

**Closing Remarks Banff 2017  
Our Finest Meeting Yet,  
But 2019 (Pittsburgh), 2021  
(Banff), and 2023 (Make a  
Suggestion!) Will Be Even Better**

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**BANFF FOUNDATION**  
FOR ALLOGRAFT PATHOLOGY

# The Words of This Poem Are True!

## “Meeting Purpose Refocused Raising a Regenerative Ruckus”

- ▶ In 1982 the word came down  
From my mentor Dr. Heptinstall of much renown:  
“Meetings are purely social events  
Nothing important in happenstance.
- ▶ Do not become involved in meetings  
Do not be impressed by all those greetings  
Nothing important happens there.  
Meetings do not really get you anywhere.”

# Meeting Purpose Refocused

## Raising a Regenerative Ruckus

- ▶ He saw me as a researcher by nature  
And ill suited to hotels, debates, and  
nomenclature.  
I ignored his advice I must confess  
And was in the lab less and less,
- ▶ As Banff meetings more and more became my  
thing  
And international cyber-communicating.  
I was so very very proud that in ISN elections  
I got way more votes than other persons

# Meeting Purpose Refocused

## Raising a Regenerative Ruckus

- ▶ Because of being so well known on the Internet.  
But I never ever did forget  
Dr. Heptinstall's words of upset  
And his social-character-of-meetings regret.
- ▶ But I must admit as the decades ticked away  
I enjoyed more seeing old friends in the hallway,  
And while meetings were never just a social event  
The social parts of them were pleasantly spent.

# Meeting Purpose Refocused

## Raising a Regenerative Ruckus

- ▶ And things might have just gone on like that  
With more friendly greetings that hit the spot  
Had I not ventured into regenerative medicine  
Where I know hardly anyone.
- ▶ So now at those meetings I know very few  
And there is much to learn, much to do.  
But we are making exciting progress  
And one can predict important success,

# Meeting Purpose Refocused

## Raising a Regenerative Ruckus

- ▶ With me as piper leading reluctant transplanters  
Into the regenerative world of tissue engineers  
Where we can increase the benefit to patients ten fold or more  
And stimulate talk cross disciplines where no one is bored.
- ▶ And finally I can say to Dr. Heptinstall  
These meetings are not just social events at all,  
But in a whole different way I am having a ball  
While engaging in activities of interest to all!

# Tissue Engineering Pathology and Human Cell Atlas Will be Part of All Future Meetings

- ▶ Every organ chair will consider tissue engineering content for the 2019 meeting
- ▶ We hope to have Aviv Regev as a speaker at that meeting presenting the Human Cell Atlas.
- ▶ The spirit of this meeting has been exactly what we were always hoping to achieve and it will only get better in future meetings! Please plan to take part in every way that suits you!



# Transplant Physicians&Pathologists May Be Only People Still Employed in 2045!

## 1 The accelerating pace of change ...



## 2 ... and exponential growth in computing power ...

Computer technology, shown here climbing dramatically by powers of 10, is now progressing more each hour than it did in its entire first 90 years

### COMPUTER RANKINGS

By calculations per second per \$1,000



**Analytical engine**  
Never fully built, Charles Babbage's invention was designed to solve computational and logical problems



### Colossus

The electronic computer, with 1,500 vacuum tubes, helped the British crack German codes during WW II



### UNIVAC I

The first commercially marketed computer, used to tabulate the U.S. Census, occupied 943 cu. ft.



### Apple II

At a price of \$1,298, the compact machine was one of the first massively popular personal computers



### Power Mac G4

The first personal computer to deliver more than 1 billion floating-point operations per second

