ISFE Welcomes the World to Baltimore

On behalf of the entire ISFE Executive and International Committees, it is my sincere pleasure to welcome you to Baltimore. This is the first ISFE meeting to be held in the USA. At every opportunity, please help me to thank our local hosts for organizing this important international gathering. Nilli Zmora, Yoni Zohar and Ten-Tsao Wong have put together an amazing program that I am sure we will all remember years after this 10th meeting of our society. Along with the regular series of symposia and posters we have special lectures, awards and plenary speakers. We have also provided student travel awards for attendees from all over the world.

I believe we are in the Golden Era of Fish Endocrinology. A dizzying arrays of research tools are now at our fingertips. We have the ideas and the vision to take a leap forward- discovery of new hormones and technological applications abound. Such meetings give us a special opportunity to hear about the latest discoveries directly from research leaders, rising stars and the new generation of scientists. Topics include in traditional aspects of fish endocrinology and the hot, emerging fields that will surely promote lively discussions, and hopefully fruitful new collaborations. Scanning the abstract co-authors, I found at least 23 countries represented. We are a cordial bunch of people, so newcomers beware- you are likely to make a new friend from another part of the globe!

I would like to thank everyone for their support and hard work over the past few years, as we revived and transformed ISFE. My sincere gratitude goes out to our Executive members Oliana Carnevaili (Vice-President) Arianna Servilli (Treasurer) and Romain Fontaine (Communications). The International Committee members have also been key to the success of the ISFE. At the end of the meeting, my term as President ends and Oliana Carnevali takes the reins of our society. Much work remains, so I ask you to support Oliana as she takes us in new directions. I also encourage you to get involved as we look forward ISFE 2028.

Yours Sincerely,

Vance L. Trudeau

President ISFE 2020-2024

Welcome from the local organizing committee

Dear Fish Endocrinologists,

We are very excited to welcome all of you, friends and colleagues of many years as well as newcomers to the field and the many students who are here, to one of the hubs of fish endocrinology research, at the Institute of Marine and Environmental Technology (IMET) of the University of Maryland in the beautiful Inner Harbor of the great city of Baltimore. IMET's mantra has always been the integration of traditional marine and fish biology research with the most advanced platforms of modern biology, biotechnology, genomics and post-genomics, as well as of fundamental and translational research, including in fish endocrinology. This mantra will be well reflected in the program of the 10th ISFE meeting that consists of many excellent and cutting edge oral and poster presentations. We want to thank all participants for your outstanding contributions to the meeting. Special thanks to Vance Trudeau, the highly effective and productive President of ISFE for the last 4 years, as well as to the other executive members of ISFE, for their valuable help in the organization of this 10th meeting. We are looking forward to yet another exciting ISFE that, judging by your abstracts, will highlight many significant advances in our field and demonstrate the accelerating progress in the science of fish endocrinology, driven by multidisciplinary and collaborative research. We are happy to proudly share with you IMET's unique research and fish experimental facilities, as well as provide the Maryland traditional seafood-based hospitality.

Welcome to the 10th ISFE meeting and to Baltimore!

The Local organizing committee: Nilli Zmora, Yonathan Zohar and Ten-Tsao Wong.

Instructions for Participants

Oral Presentations

A presenter's desk will be available near the registration desk. All presenters should submit their Oral presentation to the organizers, **the day before the presentation.** Bring your presentation (in Microsoft Powerpoint for **Windows not macOS**) saved in a USB memory stick. If you are using an Apple Mac computer to prepare your presentation at home, make sure that it runs well on a Windows-based computer, especially if you have videos or soundtracks.

The file should be labeled as "Oral **X_Lastname**_Session **Z**", where:
X = sequence number of the oral presentation, according to the Symposium Program,
Lastname = the last name of the presenter, and **Z** = Special session number

You should check your presentation in the presenter's desk computer, and make sure that all runs well. All presentations will be loaded in the projection computer the day before each Special Session, and no modifications can be made during the day.

