



American Heart Association.

Basic Cardiovascular Sciences

Chat Discussion
Monday, July 27, 2020

Concurrent Session 1A: Beyond the Heart: Systemic Effects of Pathogenic Cardiac Remodeling

name	message
Joe Trusso	Welcome! Thank you for joining us. You should be hearing music play as we wait for the session to begin. If you do not, please submit a support ticket by clicking on the Request Support button located at the bottom left of the player.
Joe Trusso	This is the previous session ending.
Fuli Xiang	(thumbsup)
Gregory Aubert	Welcome everyone, I am Gregory Aubert from Loyola University in Chicago and the moderator of this session: Beyond the Heart: Systemic Effects of Pathogenic Cardiac Remodeling. Please feel free to post your question to the speakers on this chat.
Sakthivel Sadayappan	Welcome to the cardiac remodeling session!
Sakthivel Sadayappan	Thanks to the speakers!
Sathyamangla NagaPrasad	Look forward to all the talks
Kishore Wary	Hello all.
Jiang Chang	Great program!
Guochang Fan	What a strong leadership, Sakthi!
Loren Wold	Very exciting session already!
Kate Weeks	Excited to be joining this session from Melbourne!
Maria Kontaridis	Hi all- good to "see" you all!
Mingfu Wu	Thanks Loren!
Steven Houser	Talks all look exciting
Kate Weeks	Fantastic program

Nora Engel	Great program
Maria Cimini	Hello everybody :)
Sakthivel Sadayappan	(thumbsup)
Mingfu Wu	Yeah, Good to see you all(blankface)
Loren Wold	On the right hand side, the Notes tab will allow you to take notes during the talk, then you will be emailed afterwards!
Marcello Rota	Congrats to the organizers!
Dominic DelRe	very nice! thanks loren!
Sathyamangla NagaPrasad	Thanks Loren, Jill and Sakthi
Priscila Sato	Hi everybody! Thanks for the notes tip. Will it be automatically sent or do I need to request to be sent to me?
Wenbin Liang	Hello everyone! greetings from Canada! Great program!
Loren Wold	Priscila: I believe the notes are sent after the session ends automatically. However, I do not know for absolute certainty.
Priscila Sato	Thank you
Mohammad Alkhalaf	Nice to see you here as well Dr. Wenbin Liang (thumbsup)
Ronglih Liao	Thanks to program co-chairs and committee. Great job!!
Rongxue Wu	Very nice to see you here
Yi Tan	Very exciting program! Thanks Loren, Jill, Sakthi and all the committee!
Loren Wold	(blowkiss)
Rebecca Slater	Priscila: I tested the notes feature during the opening remarks and was indeed sent a copy automatically
Priscila Sato	Rebecca: thank you so much. That is great! Saving some trees :)
Frank Li	good to know!
Eduardo Marban	Hey Loren, will there be a live Q&A? Also, hello to all, hope everyone is staying safe in this challenging time!
Raj Kishore	Hi Eduardo, i believe one need to use chat to ask a question
Gregory Aubert	Hi Eduardo, You can post your question in this chat during the talks and they will also be a 15 minutes Q&A at the end of the sessions.
Adam Wende	💎💎 interesting studies. Thank you
Fuli Xiang	Very nice talk!
Loren Wold	Hi Eduardo! There is no LIVE chat, it's all in this box during each session.
Shyam Bansal	Great Talk!

Sathyamangla NagaPrasad	Loren just answered my question!!
Guo Huang	Excellent and thorough work, Deepak! Congratulations!
Hind Lal	Great work Dr. Srivastava
Binata Joddar	Very good talk by Dr. Srivastava. thank you so much
Rongxue Wu	Great talk!
Ram Prasad	Wonderful presentation Dr. Srivastava..
Loren Wold	Exciting data Dr. Srivastava!
Sathyamangla NagaPrasad	Excellent talk Deepak!!
Suresh Verma	Great work Deepak
Santosh Maurya	Impressive work Dr. Srivastava.
Rajarajan AmirthalingamThanda	Exciting talk Dr. Srivastava.
Kishore Wary	Enjoyed the presentation by Dr. Srivastava.
Yiqiang Zhang	Enjoyed your talk. Thank you, Dr. Srivastava.
Mingfu Wu	Great work, Deepak!
Rongxue Wu	I wonder does HIPK2 level change in patients with hypertension?
Shyam Bansal	Hind: Did you see any Arrythmias in these KO mice?
Hind Lal	No
Shyam Bansal	thanks
Rajasekaran NamakkalSoorappan	Very interesting findings Hind!
Thomas Gillette	How does the increase in inflammation compare to a HF heart, say after severe TAC where you might see similar dilation and function
Hind Lal	Vanderbilt Arrythmias center help to check the same
Michelle Parvatiyar	Did you find any evidence of pathology in other tissues (e.g. skeletal muscle or kidney fibrosis) in your global HIPK2 KO mice?
Hind Lal	Global KO had significant developmental defect. Ko were half the body weight of Ko.
Hind Lal	So we did not follow a lot on global KO. The less BW of KO are due to defect in fat mass. The muscle mass was comparables.
Michelle Parvatiyar	thanks
Santosh Maurya	Dr Lal: What were the control CM-KO?
Hind Lal	both flox and cre control were used.
Santosh Maurya	Did you see any Cre toxicity?

Hind Lal	sorry-Flox
Hind Lal	and aMHC-Cre
Sathyamangla NagaPrasad	How does apoptosis (Cardiac) now plays a role in systemic inflammation!!
Hind Lal	Yes, there was Cre toxicity, as we all know. The KO were compared to the Cre control
Santosh Maurya	Thanks.
Kishore Wary	I find your data very interesting. HIPK2 appears to protect cardiomyocyte from intrinsic apoptotic stimuli! it is a comment.
Rongxue Wu	Good job Hind!
Hind Lal	Dr. Prasad-inflammation work is very recent-we following this mechanism now
Hind Lal	Dr. Wary-yes-thats correct
Hind Lal	Dr. Wu-Thanks
Xuejun Wang	Did cardiomyocyte necrosis occur in the KO heart?
Kishore Wary	enjoyed your talk
Longsheng Song	Dr. Lal: What about other family members of HIPK in the heart and heart failure?
Hind Lal	Dr. Wang-No necrosis
Suresh Verma	Agree Rosie, Great work Hind..
Sumanth Prabhu	Beautiful study, Hind!
Sathyamangla NagaPrasad	It is possible that this is a catch 21 situation wherein initial apoptotic signal initiates a systemic inflammatory reponse?
Joseph Wu	Great talk Lal!
Sathyamangla NagaPrasad	Good work!!
RamcharanSingh Angom	Very promising.
Hind Lal	Dr. Song-Other HIPK familys role is not tested in heart yet.
Hind Lal	Dr. Prasad Sir-Thanks
Raj Kishore	very nice work Hind
Hind Lal	Raj Sir-Thanks
Longsheng Song	It seems HIPK3 expression level is higher than HIPK2 in the heart from GTEX
Sakthivel Sadayappan	Congrats Hind!! Excellent study!
Zhongjian Cheng	Good job Lal!
Adam Wende	Great work as always!
Hind Lal	Thanks much Sakthi for the opprtunity
Rongxue Wu	Science is more important:)
Hind Lal	Thanks Adam