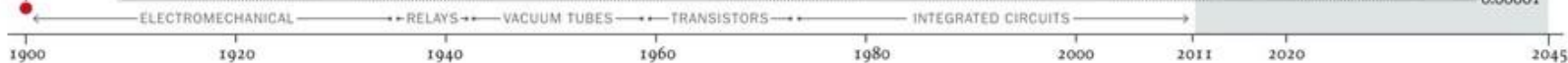
## 3 ... will lead to the Singularity

**2045**  
Surpasses brainpower equivalent to that of all human brains combined



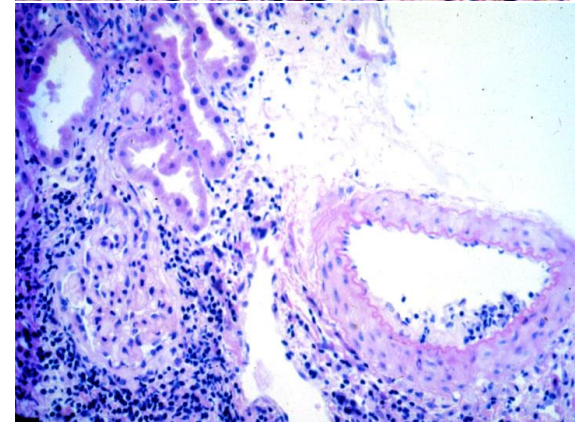
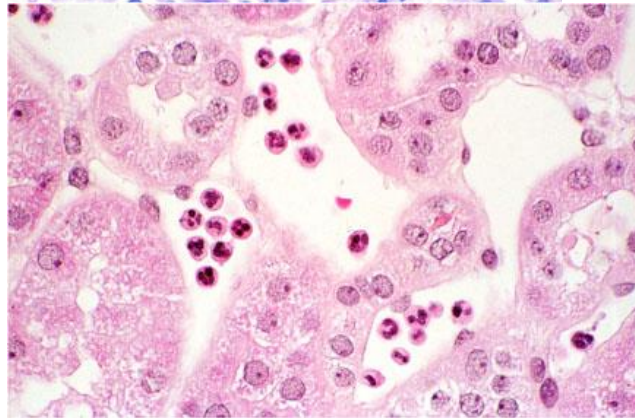
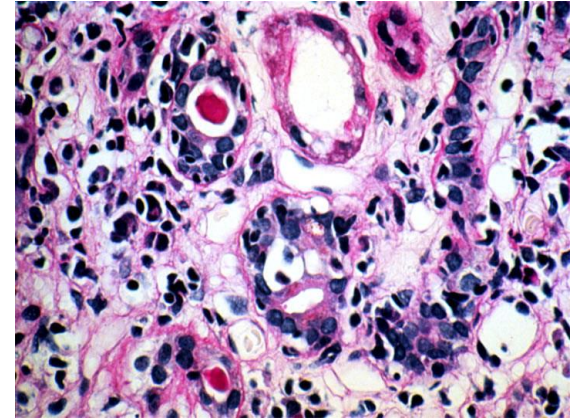
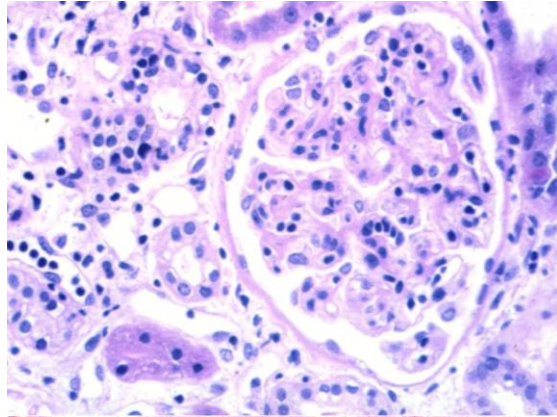
Surpasses brainpower of mouse in 2015

Surpasses brainpower of human in 2023

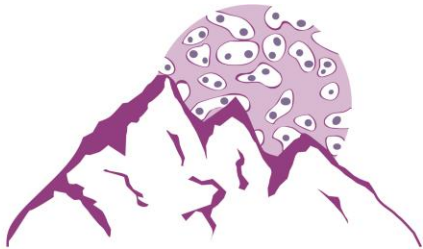




# Banff Classification of Kidney Transplant Pathology

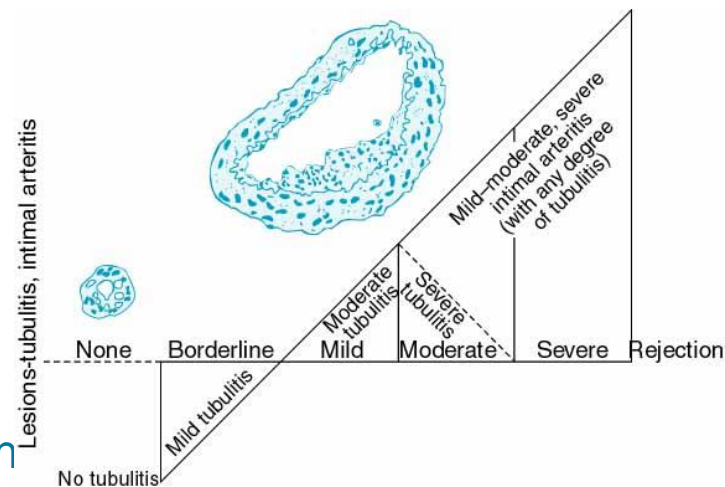


**Histologic criteria for the diagnosis of rejection and other conditions in the transplanted kidney, began 1991, updated and expanded every two years in consensus meeting.**