Poster presentations

The accepted size for the Posters is A0 upright (119 cm height x 84 cm width). The poster must be printed on gloss or matt paperor light fabric. We will provide pins, double sided tape, and blue tag for putting up the posters. Posters should be placed on their corresponding board on the evening of Monday Sept 16 or next morning, and will be organized according to Special Session. Each Poster will be given a sequence number, and the boards will be numbered accordingly.

Program at a Glance:

Sunday Sep 15th- (IMET)	Monday Sept 16th (BCC)	Tuesday Sept 17th (BCC)	Wednesday Sept 18th (BCC)	Thursday Sept 19th (BCC)
	9:00-9:30 Opening Ceremony	**9:00-10:00 Y. Nagahama Lecture by Dr. Matan Golan**	**9:00-10:00 Plenary Lecture by Prof. Manfred Schartl**	**9:00-10:00 Plenary Lecture by Dr. Romaine Fontaine**
	9:30-10:30 R.E Peter Lecture by Prof. Berta Levavi-Sivan	**10:00-10:30 Session #4 Sex determination**	**10:00-10:30 Session Society General meeting (everyone is invited)**	**10:00-10:30 Session # 10 Stress**
	10:30-11:00 Coffee break	**10:30-11:00 Coffee break**	**10:30-11:00 Coffee break**	**10:30-11:00 Coffee break**
	11:00-12:45 Session #1 Neuro-endocrinology	**11:00-12:45 Session #4 Cont'd Sex determination**	**11:00-12:00 Session #6 Development**	**11:00-11:45 Session # 10 Cont'd Stress**
	12:45-13:15 Session #2 Reproduction		**12::00-13:00 Session #7 Behavior**	**11:45:-13:15 Session # 11 Endocrine Disruptors**
	13:15-14:30 Lunch break	**12:45-14:15 Lunch Break**	**13:00-14:15 Lunch break**	**13:15-14:45 Lunch Break**
15:00-20:00 Registration	**14:30-16:30 Session #2 Cont'd Reproduction**	**14:15-16:00 Session #5 Translation**	**14:15-14:45 Session #7 Cont'd Behavior**	
			14:45- 16:15 Session #8 Integrative Endocrinology	**14:45-16:00 Session #12 Genomics and Epigenetics**
17:00-18:30 ARC Tours	**16:30 17:00 Coffee break**	**16:00 -18:30 Poster Session + Coffee break +Wine bar**	**16:15-16:45 Coffee break**	**16:00-16:30 Coffee break**
	17:00-18:30 Session # 3 Feeding & Growth		**16:45- 18:15 Session #9 Osmoregulation**	**16:30-17:30 Closing Ceremony**
18:30-20:30 Welcome Reception at IMET		**19:00- 22:00 Orioles ball game at Camden Yards**	**19:00- 22:00 Conference dinner at IMET**	

* IMET- Colwell Center, 701 E. Pratt Street, Baltimore MD 21202
BCC- Baltimore Convention Center, 1 West Pratt street, Baltimore MD 21201

Session chairs and co-chairs, and State-of-the-art speakers

Session	Chairs	State of the Art speaker
1. Neuroendocrinology	Jose-Antonio Muñoz -Cueto- Spain Wei Hu- China	Vance L. Trudeau- Canada
2. Endocrinology of reproduction	Kataaki Okubo- Japan Ana Gomez- Spain	Shigeho Ijiri- Japan
3. Regulation of feeding/metabolism and growth	Ningping Gong- USA Helene Volkoff- Canada	Mark Sheridan- USA
4. Sex determination and gonadal differentiation	Yong Zhu- USA Ten Tsao Wong- USA	Desshou Wang- China
5. Translational Endocrinology	Abigail Elizur- Australia Berta Levavi-Sivan - Israel	Yoshizaki Goro- Japan
6. Developmental endocrinology	Adelino Canario- Portugal Aurea Orozco- Mexico	Adelino Canario- Portugal
7. Endocrine aspects of behavior	John Godwin- USA Scott Juntti- USA	Kataaki- Okubo Japan
8. Integrative action and cross-talk between hormones	Matan Golan - Israel Suraj Unniappan- Canada	Shinji Kanda- Japan
9. Control of ion balance and osmoregulation	Jason Breves- USA Ciaran Shaughnessy- USA	Yoko Yamaguchi- Japan
10. Endocrinology of stress	Subhash Peter- India Andre Seale- USA	Matt Vijayan- Canada
11. Endocrine disruptors and ecotoxicology	Glen Van Der Kraak- Canada Mercedes Blázquez- Spain	Laia Navarro-Martín- Spain
12. Genomics and epigenetics	Ramji Bhandari- USA Jan Mennigen- Canada	Ramji Bhandari- USA

