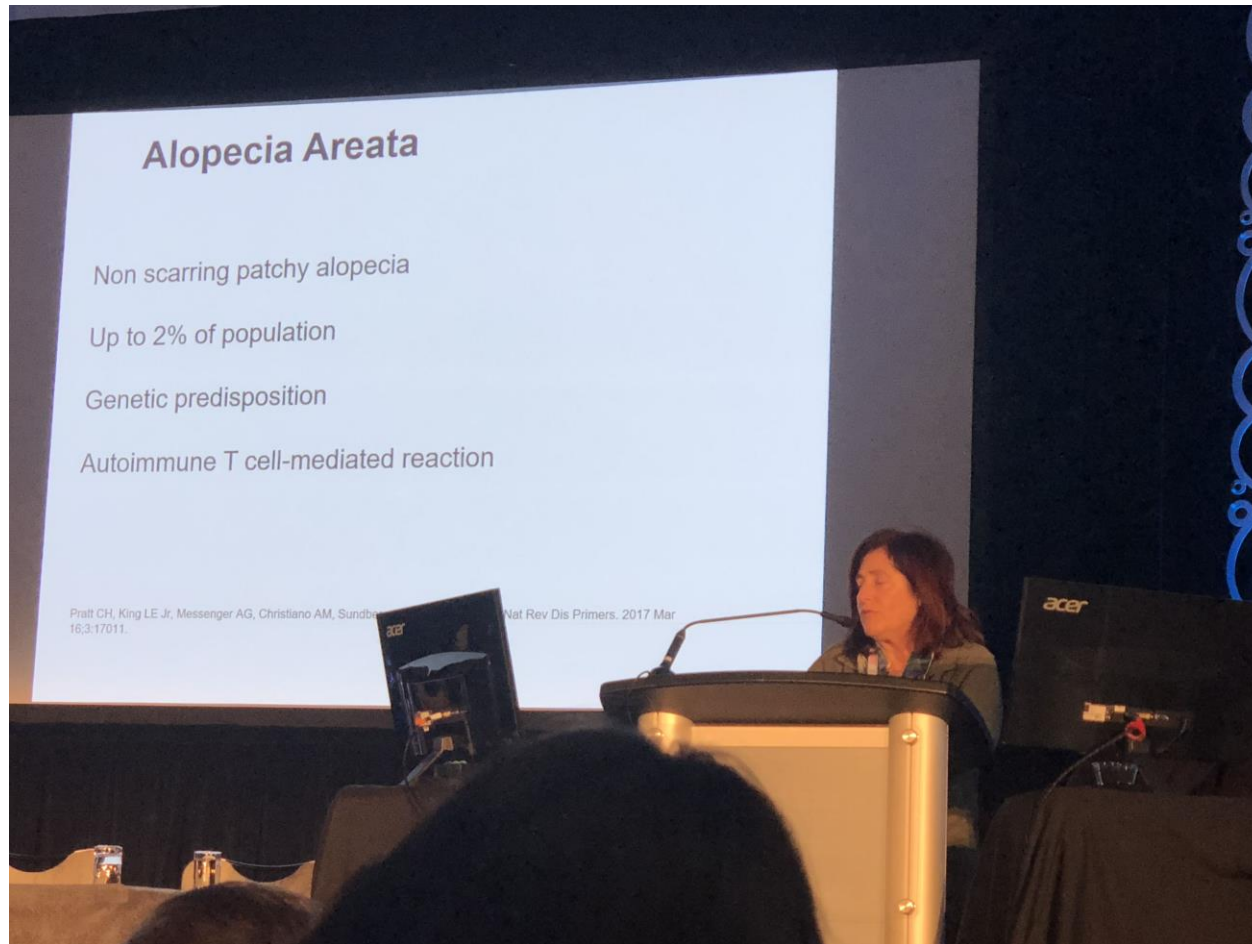




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Dr. Antonella Tosti





Alopecia Areata

- Non scarring patchy alopecia
- Up to 2% of population
- Genetic predisposition
- Autoimmune T cell-mediated reaction

Pratt CH, King LE Jr, Messenger AG, Christiano AM, Sundbom VL. Nat Rev Dis Primers. 2017 Mar 16;3:17011.