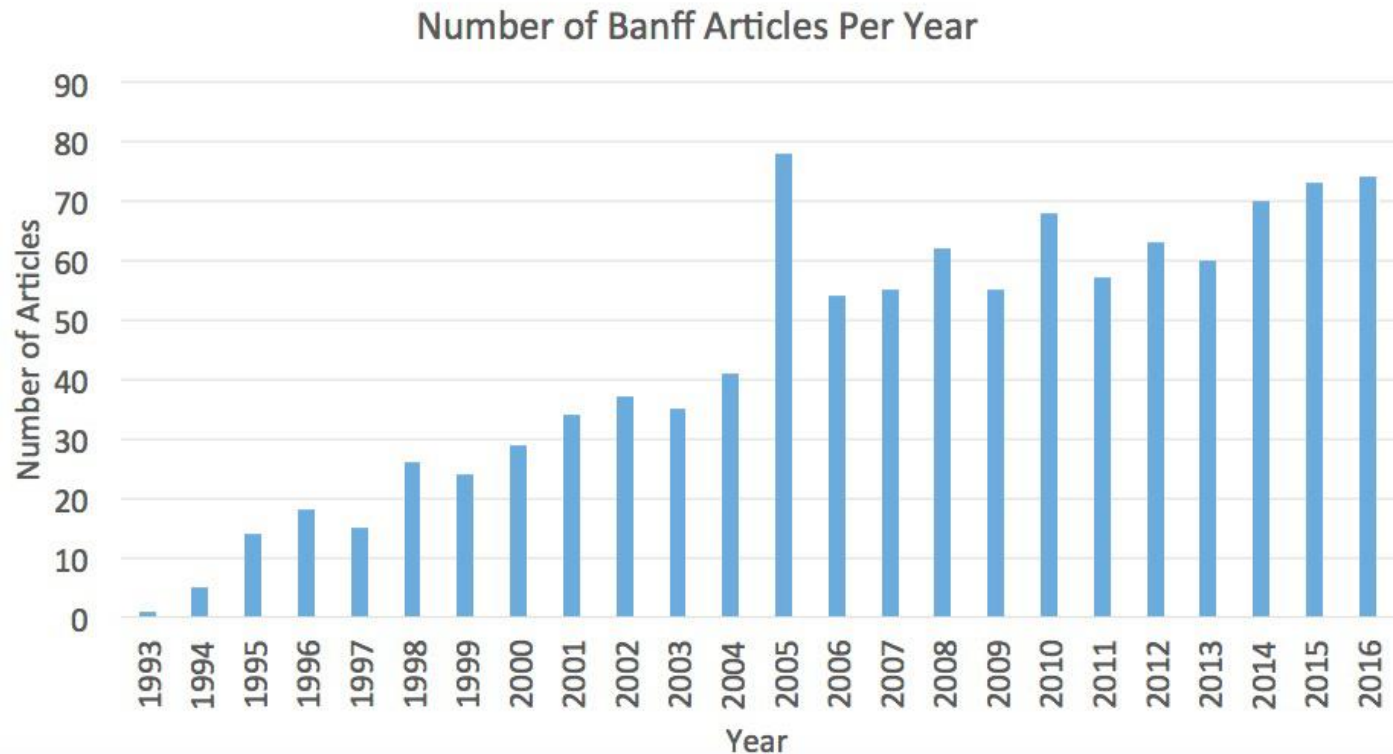
# BANFF Classification – Milestones

- ▶ 1991 First Conference
- ▶ 1993 First Kidney International publication
- ▶ 1995 Integration with CADI
- ▶ 1997 Integration with CCTT classification
- ▶ 1999 Second KI paper. Clinical practice guidelines
- ▶ 2001 Classification of antibody-mediated rejection: Regulatory agencies participating
- ▶ 2003 Genomics focus, ptc cell accumulation scoring
- ▶ 2005 Gene chip analysis. Elimination of CAN, identification of chronic antibody-mediated rejection.
- ▶ 2007 First meeting far from a town called “Banff” – La Coruna, Spain.
- ▶ 2009 Working groups. Meeting in Banff, Alberta, Canada
- ▶ 2013 Establishment of Banff Foundation for Allograft Pathology