Detailed Program

Sunday Sept 15th 2024	Colwell Center (701 E. Pratt Street, Baltimore)
15:00 – 19:00	Registration
17:00-18:30	ARC Tours
18:30	Welcome Reception

Monday Sept 16th 2024	Baltimore Convention Center (1 W. Pratt Street)
09:00 – 09:30	Welcoming **Yonathan Zohar, Vance Trudeau, Nilli Zmora**
09:30 – 10:30	R.E. Peter Lecture **Berta Levavi-Sivan** *"Novel neuropeptides as a switch between reproduction and growth"*
10:30-11:00	Coffee Break
11:00-12:45 **SS1. Neuroendocrinology** **Co-Chairs:** Jose-Antonio Muñoz-Cueto, Wei Hu	State-of-the-Art Presentation 1 **Vance L. Trudeau** *"The secretograninergic neuropeptide system is a critical player in reproduction"*
	Oral Presentation 1 **Tomer Aiznkot (Student)** *"Novel neuropeptides regulate the reproductive system in tilapia"* Oral Presentation 2 **Scott Juntti** *"Olfactory control of attraction and male parental care in cichlid Fish"* Oral Presentation 3 **Mar Huertas** *"Olfactory responses to bacteria activate distinct neurosteroidogenic pathways in rainbow trout brain"* Oral presentation 4 **José A. Paullada-Salmerón** *Does acute stress affect the reproductive neuroendocrine systems of the European sea bass? A regional and daily study* Oral presentation 5 **Wei Hu** *Olfactory gnrh3 crypt sensory neurons transduce sex pheromone signals to induce male courtship behavior in zebrafish*
12:45-13:15 **SS2. Endocrinology of reproduction**	State-of-the-Art Presentation 2 **Shigeho Ijiri** *"Mechanisms of maturation-inducing steroid production in fish"*
13:15-14:30	Lunch break
14:30 – 16:30 **SS2. Cont'd Endocrinology of reproduction** Co-Chairs: Okubo KataakIi & Ana Gomez	Oral Presentation 6 **Kohei Ohta** *"Cellular and molecular regulation of gonadal sexual plasticity in a natural sex changing fish"* Oral Presentation 7 **Yu Yang (Student)** *"Loss of function of vasoactive-intestinal peptide reduces male sex ratio and reproductive fitness in zebrafish"* Oral Presentation 8 **Maya Zanardini (Student)** "*Arginine vasotocin directly regulates spermatogenesis in adult zebrafish testis*"

	Oral Presentation 9 **Issei Yahiro** **"** *Evaluation of the consequences of the SDF1/CXCR4 signaling pathway on gonadal sterility in Japanese anchovy***"** Oral Presentation 10 **Suraj Unniappan** "*Positive actions of fibroblast growth factor 21 (fgf21) on female zebrafish reproductive axis*" Oral Presentation 11 **Erin Legacki** "*Steroidogenesis in Atlantic salmon tissues at time of ovulation*" Oral Presentation 12 **Hikaru Ishihara (Student)** "*Identification and analysis of androgen-induced "inconspicuous breeding coloration" in mouthbrooding male cardinalfish*" Oral Presentation 13 **Morgan Brown** "*Relationships between insulin-like growth factor I, lipid availability and sexual maturation onset in Atlantic salmon, Salmo salar*"
16:30-17:00	Coffee break
17:00-18:30 **SS3.** **Regulation of feeding, metabolism and growth** Co-Chairs: Ningping Gong & Hélène Volkoff	State-of-the-Art Presentation 3 **Mark Sheridan** **"***Reflections on the regulation of growth and coordination with the control of feeding and metabolism*" Oral Presentation 14 **Beth Cleveland** *"Growth performance and expression of insulin-like growth factors (igf) and igf binding proteins (igfbp) in gene edited rainbow trout lacking functional igfbp-2b"* Oral Presentation 15 **Munetaka Shimizu** **"***Utility of circulating insulin-like growth factor binding proteins as growth/stress indices in salmonids"* Oral Presentation 16 **Ningping Gong** *"Endocrine controls of larval metamorphosis and juvenile feeding of anadromous sea lamprey*" Oral Presentation 17 **Chie Umatani** *"Feeding-related peptide modulates breeding season-dependent feeding behavior in female medaka"*

