Thanks Steve. It brings me great pleasure to present my friend and colleague, Ximing Guo, with the 2021 National Shellfisheries Association Honored Life member award. I'm sorry we can't all be together with Ximing, but I'm happy to be able to have this opportunity to tell you why he was nominated and unanimously selected to receive this award.

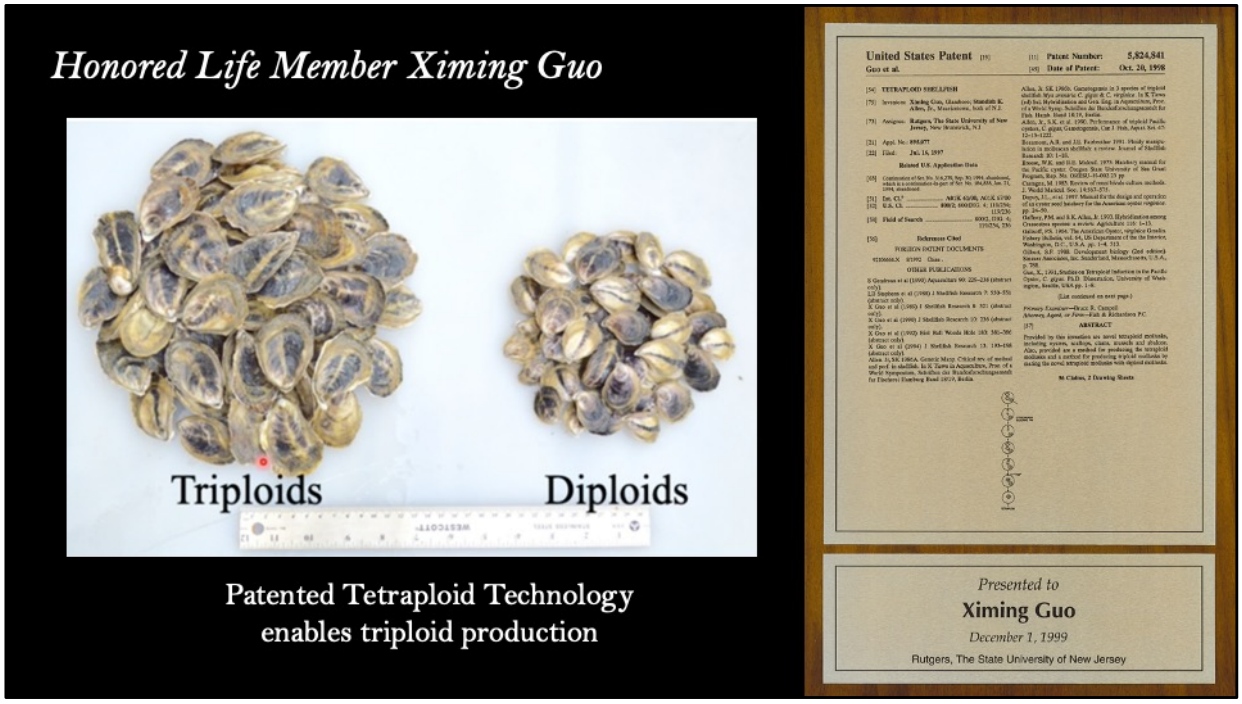
Let me start by noting the impressive list of internationally distinguished nominators that were more than happy to write strong letters of support.

Ximing was born about 150 miles south of Beijing in the small town of Donguang in Hebei province.
He found his way to Ocean University in Qingdao and there he met Dr. Lauren Donaldson of 'Donaldson Super Trout' fame.
It was Dr. Donaldson who enticed him to enroll in graduate school at the University of Washington where he earned a Master's studying triploidy in Rainbow trout and first learned about the use of tetraploid fish to make triploids.
Ximing stayed on for a doctorate but began working on ploidy manipulation in oysters. While others like Stan Allen and Sandra Downing were producing triploid oysters via chemical and physical induction following fertilization, Ximing thought they should be produced by mating diploids and tetraploids but tetraploid oysters didn't exist. He was going to have to create them. So after a few years of hard work, Ximing wrote up his dissertation which concluded, and I I quote verbatim, "None of the tetraploids produced in this study survived".

Despite that anticlimactic conclusion, Ximing, persisted. He was convinced there was a solution.