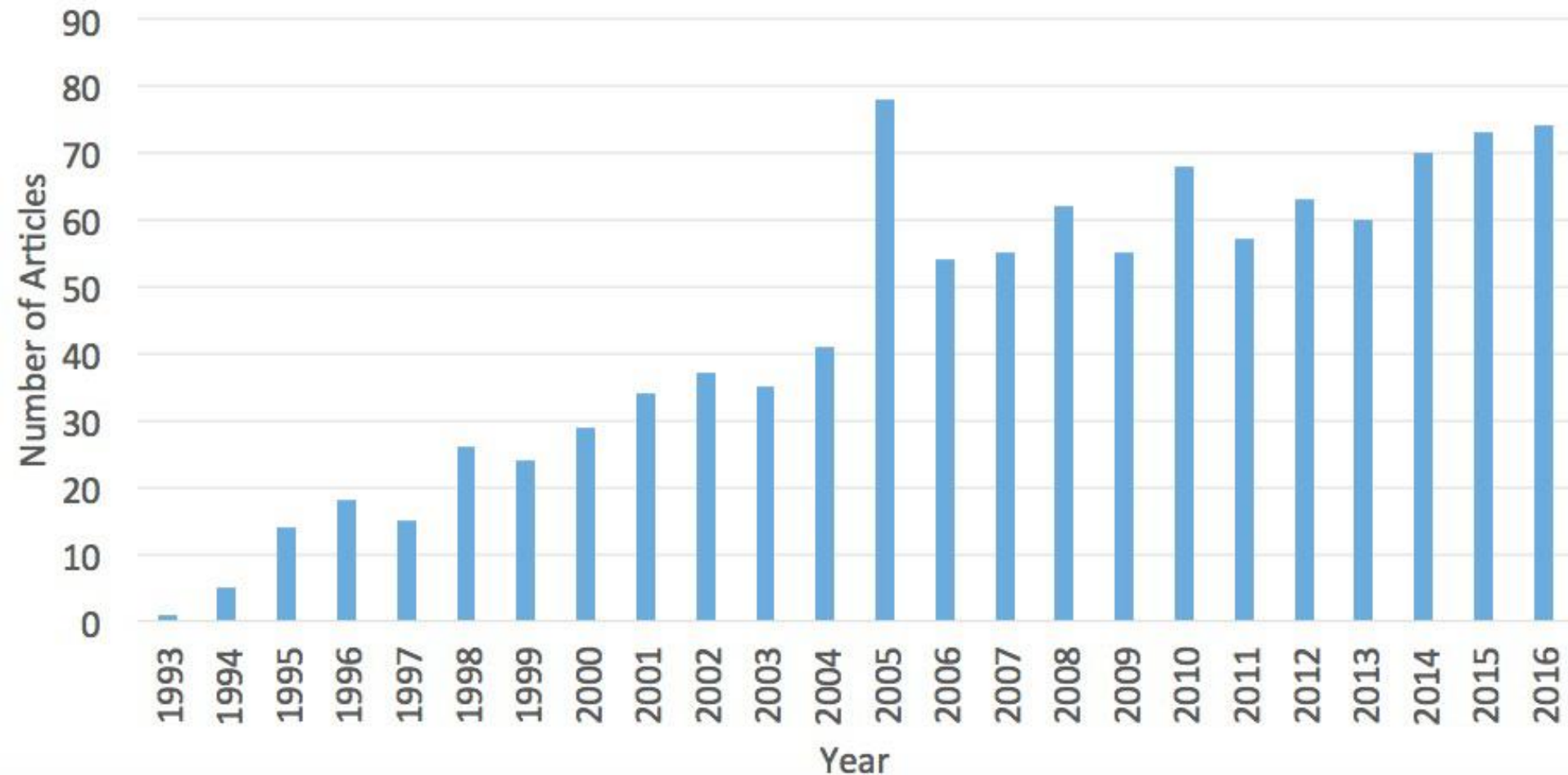
# Significance of 'Banff papers'