Tuesday Sept 17th 2024	Baltimore Convention Center (1 W. Pratt Street)
9:00 – 10:00	Yoshitaka Nagahama Lecture **Matan Golan** *"Birthday hormone: the neuroendocrine control of hatching in fish"*
10:00-10:30 SS4. **Sex determination and gonadal differentiation**	State-of-the-Art Presentation 4 **Deshou Wang** *"Networking for reproduction: how direct cell-cell communication in the teleost HPG axis shapes its development and its output"*
10:30-11:00	Coffee break
11:00-12:45 SS4. Cont'd **Sex determination and gonadal differentiation** Co-Chairs: Yong Zhu & Ten-Tsao Wong	Oral Presentation 18 **Yong Zhu** *"Sex reverse and infertility in adamts9 ko zebrafish"* Oral Presentation 19 **Wai-Kwan Chu (Student)** "*An infertility model in freshwater angelfish: unraveling dnd1 gene role and the interplay of germ cells, sex development, and adipose tissue accumulation in reproduction*" Oral Presentation 20 **David Lior** "*Flathead grey mullet – from sex determination mechanism to production of all-female progeny*" Oral Presentation 21 **Hayashida Takao** "*Expression profile of candidate sex determining gene in pacific bluefin tuna*" Oral Presentation 22 **Binbin Tao** "*A novel nucleolar protein fdf1 is essential for oocyte development in zebrafish*" Oral Presentation 23 **Shan-Ru Jeng** "*The increased expression of cyp19a1, foxl2s, esrs and gths in the brain-pituitary axis during testicular differentiation in juvenile japanese eels"* Oral Presentation 24 **André Lasalle-Gerla (Student)** "*Gonadal transcriptome of undifferentiated sexed Siberian sturgeons reveals new genes involved in sex differentiation*"
12:45 – 14:15	Lunch Break
14:15-16:00 SS5. **Translational Endocrinology** Co-Chairs: Berta Levavi-Sivan &Abigail Elizur	State-of-the-Art Presentation 5 **Yoshizaki Goro** *"Rainbow trout with fsh receptor knockout are sterile in both sexes"* Oral Presentation 25 **Ten-Tsao Wong** *"Advancing fish sterilization methods by knocking down deadend: an antisense approach and a novel vaccination technology"* Oral Presentation 26 **Moriya Natsuko (Student)** "*Rainbow trout overexpressing a follicle-stimulating hormone gene produced chinook salmon sperm within 6 months"*

	Oral Presentation 27 **Jakob Biran** "*Genome-editing for enhanced feeding in Nile tilapia*" Oral Presentation 28 **Joseph Aizen** "*Enhancement of sub-optimal reproductive performance of male Flounder broodstock using recombinant flounder EGF"*
16:00-18:30	Poster Session in Room 309
18:30- 22:00	Orioles Ball Game in Camden Yards- required advanced sign up

