

SCIENTECH CLUB NEWSLETTER



*The 99th year as a forum for the exchange of information in scientific and technical fields
A club for people who never stop learning*

Meeting at 12 noon on Mondays at Northside K of C, 2100 E. 71st St., Indianapolis, IN
In an emergency, call 317-253-3471

Luncheon (\$12) @ 11:15 am, Coffee/tea (\$2) Reservations not needed

2017

Vol. 98

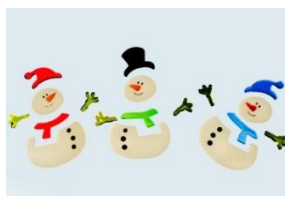
No. 46

December 11

<http://www.scientechclub.org>

Bonnie Carter, President
John Rathman, Secretary

Jeff Rasley, VP
John Prentice, Treasurer



December

18 **Annual Meeting & Election of 2018 Officers & 2020 Class of Board**

Program: The Influence of Social Media on Hyper-Polarization and Incivility in the US

Speaker: Jeff Rasley, Sciencetech Club Vice President

25 **Christmas Day – No Meeting**

January

1 **New Year's Day – No Meeting**

8 **Program:** The Future of Artificial Intelligence: Deep Learning & Blockchain Crypto-Ledgers

Speaker: Melanie Swan, Theorist of Emerging Technologies, Purdue University; Faculty at Singularity University

9 **Board of Directors:** 6:30 pm, Northside K of C

15 **Program:** Art & Neuroscience

Speaker: Shirley M. Mueller, MD, Guest Curator, IMA at Newfields

22 **Program:** Vonnegut on the Planet

Speaker: Chris Lafave, Curator, Kurt Vonnegut Memorial Library

29 **Program:** Tour of Stark Neurosciences Research Institute at IU School of Medicine

More at www.scientechclub.org/programs/calendarpagecss.asp

Jeff Rasley, Club VP, goes to Nepal

A number of Scientech Club members have asked about delivery of the LuminAid lights to Basa, Nepal. Jeff's Basa Village Foundation trekking group did deliver 180 "balloon lights" to Basa and to two other villages.

Jim Wilson brought a sample of these inflatable LED lamps with a solar battery to the Scientech program about Nobel Science Awards in which Dick Carter described advancements in LED lights. Jeff was inspired to contact the manufacturer, LuminAid, and was able to purchase the lights for the Basa Foundation. <http://scientechclub.org/newsletters/252.pdf>

These photos are of the "give-away" in Basa at the conclusion of a celebration of the rebuilding of the village after damage from the 2015 earthquakes.

Scientech Club members Hal Schimmelpfennig and Andy Ratermann also participated in the Basa trek and helped with the delivery of the lights and shoes to the village.



Homework

How did Walt Disney meet Ray Kroc in 1918?

Walt thought of the whole business of WW I not as war but as adventure. Assigned to Camp Scott, the Red Cross Ambulance Training Facility on Chicago's South Side, he wrote to friend Virginia Baker that he was "having a good time" and had "met lots of old friend[s] and made new ones already." In the midst of learning how to drive and repair ambulances and trucks, Walt contracted influenza in the horrific global epidemic. He was moved home to recuperate and his mother, although ill herself, nursed Walt and his sister Ruth through the fever and delirium. When he was well, Walt learned his ambulance unit - and his friend Russell - had already shipped out to France. Assigned to a new training base in South Beach, Connecticut, Walt became acquainted with a corpsman even younger than him - 15 year old Ray Kroc, later the founder of the McDonald's fast-food empire. Interestingly, Kroc regarded "Diz", as Walt was nicknamed, a "strange duck...whenever we went into town to chase girls, he stayed in camp drawing pictures."

<http://waltdisney.org/blog/over-there-walt-disneys-world-war-i-adventure>

Today's Program

Program: The Changing Face of Skin Cancer

Speaker: Cecelia E. Schmalbach, MD, MS, FACS, Professor of Otolaryngology-HNS Vice Chairman, Clinical Affairs, Otolaryngology-HNS Division Chief, Head & Neck-Microvascular Surgery, Indiana University School of Medicine

Attendance: 118

Guests: Linda Pendleton, Art Hegewald

Sponsor: Alison Brown

Scribe: Dick Carter

Editor: Bonnie Carter

The speaker today, Cecelia E. Schmalbach, MD, MS, FACS, is the Professor of Otolaryngology at Indiana University School of Medicine.

She discussed the epidemiology of skin cancers which are primarily related to UV-B radiation from tanning beds and sun burns, and then talked about the burdens of skin cancers including pain and suffering, morbidity and mortality, and costs relating to treatment. Her main focus was more specifically about: head and neck cutaneous melanoma, basal cell carcinoma, Merkel cell carcinoma, and squamous cell carcinoma. She related to us that just one visit to a tanning bed causes an increase in the number of skin cancers approximately equal to the increased cancer risk for a smoker. Tanning beds are now outlawed in some countries. Skin cancer related healthcare costs currently total \$8.1 billion annually in the US. She advised that people should avoid sun exposure during the 10 am to 2 pm UV peak hours to minimize UV light exposure, use sunscreen and wear protective clothing including hats, long pants and long-sleeved shirts. People receiving immunosuppressant treatments for organ transplantation have remarkably higher skin cancer rates (250%) when compared to normal people.

Melanoma skin cancer incidence has rapidly increased from 1/600 people in 1960 to 1/36 people in 2012, and still remains on the rise. The median age at diagnosis is 62 years. One out of four newly diagnosed people are under the age of 40. Melanoma is the most common skin cancer for women 25-29 years old. It is now the second most frequent cancer, after breast cancer, for women 30-34 years old. Annual mortality for melanoma has increased by 3% per year since 2004. Melanoma is now second to adult leukemia in "lost potential life-years." Skin cancer incidence per year due to UV tanning beds is estimated to be 245,000 for basal cell, 168,000 for squamous cell and 6200 for melanoma.

Non-melanoma skin carcinoma incidents are distributed as follows: basal cell - 70-75%, squamous cell - 20%, and Merkel cell - 5%. Basal cell carcinoma has 2.8 million new cases per year. Squamous cell has 700,000 new annual cases and this type has doubled in rate in the past 30 years. Forty to fifty percent of Americans will experience at least one SC carcinoma or BC carcinoma by age 65. Non-melanoma skin carcinoma has an excellent (90%) 5-year survival rate, however 2500 deaths per year occur with the more aggressive forms.

Sentinel Lymph Node Biopsy, SLNB, techniques allow a minimally invasive procedure to identify patients harboring occult nodal disease. It identifies patients who warrant therapeutic neck dissection and adjunctive therapy. It also spares 80% of melanoma patients, without regional disease, the morbidity of a neck dissection and parotidectomy. Graphs shown that supported this type of treatment indicated very significant recurrence survival rates and overall survival rates for patients using this technology. Sentinel Lymph Node mapping techniques assist the surgeon in spotting outlier regions needing treatments, and can possibly help the surgeon avoid nerve areas. The accuracy is approximately 95%.

Merkel cell carcinoma is more dominant in the elderly. The mortality rate exceeds the rate for melanoma. Mortality is in the 30-64% range for 5 years. A new diagnostic method allows significantly improved tumor detection. Immunocompromised transplant patients with skin cancer refractory to usual treatment have an option for the very effective "hedge hog", hH inhibitor Vismodegib (Erivedge) treatment. It is expensive, with estimated costs of about \$1000 per month for the required one pill per day. Potential insurance payment for treatment needs to be determined.



Cecelia E. Schmalbach