You see, he had actually learned quite from all his efforts. He hypothesized that the

extra DNA being carried in a diploid cell was simply too much for the cell to sustain. He needed a larger cell, but where would he find a larger cell. Well Stan Allen had moved on and found himself at Rutgers in need of a clever postdoc and he convinced Ximing to join him to continue their exploits in ploidy manipulation. I don't know if it was at Rutgers or while he was still in Washington, but Ximing tells me that he woke up from a dream one night and realized that the larger cells he needed where present in the triploids they had been producing via chemical means. He wrote down his thoughts, got to work and the rest is history.



Ximing and Stan had developed the technology to produce tetraploid oysters that could be crossed with diploids to yield 100% triploid offspring. They got the technology patented and it soon spread around the world where it is widely used in the aquaculture production of oysters to this day.

And I must confess that I stole this photo directly from Ximing's presentation yesterday, which, I suppose is a testament to how important this remains a topic of his research to this day.

Honored Life Member Ximing Guo

ARTICLE

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The oyster genome reveals stress adaptation and complexity of shell formation

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The Pacific oyster *Crassostrea gigas* belongs to one of the most species-rich but genomically poorly explored phyla, the Mollusca. Here we report the sequencing and assembly of the oyster genome using short reads and a fosmid-pooling strategy, along with transcriptomes of development and stress response and the proteome of the shell. The oyster genome is highly polymorphic and rich in repetitive sequences, with some transposable elements still actively shaping variation. Transcriptome studies reveal an extensive set of genes responding to environmental stress. The expansion of genes coding for heat shock protein 70 and inhibitors of apoptosis is probably central to the oyster's adaptation to sessile life in the highly stressful intertidal zone. Our analyses also show that shell formation in molluscs is more complex than currently understood and involves extensive participation of cells and their exosomes. The oyster genome sequence fills a void in our understanding of the Lophotrochozoa.

But Ximing didn't stop and rest on the laurels of his tetraploid success… no, he continue working on breeding oysters traditionally, examining their genetics, applying ploidy manipulation to the benefit of other aquaculture species, and much more. The quality of his work, his high rate of success and his quiet, unassuming benchmark of excellence earned him a high reputation that ultimately placed him in the position to co-led a team of colleagues to sequence the genome of the Pacific oyster. And this was no small team. I counted 87 co-authors on this seminal publication. This work has provided a foundation for comparative genomics and oyster breeding that is revolutionizing our understanding of so many aspects of oysters.

Honored Life Member Ximing Guo

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A bibliometric analysis of oyster research from 1991 to 2014

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Abstract In this study, a bibliometric analysis was performed to evaluate the global scientific production on oyster research from the period of 1991 to 2014. This analysis was based on the Science Citation Index Expanded database. A total of 11,493 publications were identified, and two main aspects were analysed: (1) publication performance and (2) research emphases and trends. The result indicated the annual publications on oyster study increased in number. The USA published the most papers in this field and was the most frequent partner in international collaborations. Pierre Boudry and Ximing Guo were the two most productive authors. The most productive institution was the French Research Institute for Exploitation of the Sea. The *Journal of Shellfish Research* and *Aquaculture* were two most productive journals. Analyses of author keywords suggested that "growth" was the most frequently used term followed by "aquaculture". The major research areas related to oysters were "growth, reproduction and mortality", "abiotic factors", "biotic factors", "immunity", "ecology", "pollution", "nutrition", "aquaculture and food safety" and "methods or technology". Researches about "*Vibrio parahaemolyticus*", "norovirus", "*Ostreid herpesvirus 1*", "climate change", "ocean acidification" and "pH" have become increasingly more common. "Proteomics", "transcriptome" and "ecosystem services" have been the new research topics in recent years. Overall, our findings may serve as an alternative way to learn about trends in oyster research and contribute to future investigations.

Along the way, Ximing has published a tremendous amount of work.

In a review of oyster research from 1991 to 2014, Ximing was identified as one of the two most productive oyster researchers in the world. That's among a list of 23,414 authors and co-authors during that period. I didn't' check, but I suspect that he still ranks that high as he hasn't slowed down one bit.

And it's not just oysters that he works on and publishes about, but pretty much anything aquatic that contains DNA. He has well over 200 publications, 266 according to google scholar…

Here's an analysis of his publication impact from google scholar. It's a plot of the number of times his papers have been cited over the past two decades. Look at this increase!

Many of us can only dream of having our work cited a thousand times in a year!

He has nearly 5,000 citations in the past five years!

It's no wonder the room is usually packed when Ximing gives a talk – I bet most of the audience has cited his work more than once.