Priscila Sato	Hi Hind, nice work. Does HIPK2 compete for the same phosphorylation sites as MEK? Or is it upstream of MEK?
Suresh Verma	Here we are for science not for literature.
Rajasingh Johnson	Nice and strong data!
Hind Lal	Hi Priscila-Dont know yet
Michelle Parvatiyar	Great talk Hind, very interesting findings!
Hind Lal	Thanks
Venkatesh Sundararajan	Great work Hind!
Ram Prasad	Excellent work and wonderful presentation Dr. Lal.
RamcharanSingh Angom	Beautiful work
Santosh Maurya	Excellent work Dr. Lal.
Anand Singh	Nice Talk(thumbsup)
Danish Sayed	Good job Hind
Luke Potter	Great talk
Hind Lal	Thanks
Shyam Bansal	Great work, Hind!
Hind Lal	Thanks
Jiang Chang	Great talks!
Guochang Fan	Excellent work, Hind!
Hind Lal	Thanks
Yajing Wang	great talk, Hind, did you check the cardomyocyte self regeneration signals since ERK activation?
Yaoliang Tang	Excellent work, Hind
Hind Lal	We did not
Rajarajan AmirthalingamThanda	Great talk, Hind
Hind Lal	We did not check the regeneration
Yajing Wang	okay, thanks, Hind
Sudarsan Rajan	Good Work, Hind! Congratulatio
Rachelle Crosbiewatson	Really nice story, Hind.
Hind Lal	Thanks
Fuli Xiang	Nice work, Hind! Important message for drug development!
Hind Lal	I hope so..

Yajing Wang	Hind, nice to 'see' you
Cassandra Awgulewitsch	Thanks for the talk Hind!
Hind Lal	Thanks Casandra !
Dhanendra Tomar	Dr. Hind, great talk, impressive work!!
Sakthivel Sadayappan	Thanks Dr. Song for presenting your work at the 2020 BCVS virtual session!!
Guochang Fan	Dr. Song: How big is JP2 protein?
Guo Huang	Beautiful study, Hind! Look forward to more discoveries about the function of Hipk2 in the future.
Joseph Wu	Congrats Long-Sheng!
Longsheng Song	Thank you, Sakthi, for this great opportunity.
Jiang Chang	Good to hear your talk! Excellent work Hind!
Hind Lal	Thanks Jiang
David Paik	Great to see my former colleagues from Vanderbilt! #AnchorDown
Hind Lal	Same here ..
Jiang Chang	Enjoying your talk now Longsheng
Guochang Fan	Which Calpain isoform here?
Longsheng Song	Thank you, Joe and Changjiang.
Xuejun Wang	Enjoying your talk now, Longsheng.
Rongxue Wu	Nice talk Longsheng
Longsheng Song	Guochang, here we use calpain 1 in the in vitro assay
Rongxue Wu	Very interesting work
Hind Lal	Nice work Longsheng
Guochang Fan	Thanks, Long-Sheng! Excellent work.
Hind Lal	Thanks to the BCVS organizing committee for providing an excellent opportunity to share our findings.
Di Lang	Nice talk Dr. Song!
Snekha Rajasekaran	Dr. Hind, that was an awesome talk! As a high school student, I could follow along very easily. Thank you!!!
Laihua Xie	Great work Long-Sheng!
Suresh Verma	great work Long-Sheng!
Hind Lal	Thanks Snekha !
Longsheng Song	thanks, Lai-Hua, Rongxue, and Hind.
Sathyamangla NagaPrasad	Nice work Long-sheng!!

Sakthivel Sadayappan	Welcome Sneha! Your enthusiasm as a high school student is extraordinary!! Thank you!
Ying Ge	Nice work! Long sheng!
Sneha Rajasekaran	Of course, thank you and your team for the opportunity Dr. Sakthivel uncle!
Santosh Maurya	Dr. Hind Lal: Do you think that there is early mitochondrial defect KO heart?
Longsheng Song	Thanks, Ying!
Hind Lal	There was no mitochondria defect. This data is as supplementary with the Cir our recent Cir paper.
Danish Sayed	Very nice work Long-Sheng
Santosh Maurya	Thanks.
Elaheh Karbassi	Very interesting talk. I was wondering: does JP2 have any known role in the dedifferentiation (loss of T-tubules) of isolated adult cardiomyocytes in culture?
Wei Guo	Nice work Song!
Martin VilaPetroff	Hi Song, excellent talk. Do yo know if JP2 is degraded by osmotic stress?
Shyam Bansal	Great talk, Dr. Song!
Yi Tan	Beautiful work and nice talk, Dr. Song.
Jun Feng	Great work! Dr. Song.
Longsheng Song	Hi, Martin, glad to see you here.
Kishore Wary	Wow! JP2NT is an interesting protein.
Luay Boulahouache	Great talk Dr. Song!
ChiKeung Lam	Dr. Song, is there another mechanism for JPH2 cleavage that can generate a nuclear localizing peptide?
Rajarajan AmirthalingamThanda	Great work! Dr. Song.
Robert Correll	Fantastic talk, Long-Sheng.
Hesham Sadek	Congratulations to all speakers!
Guo Huang	Great work and clear presentation, Long-Sheng! Congrats!
Chuanxi Cai	Great talk, Dr. Song!
Guochang Fan	Congrats on all three excellent presentations.
Zui Pan	Excellent talk!
Rajarajan AmirthalingamThanda	Congratulations to all speakers
Gangjian Qin	A wonderful session! Congrats to all presenters!
Priscila Sato	Dr. Song, is there only one transcript variant for junctophilin?

Ying Ge	Excellent talks! Thanks to all the speakers! Many thanks to Sakthi and Jill and Loren for their hard work in putting together this wonderful program!
Gregory Aubert	Congratulation Drs. Deepak Srivastava, Hind Lal and Long-sheng Song for your great talk.
Hind Lal	Thanks
Yang Xiang	A wonderful session! Congrats to all presenters!
Suresh Verma	Great Session. Great start of BCVS2020!!!
Guochang Fan	Is there any moderator?
Zhuqiu Jin	Outstanding research work and strong evidence to support the conclusion.
Longsheng Song	Dr. Lam, there are other mechanisms that may also contribute to JPH2 cleavage such as MMP2. But data are not complete to suggest that MMP2 mediated cleavage leads to nuclear localization...
Joseph Wu	Great session and talks by all speakers!
ChiKeung Lam	Thanks Dr. Song! Great talk!
Yunhui Xu	Thanks Dr. Song
Yang Xiang	Dr. Lal, have you checked other signaling pathways such as Akt and JNK, etc.
Sherin Bakhshab	Thank you great talks
MariaPaola Santini	Great session. Thanks to all speakers
Yiqiang Zhang	Great work! Nice seeing your updates, Longsheng. Any difference of JP2NT expression in myocytes at infarct border and remote regions?
Dominic DelRe	Great session and fantastic talks!
Hind Lal	Dr. Xiang- AKt was down (modest change), JNK was comparable
Longsheng Song	Dr. Wehrens recently published a paper in Basic Research in Cardiology suggesting that calpain 2 induces cleavage of JP2 at a different site that leads to nuclear translocation of its c-terminal fragment. We are not sure about that.
Santosh Maurya	Dr Lal: Do you think that there is alteration in circulating ANP level?
Longsheng Song	Yiqiang, border region has the highest level of JP2NT in the nuclei.
Hind Lal	As expected, ANP was upregulated in LV, not sure about the circulating levels
Santosh Maurya	Okay.
Jinqi Fan	Great work, Dr. Song! Did you do some calcium transient for function study? thank you
Jinqi Fan	Dr. Song, I mean how about the calcium cycling?
Longsheng Song	Dr. Sato, there are 4 members in Junctophilin protein family. But the heart expresses only JPH2