- More than 5,000 citations of the 14 Banff meeting reports
- 977 Banff / Transplantation papers in PubMed
- Banff 2003 meeting report (ABMR criteria) = most cited AJT paper
- 3 Banff meeting reports are among the top 4 cited AJT articles



# Tissue Engineering Pathology Added Soon!

Number of Banff Articles Per Year







THE CATALAN  
TRANSPLANTATION  
SOCIETY

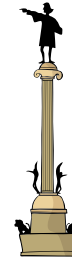


SOCIETAT  
CATALANA DE  
TRASPLANTAMENT

# 2017 BANFF-SCT Joint Scientific Meeting

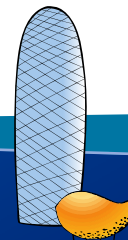
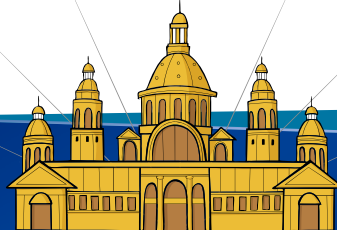
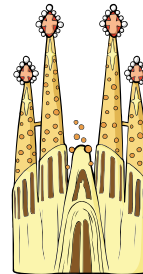
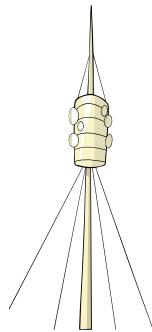
## BARCELONA

27-31 March 2017

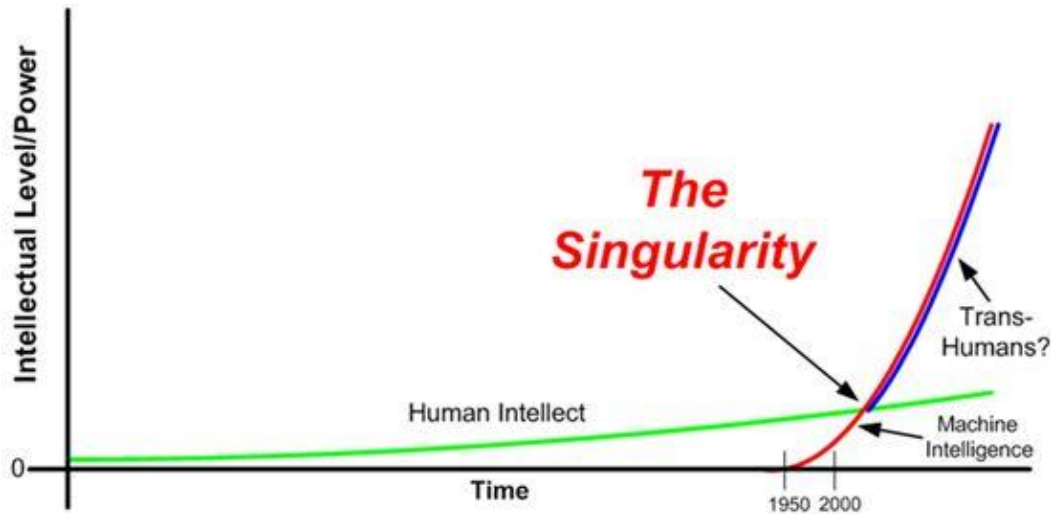


**Societat Catalana de Trasplantament** and  
**BANFF Foundation for Allograft Pathology**  
are pleased to co-host the  
**2017 Banff-SCT Joint Scientific Meeting**

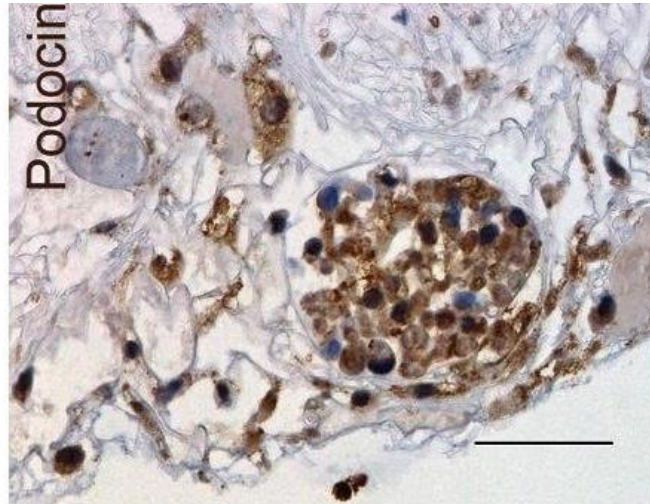
[www.sctransplant.org](http://www.sctransplant.org)  
[www.banfffoundation.org](http://www.banfffoundation.org)