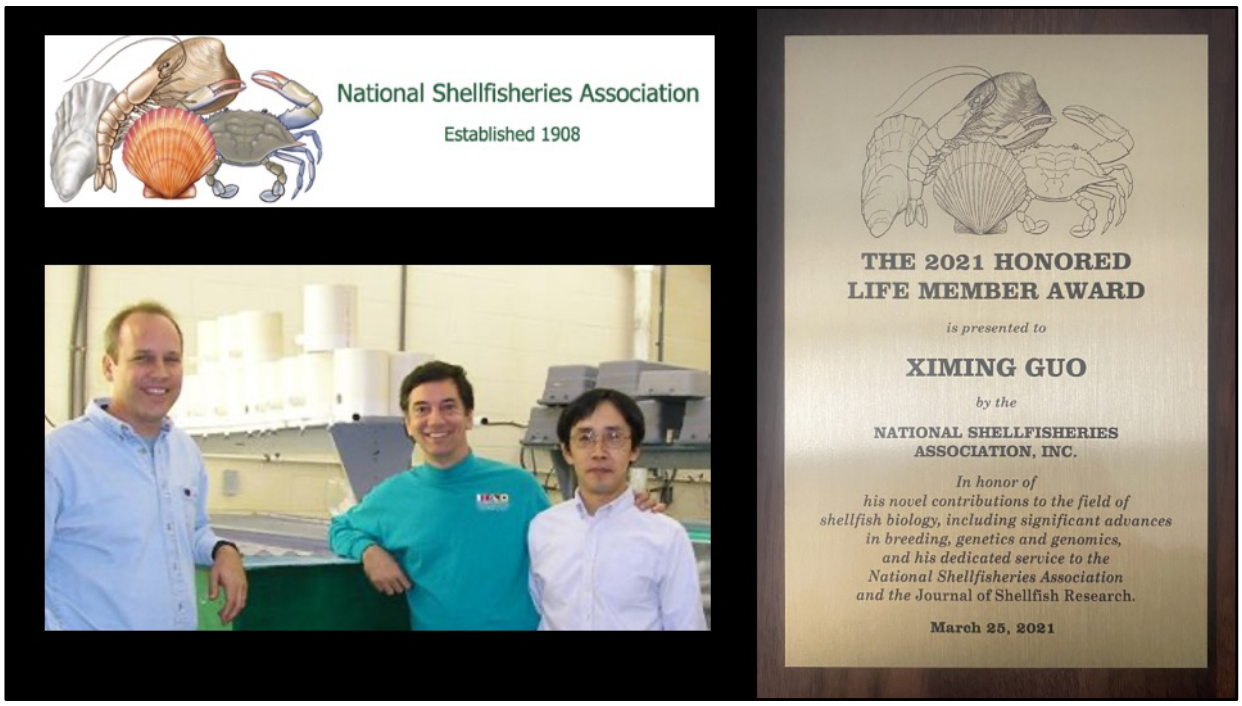
Sandy Shumway tells me that Ximing is among the most published authors in the Journal of Shellfish Research.

Not only does he publish a lot of his work, but he also serves as an Associate editor. In that role, he often takes on the difficult task of reviewing articles from non-English speakers. This important, but too often underrecognized work helps expose the rest of us to a world of research that we may not otherwise ever see.

Ximing serves on the editorial boards of several other international journals increasing his impact and service to the field for which we should all be thankful.

Others have recognized his impact. Here Ximing is being recognized by the Rutgers University Board of Trustees for his "Scholarly Excellence" along with several other top faculty. I don't have photos, but he serves on the faculty of several institutions around the world where he supervises students, develops collaborative research, and has been similarly recognized. He's received the "Chair of Excellence" award from the University of Caen in France, and the "Taishan Oversea Scholar" award from China among others. We're fortunate to have him as a dedicated, active and loyal member of NSA.

Personally, and I'm sure many of you feel the same, I find Ximing to be quiet, modest, amiable, professional and steadfast. It's an honor and a privilege to work with him, learn from him, and teach with him. I've beef fortunate to do that for the past 30 years…… under a variety of circumstances.



So now, on behalf of NSA President John Scarpa and all of NSA, I'm pleased to present Ximing Guo with the 2021 Honored Life Member Award in recognition of his novel contributions to the field of shellfish biology, including significant advances in breeding, genetics and genomics, as well as his dedicated service to the National Shellfisheries Association and the Journal of Shellfish Research.
Congratulations Ximing!