Wednesday Sept 18th 2024 Baltimore Convention Center (1 W. Pratt Street)	
09:00 – 10:00	Plenary Lecture 3 **Manfred Schartl** *"Melanocortin4 Receptor Signaling in Regulation of Energy Homeostasis and Reproduction"*
10:00-10:30	***Society general meeting (Open for all)***
10:30-11:00	*Coffee* break
11:00-12:00 Session #6 **Developmental endocrinology** Co-Chairs: Adelino Canario & Aurea Orozco	State-of-the-Art Presentation 6 **Adelino Canario** *"A developmental role for Cortistatin "*
	Oral Presentation 29 **John Rawls** *"Tools for studying enteroendocrine cell subtypes in zebrafish"* Oral Presentation 30 **Aurea Orozco** *"Thyroid Hormone modulates oligodendrogenesis during development and following demyelinating insult in zebrafish"*
12:00 – 13:00 SS7. **Endocrine aspects of behavior** Co-Chairs: Scott Juntti & John Godwin	State-of-the-Art Presentation 7 **Kataaki Okubo** *"Estrogens synthesized in the brain of male medaka promote male-typical behaviors by potentiating androgen action in the brain"*
	Oral Presentation 31 **Yoav Gothilf** *"Old and new functions for the fish pineal gland"*
13:00-14:15	Lunch break
14:15-14:45 SS7. **Endocrine aspects of behavior** Co-Chairs: Scott Juntti & John Godwin	Oral Presentation 32 **Karen Gu (Student)** *"Progestin and its nuclear receptor directly regulate the prostaglandin f2a receptor and indirectly regulate reproductive behaviors in female astatotilapia burtoni"* Oral Presentation 33 **Kaj Kamstra** *"Initiation of socially controlled sex change in the New Zealand spotty wrasse"*

14:45– 16:15 SS8. **Integrative action and cross-talk between hormones** co-Chairs: Matan Golan & Suraj Unniappan	State-of-the-Art Presentation 8 **Shinji Kanda** *"Identification of fsh-rh and emergence of dual gnrh model in teleosts"*
	Oral Presentation 34 **Peggy Biga** *"Actions of growth hormone in rainbow trout, oncorhynchus mykiss, skeletal muscle cells in vitro"* Oral Presentation 35 **Ana Gomez** *"Insights into the amh / amhrii system in the perciform european sea bass (Dicentrarchus labrax)"* Oral Presentation 36 **Jakob Biran** *"Oxytocin signaling affects the homeostatic response to cold stress in tilapia"* Oral Presentation 37 **Suraj Unniappan** *"Nucleobindin-1-derived nesfatin-1-like peptide: a multifunctional regulator of fish physiology?"*
16:15– 16:45	Coffee break
16:45 – 18:30 SS9. **Control of ion Balance and osmoregulation** Co-Chairs: Jason Breves & Ciaran Shaughnessy	State-of-the-Art Presentation 9 **Yoko Yamaguchi** *"Osmoregulatory mechanisms in the inshore hagfish, Eptatretus burgeri: Is it "ancestral"?"*
	Oral Presentation 38 **Ninping Gong** *"Involvement of hormones and ion transporters in response to salinity changes in anadromous sea lamprey"* Oral Presentation 39 **Ciaran Shaughnessy** "*Regulation of cortisol and glucose in Atlantic sturgeon (acipenser oxyrinchus) during salinity acclimation*" Oral Presentation 40 **André Seale** *"Is there a limit to osmosensitivity? Environmental attenuation of hyposmotically-induced prolactin signaling in Mozambique tilapia"* Oral Presentation 41 **Stephen McCormick** "*The pituitary is directly responsive to changes in daylength and drives seasonal changes in migration physiology of salmon"* Oral Presentation 42 **Jason Breves** *"Salinity- and prolactin-regulated expression of Na+/H+ exchanger and clc-family Cl- channel genes in Atlantic salmon"*
19:30-22:30	Conference dinner at Colwell Center

