

Rotary



Club of Livermore

Spur Report 2-3-2-21

Wednesday, February 3, 2021

Rotary Spur Report by Trish Munro

Premeeting conversation: lots of people thinking about and getting COVID vaccines!

President Carolyn called the meeting to order at 12:30



Stu Frazier led us in the Pledge of Allegiance.

Song: Don't Know Much About History, sung by Michael Ferrucci and Stu Frazier. Great job with merging voices and singing!



Thought for the Day:

Carol Gerich was scheduled for today but is having more hip surgery! Get well cards can be sent to: Carol Gerich 12885 Morgan Territory Rd 94551

President Carolyn gave us her thoughts for the day and read a Mission Statement from a Marlyn Avenue Fifth Grader: : Be a leader and best version of myself. Set an example and encourage others. Surround self with positive people. Don't have to know everything but learn from all.



Meeting Front Line

Zoom Host: Jeff Youngsma

Zoom Chat Monitor: David Rounds

Audio Visual: Alan Frank

Spur Reporter: Trish Munro

Spur Publisher: Kathy Coyle

Guests: Welcome to John Taylor Guest Irv Sower invited; Monica , guest of President Carolyn and speaker (no visiting Rotarians).

Walking Livermore Photo



Announcements

Lloyd Baysdorfer passed away on Friday, January 31. Please send cards and messages to Carolyn Schuetz, 29 Palm Beach Lane, Alameda CA 94502, email csandlb@comcast.net

Member Talk:

Ted Michels: started in Wisconsin he was born 1944, near Milwaukee, then UofW, got into mathematics. Met Charlotte Woodruff. Graduated in 1966 with a degree in math (and a minor in beer-drinking). Did PhD in comp sci and applied math. Started at LLL as programmer and settled in Walnut Creek, then Oakland. Moved to Livermore in 1989. Children grew up. Charlotte died, went on a blind date with Courtney, who brought a couple kids. Now grandkids who are the smartest ever [except for mine! PKM]. Works on getting Chromebooks for children in Livermore. One-third of all brandy consumed in US is consumed in Wisconsin.



Club President Announcement: Carolyn Siegfried Jeff Youngsma and Alan Frank are Rotarians of the Quarter for their amazing work on making the Zoom world work.



New Club Project ♦ Saving Monarch Butterflies: Beth Wilson: Beth is spearheading a project to plant milkweed to encourage monarch butterflies. Beth's email is eaw1647@att.net

District 5170 News: 2021 Rotary International Conference will be virtual instead of in Taipei ♦ Registration info to follow

Next Week's Program will be the popular Interact Basket Auction: Jacquie Williams-Cartwright



This Week's Program:

Bringing Life to 3D Printing: Bioprinting Vascular Networks for Engineered Tissues



Dr. Monica Moya, Center for Micro and Nano Technology at LLNL; introduced by President Carolyn

Goal of Bioprinting is to replace and repair human tissue. Initially non-biological material compatible with cells, then layered cells on top to make organs. More challenging to print cells and materials together. These require little vasculature. Engineered tissues need vasculature to act as plumbing and to communicate among systems. These vary a great deal from organ to organ in both look and function. Dr. Moya tries to co-engineer with the body creating the environment to enable grow and maintain life she doesn't dictate the biology.

3-D printing plus time time is a real challenge.

Post print process have something that is alive and now has to be kept alive.

The bioprinting toolkit includes: bio-inks. Start with a natural material that cells recognize and change to make it their own.

One challenge is that tissues are soft and need to have support. There are a number of ways to do that. Providing a support bath keeps the soft tissue from collapsing. Another way to support the soft tissue is to print a disappearing support system that can be dissolved when its work is done.

The 3-D bio-printing can also be used to understand how bacteria organize. These are much easier to manipulate. Bacteria can be used to eat waste, for example. We can create organized grids of bacteria and manipulate the 3-D environment so that we can influence the environment of the bacteria.

We need to manage predictive capability to understand human biology and increase our ability to get successful treatments. Animal studies are very imperfect ways to test new treatments. These new 3-D bioprinting tools can help us to overcome these limitations and improve our predictive capabilities.

Some projects going on now: 3-D printing of brain aneurysm for modeling interventions.

Club Leaders



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[Keith Beck](#)
International Service Chair



[Mary Anne Rozsa](#)
Youth Services Chair



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iPast President

Club Meeting

Livermore
Meets at We are meeting via Zoom for the foreseeable future.
Zoom
Livermore, CA 94551