Concurrent Session 1B: Cutting-edge Approaches to Targeting Complex Cardiomyopathies

name	message
Joe Trusso	Welcome! Thank you for joining us. You should be hearing music play as we wait for the session to begin. If you do not, please submit a support ticket by clicking on the Request Support button located at the bottom left of the player.
Sakthivel Sadayappan	Welcome to one of my favorite sessions!!
Jon Pagtakhan	Welcome, everyone!
Sakthivel Sadayappan	Thanks to the speakers!!
Jil Tardiff	Welcome everyone - I'm moderating this great session, today's basic discoveries may end up in the clinics, this is an extremely active field, lots of work to do.
Farid Moussaviaharami	Hi Jil! Fantastic line up!
Sakthivel Sadayappan	Thanks Jil!! We need cutting-edge approaches to treat cardiomyopathies..
Anne Murphy	as a clinician we often have difficulty interpreting the pathogenicity of novel site mutants in MyBPC. Would this approach help in clinical interpretation
Brett Colson	This approach would be able to detect changes in actin binding and phosphorylation, so it would likely helpful for a subset of mutations.
Elizabeth McNally	Just had a patient with a VUS right in this region. So yes, I think this could help.
Sakthivel Sadayappan	In the same line with Anne, can we use this assay for the C' mutants
Sakthivel Sadayappan	Thanks Brett! Excellent presentation!
Farid Moussaviaharami	Great talk Brett! Can this technique be used for a full thin filament with troponin complex?
Jil Tardiff	Nice Brett!
David Barefield	Elegant approach, fantastic work Brett.
Brett Colson	Thanks everyone!
Jil Tardiff	LOL Farid, Brett and I are working on this -
Farid Moussaviaharami	I am happy to think of the same questions as someone like you! :)
Jane Freedman	Great talk Brett
Jil Tardiff	The role of actin dynamics looms large here
Anne Murphy	ok great
Farah Sheikh	Great talk Brett!

Brett Colson	Sakthi, we are developing a similar assay for myosin binding. C' MyBP-C can bind actin too, so it may not be as physiological but still - changes in actin binding could possibly be detected in these C' mutants, too.
Sakthivel Sadayappan	Thanks Brett. We should also expand this to skeletal paralogs!
Charles Chung	Brett: Great talk- Feel like I should ask about the giant elephant- Could this be adapted to other proteins? e.g. Titin-Actin interactions?.
Brett Colson	That's right, Jil. We have now studied the R282W mutant using time-resolved FRET and Phosphorescence Anisotropy. There are definitely interesting changes in MyBP-C and actin dynamics.
Jil Tardiff	(thumbsup)
Brett Colson	Sakthi, yes, this assay works with skeletal MyBP-C N' terminal fragments as well!
Brett Colson	Charles, definitely. Both MyBP-C and titin having Ig-like domains makes this likely. If the titin binding site is near Cys-374, then you can do this with rabbit actin - should work well!
Jil Tardiff	This is really nice work, Sharlene. Super clear, easy to follow. Important questions, long unanswered
Francesca Stillitano	hello everybody, do you also see very small slides? difficult to read
Sharlene Day	Thank you so much Jil. Combining the clinical and experimental data has been very revealing and rewarding
David Hsu	You can download the full size PDF slides under resources
Ronglih Liao	Wonderful section. Outstanding speakers!!
Kimm Hamann	Really beautiful work Sharlene! ANd great to "see" you - hope all is well - miss you and MIM!
Francesca Stillitano	Thanks
Sharlene Day	Thanks David. Sorry for the small slides, they looked fine when I recorded it a month ago! Miss you too Kimm!!
Jil Tardiff	Thanks David Hsu!
Farid Moussaviaharami	Is this pathway specific to MyBP-C or is it involved in other sarcomeric proteins?
Farid Moussaviaharami	Great talk! Very exciting data.
Farah Sheikh	Great talk Sharlene! Hope you are well!
Sakthivel Sadayappan	Excellent, Sharlene. Did you try using HSP70 overexpression and null models to determine the regulation of cMyBP-C?

Thomas Martin	Dr. Day, love the talk. Do you think the regulation of MYBPC3 levels by HSP70 may be through the canonical BAG3-mediated chaperone assisted selective autophagy (CASA) pathway? Thanks!
Jil Tardiff	Don't forget about kinetics in the myocyte!! This is important for the sarcomere and energetics.
Willem DeLange	Hi Sharlene, how do you reconcile the fairly well established decrease in cMyBP-C levels in the myocardium of heterogeneous mutation carriers with your data? Is this a slowly developing phenomenon?
Charles Chung	Sharlene- great talk! Do your assays or studies provide insight how HSP70 either translocate to the A-band or MyBP-C translocate to the M/Z-lines? Also could the Alpha-LISA assay give data on how quickly degradation might occur?
Sharlene Day	Thanks for the great question Farid. We're not sure yet, but we did find that JG-98 accelerated degradation preferentially in MYBPC relative to myosin. We need to look at other sarcomere proteins in future experiments.
Sharlene Day	Sakthi - not yet, but working on it. There's been quite the lag between moving labs and the shut down. But we'll get there!
Jil Tardiff	An elemental question in cardiomyopathic remodeling - what does a single timepoint mean in the context of a progressive disease, Dr. Carley is addressing one of the myocellular correlates...
Sharlene Day	Thomas - thanks for the great question. We think it's primarily through the proteasome rather than autophagy pathways although we haven't specifically looked at the CASA pathway.
Sakthivel Sadayappan	Thanks Sharlene!
Sharlene Day	William - great question. We think that the compensatory response that we see in ips-CMs must be lost in the human heart after some period of time. We can't really test that, but that's our theory anyway. The disease onset in patients is typically later and progression is slow so this would at least be consistent.
Willem DeLange	Thanks Sharlene, great talk btw!
Sharlene Day	Charles - thanks for the great questions! I can't answer the first question - HSC70 is juxtaposed to MYBPC in the sarcomere but I can't tell you how or what triggers them to translocate to each other. The alpha-LISA assay is very sensitive and precise. Yes, we use it in cyclohexamide chase assay to measure protein 1/2 lives and can look at early time points for mutant proteins that are very unstable and degrade rapidly.

Charles Chung	Thank you, Sharlene!
Sharlene Day	Thanks so much Sakthi and William! This is really a great forum for Q&A.
Jil Tardiff	This timing issue is KEY
Charles Chung	Agreed, Jil- Many don't realize their assays are dependent on such timing endpoints (not just for metabolic, but also sarcomere functional kinetics). Thank you for the reminder Dr. Carley!
Jil Tardiff	Have to avoid over-focusing on steady state approaches. No steady state in the heart (well, a live heart).
Jil Tardiff	These pathways (or a subset thereof) are almost certainly involved in, for example, HCM.
Charles Chung	Question about the TAG Enrichment graph shapes- are the exponentials different or just the linear phases? i.e. on quick review, the TAC Palmitate might just be a scaled version of the others.
Heinrich Taegtmeier	Beautiful work, Andrew. How does TG turnover compare to glycogen turnover in the heart?
Santosh Maurya	Great work Andrew!
Jil Tardiff	Hi everyone- thanks to all of the speakers and we have 12 mins to chat
Andrew Carley	For the TAC curves the exponentials are not different, only the linear phase is altered.
Andrew Carley	Thank you Dr. Taegtmeier. Look forward to your talk later.
Jil Tardiff	BTW - you can ask questions of any of the speakers, they are all o the chat
Farid Moussaviharami	Fantastic session!
Rene Packard	Thank you to all the speakers for a very informative session!!
Jil Tardiff	Andrew - a long, complicated and sometimes frustrating literature re: energetic flux in the context of genetic cardiomyopathies. Have you looked at this?
Andrew Carley	We have only briefly looked at genetic cardiomyopathies. Generally the degree of dysfunction is much larger and sometimes it is difficult to interpret the metabolic response when the heart is barely beating.
Farid Moussaviharami	Brett: in your assay how to you determine a physiologically significant change?
Venkatesh Sundararajan	Excellent work, Dr. Andrew
Joseph Wu	Fantastic session by all speakers!