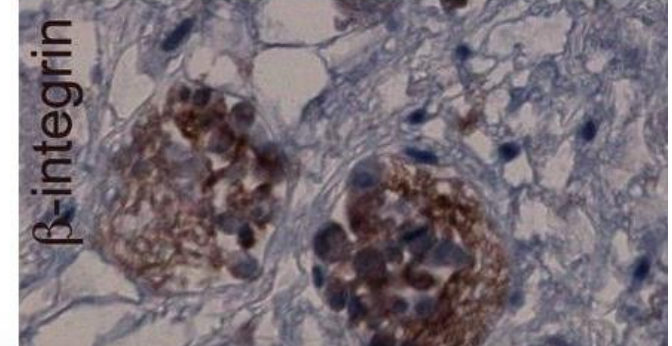
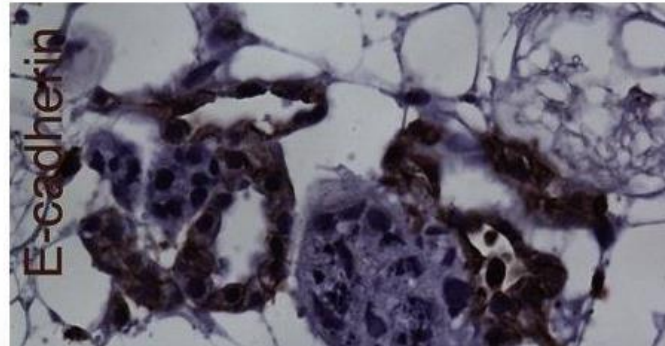
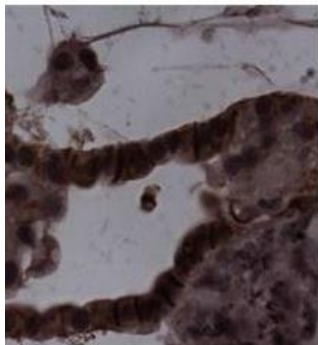
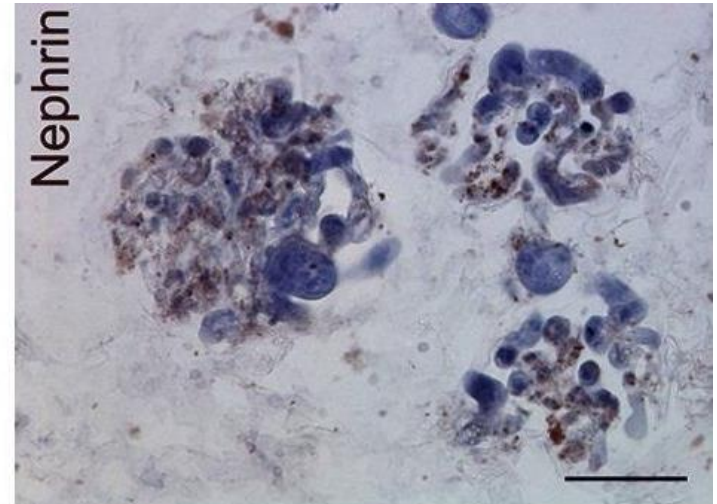
# The Technological Singularity



# Podocytes go wandering into the interstitium! Song et al.



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# Beginning at the Very Beginning!

- ▶ “We are at the very beginning of time for the human race. It is not unreasonable that we grapple with problems. But there are tens of thousands of years in the future. Our responsibility is to do what we can, learn what we can, improve the solutions, and pass them on.” - Richard P. Feynman, (1918-1988) Physicist, Nobel Prize Winner
- ▶ *"The sense of the future is behind all good policies. Unless we have it, we can give nothing either wise or decent to the world."* - Snow CP, (1905-1980) Novelist and Philosopher.
- ▶ *"To a large extent, the future lies before us like a vast wilderness of unexplored reality. The God who created and sustained the evolving universe through eons of progress and development has not placed our generation at the tag end of the creative process. God has placed us at a new beginning. We are here for the future."* - Sir John Templeton (1912-2008), Financial Analyst

Originally we had mule deer poking their heads into the meeting rooms. Now we have real data complexity but outcome should be very good for patients. We've come a long way!