Thursday Sept 19th 2024	**Baltimore Convention Center (1 W. Pratt Street)**
9:00-10:00	Plenary Lecture 4 **Romain Fontaine** *"Unveiling the Dance: Pituitary Plasticity and Reproductive Regulation through Thyrotrope-Gonadotrope Interplay"*
10:00-10:30	Coffee Break
10:30 -11:45 SS10. **Endocrinology of stress** Co-Chairs: Subhash Peter & Seale Andre	State-of-the-Art Presentation 10 **Matt Vijayan** *"Mineralocorticoid receptor signalling: a stress metabolism éminence grise"* Oral Presentation 43 **Ryan Chang (Student)** *"Differential responses between branchial and hepatic glucocorticoid receptors and glycogen metabolism during salinity challenges in mozambique tilapia"* Oral Presentation 44 **Khalid Enezi** *"Role of the ras-mapk pathway in facilitating acute stress-related behaviour in zebrafish larvae"* Oral Presentation 45 **Ciaran A. Shaughnessy** *"A novel 'promelanocortin' and the neuroendocrinology of stress in lamprey and hagfish"*
11:45 -13:15 SS11. **Endocrine disruptors and ecotoxicology** Co-Chairs: Van der Kraak Glen & Mercedes Blázquez	State-of-the-Art Presentation 11 **Laia Navarro-Martín** *"From genes to lipids: multi-omic approaches in environmental Toxicogenomics"* Oral Presentation 46 **Patrick Kestemont** *"Exploring the impact of estetrol on sexual differentiation in Rainbow trout (oncorhynchus mykiss)"* Oral Presentation 47 **Marta Lombo** *"Glyphosate under the spotlight: alterations in corticoid levels in female zebrafish and their effects on liver and brain metabolism"* Oral Presentation 48 **Sourav Chakraborty** "*PCOS-NAFLD, a multi-disease phenotype, developed in medaka four generations after BPA exposure"* Oral Presentation 49 **Arianna Servili** *"Do predicted future environments modulate the effects of Xenoestrogens on fish physiology?*
13:15 - 14:45	Lunch break
	State-of-the-Art Presentation 12 **Ramji K. Bhandari** *"What can the DNA methylation profile of eggs and sperm tell us about the health of future generations?"*

14:30 -16:00 SS12. **Genomics and Epigenetics** co-Chairs: Ramji K. Bhandari & Jan Meningen	Oral Presentation 51 **Sourav Chakraborty** "*Human NAFLD-NASH transcriptional signatures in the liver of medaka with a history of ancestral bisphenol A exposure*" Oral Presentation 52 **Nancy Denslow** *"Estrogen signaling in the brain of fathead minnows exposed to ethinylestradiol and levonorgestrel"* Oral Presentation 53 **Laia Navarro-Martín** *"Integration of epigenomics into multi-omic approaches for a better understanding of the effects of tributiltin in zebrafish embryos"*
16:00-16:30	Coffee break
16:30-17:30	Closing Ceremony

List of Poster Presentations

SS1. Neuroendocrinology		
P1	**Bin Wang**	Differential activation of galanin receptors by spexin peptide in the yellowtail kingfish
P2	**Kenny Uehara Shun (Student)**	Cholecystokinin is an essential hormone required for the secretion of follicle-stimulating hormone in medaka
P3	**Yalong Sun (Student)**	Heterogeneity within the gnrh3 population
P4	**Camilla Harillo (Student)**	New insights on the brian-pituitary axis of holocephalans: the chimaera *Callorhinchus callorynchus* a compelling model species to understand evolution
P5	**Ritu Narwal (Student)**	Neuroendocrine regulation of reproduction via GnIH in the murrel, *Channa punctatus*
P6	**Jessica Bowers (Student)**	Sex hormones as regulators of sex-specific olfactory sensitivity to pheromones in cichlid fish

SS2. Reproductive endocrinology		
P7	**Shuxian Wu (Student)**	Development of ovarian germ cell xenotransplantation technology between Atlantic salmon and rainbow trout
P8	**Ryomei Koya (Student)**	Transcription factor candidate genes that mediate lh stimulation and hsd17b12l expression in masu salmon
P9	**Jie Chen (Student)**	Somatostatins regulate metabolism and fecundity
P10	**Wenjing Tao**	Functional study of cpeb1 in tilapia oogenesis
P11	**Mercedes Blázquez**	Transcriptomic study of testicular maturation in European sea bass
P12	**Kyle Dominic Barnuevo (Student)**	Characterization of temperature-sensitive transient receptor potential cation channel subfamily vanilloid (trpv) 1 and its modulation of fshb expression in chub mackerel pituitary
P13	**Yudong Jia**	Melatonin stimulates turbot oocyte meiotic maturation and antioxidant capacity, inhibits apoptosis-related gene mRNAs in vitro
P14	**Samaneh Poursaeid**	Targeted mutagenesis of fads2 gene impacts spermatogenesis and spawning success in zebrafish