Jil Tardiff	And a question to Sharlene - from your perspective, does the "old" literature hold up with respect to the later onset for MYBP-C, exceptions to all rules of course, but I'm curious from the clinical side
Sean Wu	Great talks to all speakers!
Heinrich Taegtmeyer	Jill and Andrew, you are correct, it is a long and complex story, but what we have just heard is a step into the right direction. More will follow, I am sure.
Andrew Carley	Dr. Taegtmeyer, we are still limited in what we can say about glycogen turnover. It is not as easily visualized.
Sharlene Day	Great question Jil. There are some things that hold up and some that don't as you might imagine. The age of onset is a bit older in the patients with MYBPC variants compared to myosin or thin filament. And the rates of some adverse events are less (for atrial fib and heart failure). But no difference in sudden death rates for example. And there's a huge spread. We do have many MYPBC patients diagnosed as children and young adults too.
Jil Tardiff	Andrew, might be interesting to look at much earlier timepoints in the animal models for example. The "preclinical" state is rising in importance in clinical care - an opportunity to intervene before things become too interwoven and complex.
Jil Tardiff	Shar, interesting re less AF/HF , fits with my experience - very different from my thin filament patients ..
Brett Colson	Great questions, Farid. In the assay, we can operate at the substoichiometric ratio of MyBP-C:actin ~1:7. Here, the assay is very sensitive even to sub-maximal phosphorylation (intermediate) levels in the in vitro system.
Sharlene Day	Yes, although in absolute numbers, there are tons of MYBPC3 patients with heart failure and atrial fib. Twice as many patients overall with MYBPC vs myosin. I think that is something that has only been recognized in more recent years.
Farid Moussavieharami	Are you able to use whole thin filaments from some of Jil's mice for this assay? That would be cool.
Farid Moussavieharami	Last question was for Brett!
Jil Tardiff	Just have a few minutes left - want to thank all the speakers and the AUDIENCE for the engaging discussion. A great start to what will be an exciting meeting. And if you enjoy sarcomeric biology (who doesn't??) , stay tuned for the moderated poster section coming up next. Great science there!
Guo Huang	Hi Jil, will the talks in concurrent sessions be open for us to watch later as well?

Farid Moussaviharami	Sarcomere is where it is all at!
Jil Tardiff	Guy - yes! you have 90 days access
Jil Tardiff	Guo- autocorrect!
Guo Huang	Great, Jil. Thanks!
Xiongwen Chen	That is great!

Concurrent Session 2A: Cardiovascular Risk Factors–Nicotine Use, Diet and Physical Activities as Modulators

name	message
Taylor Rondenell	Welcome! Thank you for joining us. You should be hearing music play as we wait for the session to begin. If you do not, please submit a support ticket by clicking on the Request Support button located at the bottom left of the player.
Loren Wold	Hi everyone and welcome to session 2A. I am your moderator, Loren Wold from the Ohio State University. We have three excellent talks lined up for you. If you have any questions, please post them in the chat and if they are not answered during the session, we will have time at the end for questions. Enjoy!
Naomi Hamburg	Hi Loren and everyone. Glad to be together and have discussion together. Naomi Hamburg
Jason Gardner	Good afternoon everyone.
Zhaokang Cheng	Thank you Loren!
Zhaokang Cheng	Jason, Looking forward to your talk!
Adam Wende	Looking forward to more great talks and discussion.
Jason Gardner	@Zhaokang Cheng (thumbsup)
Sakthivel Sadayappan	Thanks to the speakers and Loren for this session!!
Robert Lust	not sure the heart rate efftcs are actually abolished as much as simply the whole profile is shifted downwards. There is still a substantial bump with nictotine or smoking, even with BB
Aruni Bhatnagar	The delta (change in HR) in the presence of the beta blocker is much smaller than in its absence
Hind Lal	Dr. Bhatnagar, impressive data-the work is highly applicable to public health
Aruni Bhatnagar	Thank you
Sakthivel Sadayappan	Aruni, as always awesome talk!!
Loren Wold	Very exciting Aruni! Impressive data.

Poonam Rao	Dr. Bhatnagar, thanks for the great talk.
Rong Tian	great talk, Aruni!
Aruni Bhatnagar	It a bit awkward to talk to a camera, but I guess we all have to get used to the new normal.
Heinrich Taegtmeier	Agree with Rong (and everyone) - thanks for a great talk, Aruni.
Aruni Bhatnagar	Thanks Loren for organizing this session on this important topic
Naomi Hamburg	Great talk Aruni. how much of the CV effects of smoking or ecig do you think is attributable to nicotine?
Aruni Bhatnagar	I believe that most of the vascular effects of e-cigarettes - FMD, changes in HR and HRV are mostly due to nicotine
Poonam Rao	Dr Bhatnagar, Is it just nicotine or other things in the e-juice like acidifying salts can have synergistic effect on vascular function dysfunction?
Naomi Hamburg	So is low nicotine better or do we just not have a great way to test what the long term health effects will be of the other toxic elements in tob smoke/vape
Zhaokang Cheng	Interesting talk Dr. Bhatnagar! Was nicotine intake similar between the smoke and nicotine spray similar in the study?
Robert Kloner	Can anyone comment on concern that Vapers are more likely to get COVID? Dr. Kloner
Aruni Bhatnagar	There is not much evidence to say. The salt form of nicotine makes it easier to absorb, so salts may make nicotine actions more prompt, but there is no hard evidence either way
Poonam Rao	Okay. Thanks
Robert Lust	Bob, do you mean contract it, or be symptomatic, or more aggravated course from it?
Robert Kloner	All of the above
Poonam Rao	Will the temperature of the heating element used for vaping the e-liquid has any effects on the nicotine absorption?

Aruni Bhatnagar	We tried to match nicotine in the spray with e-cigarettes, but we are currently measuring plasma nicotine concentration in the two groups to see if they are equivalent
Zhaokang Cheng	Great! Thank you Dr. Bhatnagar!
Loren Wold	Bob: There is anecdotal evidence that smokers are more likely to have a difficult course if they contract COVID-19. I haven't found anything regarding if rates are different in positivity between smokers and non-smokers.
Venkatesh Sundararajan	Dr. Aruni, Great talk and information. Are there exceptions where people regularly use nicotine and still have no effect on the cardiovascular system. Is there any kind of resistance to nicotine use?
Robert Kloner	Thank you, Loren
Robert Lust	Bob, I'm trying to track the other session on COVID and heart at the same time, but so far, haven't heard anything about VAPING.
Aruni Bhatnagar	VS, not much data on that. We do know that even during the course of the day, people develop tolerance to the sympathomimetic effects of nicotine. Long-term smokers may be more resistant to nicotine, and some individuals may be more sensitive than others, but I have not seen reports of nicotine-resistance individuals
Naomi Hamburg	I know that studies are collecting information about vaping and COVID but so far I believe mostly speculation that could have an impact on disease severity. Smoking traditional cigarettes does appear to be a risk factor
Venkatesh Sundararajan	Thank you for the answer Dr. Aruni.
Robert Lust	VS and Dr. Bhatnager... seems like nicotine tolerance is hard to sort out from nicotine addition/dependence, as I would also imagine withdrawal. tim rewitout new dosing could also induce a significant sympathetic stress drive of its own.