Jakinibs

- Cytokine/Interferon- \rightarrow signal via JAK/STAT partway \rightarrow gene transcription
- 1st used in dog with atopic dermatitiss
- Right now use in GVHD, DIHS, DRESS, Scleroderma, Vitiligo, JDM
- Also use Tofacitinib in mild to moderate lupus (Phase $\frac{1}{2}$ w/o side effect)



Impact of hemangioma ✨

- Research on parents of children with IH
- Show photo of the child before and after Photoshop of birthmark on the child face
- Monitor response using questionnaire
- What do other kids think?
- Children with facial difference rated as less likeable, less attractive, less happy, less good at school, less popular than without facial difference



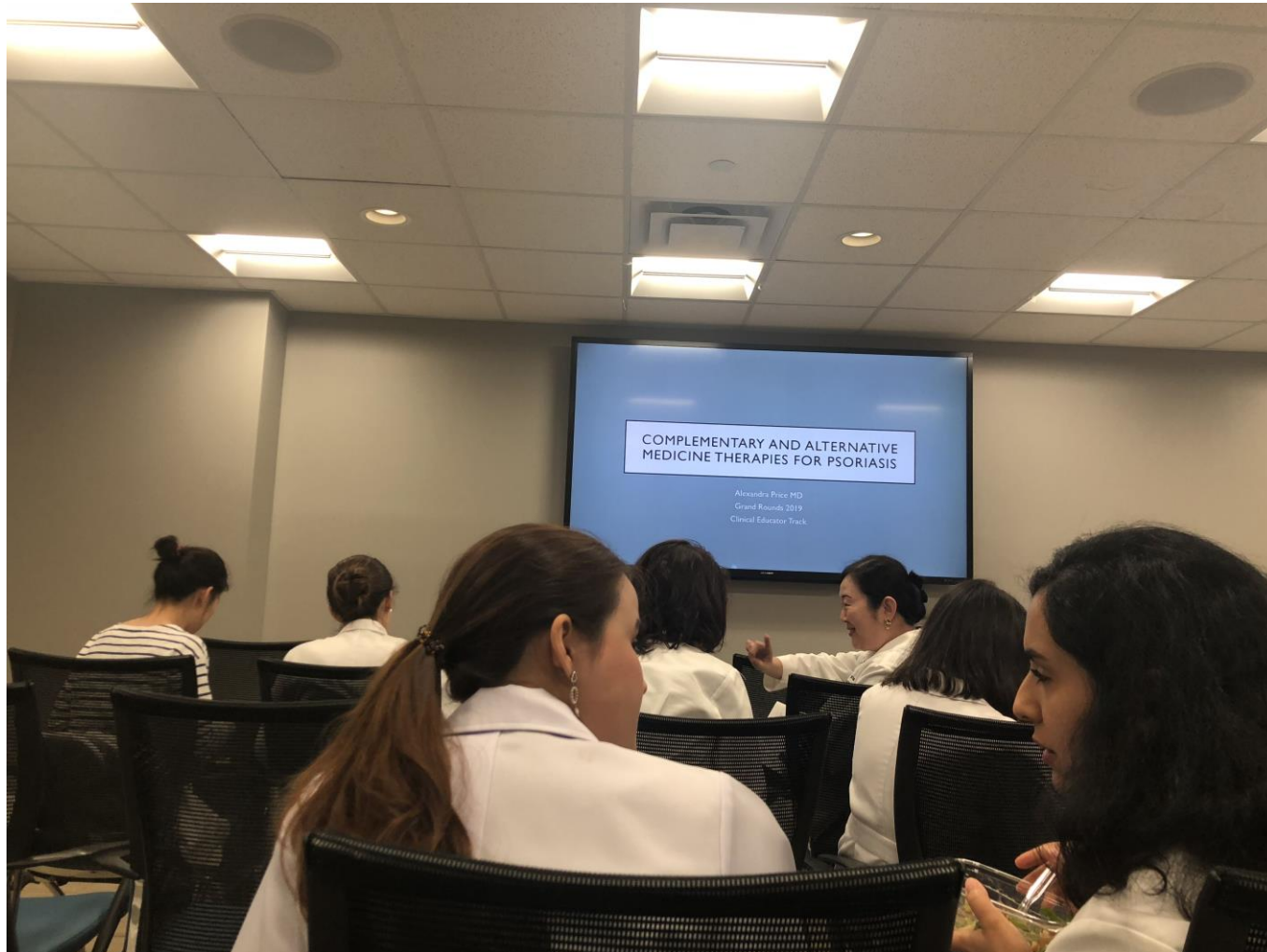
Impact of hemangioma ✨

- How can you change it?
 - Education by teachers and parents should help
 - Encourage parent to get in the classroom with students and teachers
 - Presentation of oneself in social situations can directly affect first impressions and judgement can changes as you get to know someone
 - Teach positive social skills



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Learning in the conference room





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Outside the conference room





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SPD meeting (Pre-AAD)





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AAD 2019





Benefits

- I gain motivation in pediatric dermatology field and want to introduce new treatment to my patients
- Innovation and ideas come up.
- Giving the paper handout or electronic to the patient might be the other way out to this problem. “Patient own their own information”
- Opportunity for my future fellowship exchange
- Working on a case report with Prof. Schachner on “Is it Morphea? Is it Vitiligo? Or Is it Both?”



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Thank you