SS3. Regulation of feeding, metabolism and growth		
P15	**Hélène Volkoff**	Regulation of feeding in wild type and orange tiger barb *(Puntigrus tetrazona)*
P16	**Izutsu Ayaka (Student)**	Profiles of circulating insulin-like growth factor (igf)-1 and igf-binding proteins (igfbps) in igfbp-2b gene-edited rainbow trout
P17	**Oka Yuki (Student)**	High-fat diet induces sexually dimorphic effects to lipid metabolism in medaka

SS4. Sex determination and gonadal developemnt		
P18	**Denise Vizziano-Cantonnet**	Estradiol-17β but not 11β- hydroxyandrostenedione induces sex transdifferentiation in Siberian sturgeons
P19	**Nakase Hidefumi (Student)**	Four foxl2 paralogs, sf-1, and fsh signaling are involved in transcriptional regulation of aromatase gene in Japanese eel
P20	**Arai Tomomitsu (Student)**	Role of gonadal-soma derived factor (gsdf) on sex differentiation- related gene expression in nile tilapia
P21	**Huihong Zhao**	Exploring the role of foxl3 in sex regulation in orange-spotted grouper
P22	**Adam Luckenbach**	Reproductive physiology of sablefish resulting from different sterility induction methods: triploidization vs. Gene silencing

SS5. Translational endocrinology		
P23	**Hilla Turbowicz (Student)**	Exploring novel plasmid-based hormonal treatment to induce precocious puberty in late-maturing female fish
P24	**Jonas Miller (Student)**	Initial gene expression profiling of skin-mucus from the North American Atlantic salmon *(Salmo salar)*
P25	**Smirra Amitay (Student)**	Development of tools for early sex change in the Australian barramundi for establishing a reliable broodstock
P26	**Hodaya Lankry (Student)**	Comparative analysis of growth factors derived from piscean and mammalian sources

SS7. Endocrine aspects of behavior		
P27	**Westbrook Molly (Student)**	Understanding steroid drivers of early life aggression of a cichlid Fish
P28	**Yair Wexler (Student)**	The zebrafish pineal gland stabilizes the phase of the daily rhythms of locomotor activity following dark exposure

SS8. Endocrine disruptors and ecotoxicology		
P29	**Danielle Staggers (Student)**	Fluorescent transgenic zebrafish as a model for detection of estrogenic endocrine disruptors through the expression of vtg as a biomarker
P30	**Glen Van-der Kraak**	Ammonia blocks reproductive behavior and spawning in adult female zebrafish
P31	**Dianne M Baker**	Effects of perfluoroundecanoic acid (pfunda) exposure on thyroid gene expression in japanese medaka (*oryzias latipes*)
P32	**Mercedes Blázquez**	Molecular effects of progestins during zebrafish early development

SS10. Endocrinology of stress		
P33	**Mana Yamakawa (Student)**	Pituitary adrenocorticotropic hormone (ACTH) -producing cells in medaka directly scenes cold temperature
P34	**Setiawan, A. N**	Cortisol to acute stress response in farmed: *Seriola lalandi* (yellowtail kingfish) – evidence of consistent rapid recovery across size ranges
P35	**Ryan J. A. Chang (Student)**	Effects of freshwater dip on the stress response of longfin yellowtail, *Seriola rivoliana*

SS11. Integrative		
P36	**Anastasia Volkova (Student)**	Investigating gonadotropin regulation in tilapia pituitary cells: insights from a novel cell model

SS12. Genomics and epigenetics		
P37	**Lina Sun**	DNA methylation plays a critical role in testicular maintenance, but not in sex determination of male tilapia
P38	**Wenteng Xu**	Testis ubiquitination pattern in male and pseudomale of Chinese tongue sole provides insights into abnormal spermatogenesis