Aruni Bhatnagar	Good point, Robert! That is precisely why it has been difficult to document the sympathomimetic effects of nicotine, although they may be easier to study in non-severely addicted population - which is what we did in our study
Loren Wold	Awesome talk Naomi, thank you! Looking forward to collaborating with you and your group on the ENACT program.
Jason Gardner	Great presentation Naomi Some of those flavoring compounds seem quite nasty when vaped.
Naomi Hamburg	thanks all. looking forward to working together!
Sakthivel Sadayappan	Exciting Jason! Look forward to watching your talk..
Aruni Bhatnagar	Great talk Naomi! Very impressive data with JUUL.
Jason Gardner	Sakthi! (thumbsup)
Jane Freedman	Great talk Naomi!
Venkatesh Sundararajan	Thank you Drs Bhatnagar and Robert for the insights.
Aruni Bhatnagar	Great data Jason! Did you consider measuring ACE2 levels, which might have significance in understanding the modulatory role of nicotine on SARS-CoV-2 infection.
Jason Gardner	Aruni, thank you. We measured ACE2, but found no appreciable changes in Lung, Heart, or plasma. We were surprised, because that was our original hypothesis.
Loren Wold	Excellent talk Jason...very interesting data.
Jason Gardner	Heart and lung rather.
Jason Gardner	no sig changes
Aruni Bhatnagar	Maybe the levels of ACE2 in the urine may be worth measuring
Loren Wold	Excellent session everyone.
Poonam Rao	Great talk Dr. Jason
Zhaokang Cheng	Interesting data Jason! Is the receptor required for nicotine uptake into the cells or body?
Rajarajan AmirthalingamThanda	Interesting talk Dr. Jason

Loren Wold	We've had great questions flying through the chat. We have a few minutes before they will lock this session.
Rushita Bagchi	Great session! Thank you to all speakers.
Longsheng Song	A great session. Thanks to Dr. Wold.
Poonam Rao	For ACe2 measurements, how long did you expose the animals?
Jason Gardner	Not sure about non-receptor mediated effects of the nicotine at this point.
Naomi Hamburg	Great work Jason!
Longsheng Song	Jason, enjoyed your talk.
Jason Gardner	thank you
Loren Wold	Have a great day everyone...stay safe

Concurrent Session 2B: Covid-19 and Cardiovascular Disease

name	message
Taylor Rondenell	Welcome! Thank you for joining us. You should be hearing music play as we wait for the session to begin. If you do not, please submit a support ticket by clicking on the Request Support button located at the bottom left of the player.
Sakthivel Sadayappan	Welcome to the exciting and one of the important sessions!
Sakthivel Sadayappan	Thanks to the speakers and moderator!!
Mina Chung	Welcome everyone! Please post any questions on this chat, and we'll try to answer them here.
Jiang Chang	Great program! Thanks for the organizers
Sakthivel Sadayappan	Thanks Mina and JC!
Jil Tardiff	(thumbsup)
Jil Tardiff	surprisingly high
Jiang Chang	Good to "see" you Sakthi and Jil!
Jil Tardiff	Right back at you, JC!
Rongxue Wu	Great program!
Mina Chung	What's your experience? Have you seen more stress cardiomyopathy/Takotsubo's?
Eduardo Marban	Takotsubo seems to be more common as a cause of HF than myocarditis in acute COVID-19
Jil Tardiff	Interesting.
Mina Chung	Thanks for showing that EM! Always seeking to see if viral particles are in the heart, in the cardiomyocytes or in the vessels or endothelium.
Farid Moussaviaharami	Dr. Marban, is the percent of patients with troponin elevation different from series of patients with sepsis?
Eduardo Marban	yes, more common in COVID than with bacterial sepsis or other illnesses (eg flu)
Jil Tardiff	Mina, Right? EM underutilized these days. Non-trivial to get good images - those were superb.
Elizabeth McNally	RNA scope can be used to look at viral RNA in heart tissue.
Mina Chung	Difficult to get done; autopsies don't seem to usually do EM preps.
Farid Moussaviaharami	Data seems similar to our experience here at University of Washington.

Rebecca Levit	RNA scope series just published in JAMA Cardiology - 61% of hearts positive
Eduardo Marban	Postive for RNA but infectious particles not demonstrated in that JAMA Cardiology paper
Mina Chung	Great suggestion on RNAScope and thanks for the reference.
Sumanth Prabhu	We have seen several cases with ECG evidence of myopericarditis -actual incidence may be higher than in autopsy series
Jidong Fu	Did those rare clinic events have highest elevation among those biomarker elevations?
Viswanathan Rajagopalan	Thanks for the wonderful presentation.
Eduardo Marban	not a clear correlation although teh higher the Tnl, teh worse teh prognosis
Xiongwen Chen	Did you try hydroquinine and does it induce arrhythmias? Thanks.
Xiongwen Chen	To Dr. Marban.
Mina Chung	Great talk Dr. Marban! Thank you!
Ivor Benjamin	AHA's COVID-19 response has funded Mike Bristow's group, which is taking patients to the cath lab at Colorado. Perhaps, ? collaboration.
Shyam Bansal	Great talk, Dr. Marban!
Eduardo Marban	We published a apper on hydroxychloroquine and azythro increasing QT interval in hospitalized covid apteints (JAHA)
Jidong Fu	Thanks, Dr. Marban. Great Talk.
Xiongwen Chen	Thanks. @Dr. Marban.
Ivor Benjamin	Eduardo, thoroughly enjoyed it!
Eduardo Marban	gracias amigo
Sumanth Prabhu	Very nice review Eduardo
Rongxue Wu	Thanks, Dr. Marban!
Sakthivel Sadayappan	Dr. Marban, very nice presentation!
Wenbin Liang	Thanks, Dr. Marban! Great Talk.
Kishore Wary	Enjoyed the presentation
Raj Kishore	Dr. Marban: is there a stem cell therapy avenue for Covid 19 possibly by immunomodulation?
Jil Tardiff	Thanks again, Eduardo !
Yiqiang Zhang	Thanks, Eduardo, Nice talk and updates.

Eduardo Marban	we published on cell therapy for COVID in Basic Research in Cardiology not long ago. Encouraging result in 6 vent-dependent ICU patients. Several large trials are ongoing now
Margaret Westfall	Is there a higher proportion of patients with a SNP such as factor V Leiden?
Raj Kishore	Thanks, Eduardo. Great talk
Mina Chung	Mike Bristow's work will be really illuminating - so glad his project is funded. We'll get real answers on CoV-2 in cardiac myocytes from endomyocardial biopsies!
Eduardo Marban	I am not aware of any SNPs yet associated with thrombotic risk but many groups are looking for them
Eduardo Marban	In the JASMA Cardiology autopsy series published today, the RNA (by in situ hybridization) was NOT in cardiomyocytes
Jamie Francisco	Is there any evidence of patients currently taking ACE inhibitors being "protected" from COVID either in the lungs or in the heart?
Eduardo Marban	Discrete areas lit up which the authors called interstitial cells, speculating they may be macrophages
Mina Chung	Interesting!
Eduardo Marban	Lost of emerging evidence now that ACE i and maybe ARBs are indeed protective
Eduardo Marban	but no big RCTs that are as-yet peer reviewed
Eduardo Marban	no big RCTs
Jamie Francisco	Thank you Dr. Marban! =)
Meenakshi Madhur	https://www.ahajournals.org/doi/10.1161/CIRCRESAHA.120.317134
Rongxue Wu	Dr. Marban, could use of ACE i and ARBs change the ACE2 level?
Eduardo Marban	yes there is evidence for that
Mitchell Elkind	Terrific presentations, Drs. Marban and Sethi. Thank you!
Rongxue Wu	I am wondering if increase in ACE2 may enhance the risk to get COVID-19?
Pilar Alcaide	Very nice overview and work, Drs. Marban and Sethi. Any insights into the Type I IFN axis and outcomes of myocarditis, or vascular thrombosis?
Mina Chung	Great echoes of RV thrombus!
Eduardo Marban	The Circ Res paper cited above was an associational study, not an RCT
Sanjum Sethi	Thank you!
Meenakshi Madhur	Yes that is true. I just wanted to share it. No RCT yet.

Mina Chung	No increase in COVID-19 positivity on ACEI or ARBs. Hard to answer the actual question of whether increase in ACE2 enhances risk difficult to answer directly in patients, mostly in vitro or animal studies.
Rongxue Wu	Thanks, Dr. Mina Chung
Spoorthy Burli	Thanks Dr. Sethi. What about DOACs?
Sanjum Sethi	re IFN axis, there is some evidence that there is impaired activity of type I interferon in COVID-19. Anything that promotes inflammation is going to potential have an impact on vascular thrombosis
Sanjum Sethi	We are not recommending inpatient use of DOACs for this currently. They are several ongoing trials for both inpatient and outpatient DOAC use
Sanjum Sethi	Meaning for prophylaxis. For Treatment we have been using DOACs on discharge
Meenakshi Madhur	Dr. Sethi - what are your thoughts on ASA for outpatients with covid19?
Spoorthy Burli	Thanks, that's helpful to know.
Sanjum Sethi	outpatient (not needing admission) or post discharge outpatients?
Jeffrey Hsu	Great presentation, Sanjum! Also, Eric Yang wanted me to relay his greetings to you.
Mina Chung	Great review of the hot topic of thrombosis in COVID-19! Thank you Dr. Sethi!
Sanjum Sethi	Thanks Jeff. Was he busy taking another 300 clips during a TEE? ;)
Sanjum Sethi	Thanks Mina!
Meenakshi Madhur	re: ASA question - outpatients not needing admission is what I meant.
Jeffrey Hsu	@Sanjum: I think he was actually finishing his usual 10,000 word "summary" findings of a TTE :)
Sanjum Sethi	re: ASA - it is relatively data free zone. We currently do not recommend this, but more because data is lacking. We actually don't know the rates of outpatient VTE related to COVID. Further, if you look at pre COVID data looking post treatment phase prophylaxis after initial event in DVT/PE patients, low dose DOAC performed better than ASA. Multiple DOAC trials are ongoing
Meenakshi Madhur	Thanks!
Sanjum Sethi	@Jeff - Glad to hear from you and tell him I said Hi also! - For context I know Dr. Yang and Dr. Hsu from my training at UCLA :)
Farid Moussaviharami	How are you determining the number of nodes?

Michael Lu	Thanks for the question -- I am not sure if I understand the question. Do you mean nodes in the convolutional neural network?
Farid Moussaviaharami	yes, what feature do you start with?
Farid Moussaviaharami	Chest x-ray can have a lot of data in it.
Michael Lu	In this case, the input was the raw chest x-ray image reformatted to 224 x 224 pixels
Michael Lu	so the CNN is seeing a 224x224 matrix of color/intensity values
Lindon Young	When could you give a therapeutic to give to potential heart attack patients to prevent the heart injury from Covid19 heart attack patients? How early in diagnosis could this be determined?
Mina Chung	Dr. Lu - great talk, loved to hear about AI and imaging in COVID-19. Impressed that with you might be able to get predictive results from normal looking CXRs. Thank you!
Farid Moussaviaharami	Thanks for the explanation!
Michael Lu	we used transfer learning from an existing mortality prediction CNN (see https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2738349)
Michael Lu	that CNN used google's inception v4 architecture as a starting point
DanielleJinkwang Kim	Is there anyway I can download the chat? There are numerous really interesting discussions
Michael Lu	so there was no planned number of nodes in the network, we just used this off-the-shelf architecture
Farid Moussaviaharami	Thanks for the explanation.
Mina Chung	Unfortunately, tech support says it's not possible to download the chat.
DanielleJinkwang Kim	Thanks for checking!
Michael Lu	If you highlight all of the text, then you can copy/paste into a word processor. It's a kludge and doesn't format very well but it works
Mina Chung	Thank you!
Meenakshi Madhur	I wonder if the difference is based on people's immune system - perhaps some people have less counter-regulatory immune function to prevent the cytokine storm and exaggerated inflammatory response seen in the fatal cases.
Mina Chung	Hopefully we can all collaborate for large genome-wide association studies of COVID-19 susceptibility or severity of disease.

Mei Methawasin	Regarding the endothelial damage from Covid-19, is there any down regulation in NO-PKG pathway?
Pilar Alcaide	Re. Dr. Marban's comment: the host anti-viral immune response must be critical at baseline to direct cardiac or endothelial cell protection or the perfect storm to induce damage and death.
Meenakshi Madhur	Co-morbidities increase risk of death from covid19 and these same co-morbidities (diabetes/hypertension/CAD) are generally associated with a heightened inflammatory response.
Farid Moussaviharami	POCUS can be very useful!
Rongxue Wu	Thanks, I have learn a lot
Mina Chung	Thank you everyone for your participation!
Willard Sharp	thanks
Michael Lu	Thank you
Sanjum Sethi	Thank you!

ACS Japanese: Inflammation and Cardiac Remodeling in Heart Failure

name	message
Joe Trusso	Welcome! Thank you for joining us. You should be hearing music play as we wait for the session to begin. If you do not, please submit a support ticket by clicking on the Request Support button located at the bottom left of the player.
Junichi SADOSHIMA	Hi everyone, this is ACS Japanese section to discuss Inflammation and cardiac remodeling in heart failure. Thank you very much for tuning in. I am Jun Sadoshima at Rutgers, a moderator for this session.
Junichi SADOSHIMA	I want to thank Drs. Tardiff, Wold and Sadayappan for their hard work to make BCVS2020 possible. I also thank Susmita Sahoo and others for their hard work for ACS2020.
Jiang Chang	Hi Junichi, good to see you
Junichi SADOSHIMA	The current session was organized by a group of senior Japanese investigators who are keen to assist young scientists' career development. The group includes Dr. Koichiro Kuwakara, Professor, Shinshu University, Dr. Tohru Minamino, Professor Niigata University, Dr. Ichiro Manabe, Professor, Chiba University, Dr. Mitsuru Ohishi, Professor, Kagoshima University Dr. Junichi Sadoshima, Professor, Rutgers New Jersey Medical School.
Jamie Francisco	Hi Dr. Sadoshima! Congratulations on the award!
Junichi SADOSHIMA	Hi JC. Good to see you, too.
Yang Xiang	thank you, Junichi for putting together this session!
Rajarajan AmirthalingamThanda	Junichi Sensei, Konichiwa
Junichi SADOSHIMA	Thanks. Jamie.
Jun Matsuda	Thank you for the arrangement, Dr. Sadoshima.
JoanHeller Brown	Hi Jun, yes thanks for doing this. Looking forward, best wishes, Joan

Junichi SADOSHIMA	We have three excellent talks today. If you have questions and comments, please post them during and after the presentations. We also have time for discussion after all presentations are completed around 4:45 PM (CDST).
Junichi SADOSHIMA	I look forward to having many questions and comments from all of you. Although it is now 6 AM in Japan, all the presenters are ready to answer your questions from the other side of the earth.
Liming Pei	Thank you, Jun, for organizing this.
Junichi SADOSHIMA	Hi Joan, Thanks for tuning in.
Dominic DelRe	Jun, thank you for organizing this session
Fuli Xiang	Excellent topics:)
Rong Tian	Wonderful session, Jun! Thx for organizing
Ronglih Liao	Thanks Jun for organizing this section!
Venkatesh Sundararajan	Going to be a great session!!! Thanks, Jun
Hideaki Inazumi	Thank you for giving me the great opportunity, Prof. Sadoshima.
Suresh Verma	Thanks Jun for organizing this section. Topics are really interesting.
Sakthivel Sadayappan	Excellent session, Jun!! Thank you for moderating. Thanks to the speakers!!
Loren Wold	Great job Dr. Sadoshima!
Sathyamangla NagaPrasad	Very nice session Jun!!
Rongxue Wu	Thanks Jun, I like the section!
Junichi SADOSHIMA	I am just moderating. All praise should go to Drs. Kuwahara, Minamino, Manabe and Ohishi.
Junichi SADOSHIMA	Dr. Inazumi, Very nice work. Is NRSF downregulated in human heart failure?
Blake Monroe	Did the dnNRSF mice develop fibrosis? If so did gao knockdown normalize it?
Yajing Wang	Hi, Hideaki, nice talk! did you measure the abnormal calcium concentration in cardiac specific OE GNAO1 mice compare to WT? I am wondering how much it change compare to normal calcium concentration....
Loren Wold	Exciting talk Dr. Inazumi!
JoanHeller Brown	Very lovely talk, congratulations. Do you see changes in hypertrophy and fetal gene expression or is the effect of altered Go more on HF development?
Joseph Wu	Agree, very exciting session and topics!

Hideaki Inazumi	JS: The expression of NRSF is not changed. I think the function of NRSF is downregulated in human failing heart too. however, the expression of Gao is decreased in human failing ventricular myocytes.
Pilar Alcaide	Very nice session. Does stretch induce cytokine production by primary macrophages? If so, which ones?
Jun Matsuda	PA: Thank you, unfortunately, primary macrophages were too vulnerable and we could not stretch well for 24 hours.
Hideaki Inazumi	BM:dnNRSF-Tg did not show clear fibrosis. I think it is partly because ventricle in dnNRSF-Tg have very high level of ANP, which function antifibrosis.
Fuli Xiang	Very interesting data!
Loren Wold	Great talk!
Pilar Alcaide	Thank you! very nice work!
Rong Tian	interesting work!
Fuli Xiang	Dr Matsuda, I am wondering how much stretch (%) have you applied and what is the frequency in your stretching device.
Blake Monroe	Thank you, Dr. Inazumi. Interesting talk!
Sathyadev Unudurthi	Interesting work Dr.Matsuda...In case of injury, the CCR2+ infiltrating macrophages overwhelm the heart, compared to resident macrophages. Did you happen to study those cells as well? Thanks
Rongxue Wu	It is a interesting topic!
Junichi SADOSHIMA	Thank you for the very good presentation Dr. Matsuda. It is very interesting to find that a molecule on macrophages senses stretch.
Hideaki Inazumi	YW: Sorry, i have not measured Ca concentration in GNAO1-Tg yet.
Sathyamangla NagaPrasad	Interesting work!! Dr. Matsuda was the primary macrophages plated on fibronectin or any other medium
Jun Matsuda	FX: 110%, 60 /min. We would like to stretch BMDM or cardiac macrophages, they could not stand this condition.
Fuli Xiang	Thanks
Yajing Wang	Hideaki, okay! thank you for your answer.
Ronald Vagnozzi	Great presentations - congrats to all! Question for Dr. Matsuda: how did you define your macrophages as cardiac-resident? Based on marker profile, or lineage tracing?

Guo Huang	To Dr. Matsuda: nice talk! Do you think Trpv2 is a direct mechanosensor or a downstream mediator of a stretch molecular sensor?
Jun Matsuda	SU: Thank you. In fact, we mainly studied about Ly6c- resident macrophages. Some other researchers tried to injection of Trpv2 KO primary macrophages in MI model.
Jun Matsuda	RV: Thank you. We minced murine heart and sorted cardiac macrophages from the heart.
Hideaki Inazumi	JB: Sorry, i have not checked gene expression or degree of hypertrophy in multi point.
Sathyadev Unudurthi	Thanks for your respose Dr.Matsuda. What was the effect of injecting Trpv2KO macrophages in MI heart? Thanks
Jun Matsuda	GH: Thank you. TRPV2 is already reported to be a direct mechanosensor in some other cells. And I guess this molecule works as well.
Hideaki Inazumi	LW: Thank you!!
Lindon Young	p16 is increased in in aged population..if you KO p16 will you increase the likelihood of cancer? p16 is a checkpoint between cyclin D to cyclin E i cell cycle
Fuli Xiang	Dr Matsuda, is the high expression of Trpv2 cardiac macrophage specific? I guess I am asking if it is also highly expressed in other organ resident macrophages.
Jun Matsuda	SU: Thank you. I remember they said TRPV2 works inflammative in recruited macrophages in MI, maybe opposite to cardioprotective effect in our resident macrophages.
Sathyadev Unudurthi	thanks Dr.Matsuda
Jinqi Fan	Hello Dr. Matsuda, Great job! did you check the expression levels of some cytokines? I guess some cytokine secreted by macrophage also support cardiac function? did you measure the calcium transient? thank you very much
Jun Matsuda	FX: Thank you. We compared RNA-seq profile among some organ specific macrophages, and only cardiac resident macrophages expressed Areg on the baseline.
Jun Matsuda	JF: Thank you. At least, in the Trpv2 cKO mice, the expression of IL-10 was suppressed. I haven' t checked Ca transient. I will consider about it. Thank you.
Masayoshi Suda	Dear Dr. Young. Thank you for your important question. p16 KO mice are known to death by several kind of cancers.
Junichi SADOSHIMA	All presentations are now open for questions and discussion.

Rajasekaran NamakkalSoorappan	That was an awesome session - Congratulations to all Speakers and Dr. Jun Sadoshima!
Rene Packard	Thank you to all for a very informative session!!
Patrick Hsieh	Dr. Suda, very nice work. How is the SAGP vaccination made?
Jinqi Fan	Thank you, Dr. Matsuda
Matthew Stratton	Great Session - thanks for sharing your work
Jun Matsuda	SN: Thank you. We use the mixture of collagen and fibronectin. I will consider trying again.
Fuli Xiang	Excellent talks. Thank you:)
Yibin Wang	Very exciting presentations! Great session.
Junichi SADOSHIMA	Masayoshi, Is SAGP expressed exclusively in senescent cells?
Jamie Francisco	Dr. Matsuda, excellent talk! I was wondering if TRPv2 effects the recruitment of other immune cells (neutrophils, CCR2+ monos + macs)?
Carl Lee	Thank you all! Very exciting presentations!
Masayoshi Suda	Thank you Dr. Patrick. Using lipid adjuvant and SAGP peptide.
Adrian Arrieta	Excellent talk Dr. Suda! To follow up on Patrick Hsieh's question? Is there any indication that such a vaccine would cause the immune system, especially in older mice (or patients ¹) to attack self?
Patrick Hsieh	Jun, great session with great talks.
Jun Matsuda	JF: Thank you. In sorting cardiac resident macrophages, we had counted other immune cells. But we did not find changes in number.
Jamie Francisco	Thank you!
Adrian Arrieta	Especially as older organisms have been reported to have lower T-reg cell populations.
Junichi SADOSHIMA	Vaccination is an interesting approach but isn't it a little bit risky? Do you see any side effect? What happen to cancer?
Abinayaa Rajkumar	Thank you!
Masayoshi Suda	Thank you. Dr. Sadoshima. We extracted the molecules which expression is very low in young cells and strikingly high in old cells. So SAGP expression in young cells are quite low.
Adrian Arrieta	Dr. Matsuda,
Masayoshi Suda	Dr. Arrieta. Thank you. Its important point. We have to analyze. Thank you so much.

Adrian Arrieta	Dr. Kenneth Walsh focuses on macrophages population that have Tet2 mutations that cause them to be hyper pro-inflammatory. Have you tried your stretch experiments on this type of macrophage?
Adrian Arrieta	Thank you Dr. Suda!
Luay Boulahouache	I didn't understand how targeting senescent cells with SAGP can help against atherosclerotic plaque while the data shown in KO shows that % plaque area increased.
Luay Boulahouache	Could someone explain?
Jun Matsuda	AA: Thank you. In this work we only used RAW264, as is, with inhibitors, and Trpv2 knockdown. Thank you for your suggestion.
Adrian Arrieta	Thank you Dr. Matsuda!
Fuli Xiang	Thank you Dr Sadoshima for organizing such a great session! BTW, congratulations on the award!
Junichi SADOSHIMA	I think KO promotes survival (increases) senescent cells but senolysis eliminates them.
Masayoshi Suda	Thank you Dr. Sadoshima. Vaccine is cheap way and safe way rather than antibody therapy in my opinion. But we need to check side effects. We are now working on the effect on the cancer. Thank you very much.
Junichi SADOSHIMA	Sorry I am wrong.
Kishore Wary	Enjoyed these presentations. Thank you.
Luay Boulahouache	No problem Dr. Sadoshima
Luay Boulahouache	Dr. Suda, how would the targeting of senescent cells overexpressing SAGP inhibit the formation of atherosclerotic plates if the deletion of SAGP promotes it? Would it be that senescent cells would still secrete a substance that can promote atherosclerotic plaques, so targeting them ends the problem?
Masayoshi Suda	Than you Boulahouache. It is very complicated. SAGP is a surviving factor and over expression of SAGP somehow attenuated the atherosclerosis. But SAGP cannot reverse senescent cells to normal cells completely. Just help the senescent cells.
Sakthivel Sadayappan	Awesome presentations from Japanese scientists from Japan. ACS is now part of the BCVS session! Thank you the support.
Sakthivel Sadayappan	Have a wonderful evening!
Luay Boulahouache	Got it, and as you said later in the discussion, it is way better to do senolysis rather than help the cells.

Junichi SADOSHIMA	I would like to thank all speakers for excellent presentations. I am proud of you. Thank you very much.
Luay Boulahouache	Thank you so much for the presentation! It was really well organized and informative.
Junichi SADOSHIMA	If you have more questions and suggestions, please directly contact the authors.
Masayoshi Suda	Yes that's right.
Junichi SADOSHIMA	Thank you very much for participating in this session. Stay healthy and enjoy the rest of the session and the summer. Hope to see you next year.
Jamie Francisco	Thank you everyone!
Masayoshi Suda	Thank you very much professor Sadoshima.

ACS Korean: Cellular and Molecular Mechanisms of Heart Failure

name	message
Joe Trusso	Welcome! Thank you for joining us. You should be hearing music play as we wait for the session to begin. If you do not, please submit a support ticket by clicking on the Request Support button located at the bottom left of the player.
Keith Jones	how long till this sessions begins?
Keith Jones	ok
Sakthivel Sadayappan	Young-sup, Thank you for moderating the session!
Joseph Wu	Thank you all!
Ronglih Liao	Adding my thanks to all involved in organizing this section.
SuhHee C	Yes, thank you!
DanielleJinkwang Kim	Very interesting talk! Dr.Park, how long was the follow up period?
Jiang Chang	Thank you Young-sup and good to see you!
Chulan Kwon	Hi, wondering which dev stages LPHN2 is required and if its LOF affects heart field specification.
Chulan Kwon	Any interaction with hopX?
Keith Jones	nice talk Dr. Park
Guo Huang	Nice to "see" you, Chulan.
Chulan Kwon	Hey Guo
Mingfu Wu	Hi Chulan, Good to see you!
Chulan Kwon	Hey Mingfu! Hope all is well!
Mingfu Wu	Yes, I am doing fine.
Rongxue Wu	I enjoy the section!
SuhHee C	I really appreciate this section, I have been reviewing literature on maturation of iPSC-CMs through longterm culture, mechanical bioreactors, and electrical pacing, but haven't seen as much from the genetic side
Guo Huang	Can the moderator turn off the music?
Hyun Kook	Thank you, all organizers and speakers!
Guo Huang	Thank you.
Rongxue Wu	Do you see any metabolism change in response to PGC1 ?
Guo Huang	Nice talk, Chulon!

David Paik	Great talk Dr. Kwon!
Stephanie Padula	Really great talk!
SuhHee C	Thank you Dr. Kwon!
Mingfu Wu	Innovating work, Chulan!
Sakthivel Sadayappan	Congrats Korean scientists!!! Nice talk Dr. Kwon!
Chulan Kwon	Thank you all
Emmanouil Tampakakis	Great talks!
David Wolfson	Thank you for the talk Dr. Kwon. Question, how easily can your new LP-FACS technique be implemented for adult cardiomyocyte flow
Sakthivel Sadayappan	Note that ACS Korean Session is now part of the BCVS. Thank you for your excellent support. We look forward to organize this again next year in Chicago.
Venkata Garikipati	Great Session!
Jinqi Fan	Great talk
Rongxue Wu	Great talk Chulan!
Chulan Kwon	To Rongxue- Yes, oxygen consumption rate goes up.
Taejeong Song	Appreciate nice talk dr. Kwon.
Chulan Kwon	Didn't know you are here ET
David Paik	💡💡
Austin Feeney	Great work Dr. Kwon! I am curious if all of the results presented were in mouse cells? Are human stem cell based studies underway?
Rongxue Wu	Thank you, Kwon
Katherine Yutzey	Do you have any ideas of what induces PGC1 after birth?
Chulan Kwon	To David - LP-FACS is very user friendly and enables sorting adult CMs. Please check our paper.
Ronglih Liao	THANK YOU to all speakers for wonderful lectures
David Wolfson	Great! Will check it out tonight. Thank you Dr. Kwon
Chulan Kwon	Hi Katherine,
Chulan Kwon	It could be CREB.
Dominic DelRe	Outstanding seminar. Can you comment on the relationship between PGC1/PPAR and Yap1? Thank you.
Chulan Kwon	Dominic - Thx for asking.
Chulan Kwon	Yap1 is well known as a regulator of CM proliferation

Chulan Kwon	However, growing evidence suggests that Yap1 could be a central regulator of CM hypertrophy
Chulan Kwon	You can check Dr. Sadoshima's work. It has a redundant role with TAZ
Chulan Kwon	We found that PGC1/PPAR directly regulates Yap1 expression
Dominic DelRe	That is very interesting. Beautiful work. Thank you!
Chulan Kwon	Thanks for listening!
Guo Huang	Hi Chulan, following Katherine's question, how many folds increase of Pgc1a did you observe in postnatal CMs?
Megan Rowton	Hi Dr. Kwon, great talk! Do you think that PGC1/PPAR are activated cell non-autonomously?