

20th International Xenopus Conference

CONFERENCE PROGRAMME



HOW TO GET THERE



WELCOME MESSAGE

At last we can welcome you all to our city on an island on the South Coast of England. Portsmouth was the birthplace of Lancelot Hogben, who pioneered using *X. laevis* in the Hogben pregnancy test, and for the last 19 years has been the home of one of our community's resource centres: the EXRC. As well as having a "frog history" the city has a massive naval heritage and we'll be visiting the breathtaking, recovered wreck of the Tudor warship the Mary Rose for our networking event during the conference.



SHOWCASE OF THE EXTRAORDINARY RANGE AND DEPTH OF RESEARCH POWERED BY XENOPUS

Welcome to the 20th International *Xenopus* conference. To our great disappointment the previous in person meeting in Portsmouth was cancelled due to covid, so we are especially happy to have you here. We are extremely grateful to our sponsors for their support of prizes and student travel, please take opportunities to meet them at their stands which will be alongside the resource centres' displays. We hope that you enjoy the science, the networking and the city.

Prof. Matthew J. Guille

PI of the EXRC

CONFERENCE PROGRAMME

The conference programme offers a rich lineup of talks, workshops, and networking sessions designed to showcase the latest *Xenopus* research and foster collaboration across the community. Please note that the programme is STILL subject to change, and updates may occur as speakers and schedules are finalised. Attendees are encouraged to liaise with the Organising Committee for the most current information.

CONFERENCE SCHEDULE FIVE - DAYS		
DAY 01 - SUNDAY - 17 AUGUST	12:00 - 12:20	Arrival with pastries/ Registration
	12:20 - 12:40	Welcome Talk
	12:40 - 13:40	Plenary Talk 1 with Aaron Zorn
	13:40 - 14:00	Talk 1 - Brian Mitchell Balancing tissue growth during epithelial morphogenesis
	14:00 - 14:20	Talk 2 - Dale Frank Evolution of MEIS Transcription Factor Activity during Metazoan Neural Development – Born to be Wild!
	14:20 - 14:40	Short break to say hello to everyone
	14:40 - 15:00	Talk 3 - Darek Gorecki Unravelling early disease mechanisms in Duchenne muscular dystrophy using a novel frog model
	15:00 - 15:20	Talk 4 - Sarah Bodwen Temporal chromatin dynamics and transcriptional regulation of mucociliary epidermis development

	15:20 - 15:40	Talk 5 - David Vijatovic From Tail to Limb: Enhancing the Amphibian Toolkit
	15:40 - 16:00	Talk 6 - Kerstin Feistel Mechanisms of cranial neural tube closure: How the interaction of endocytosis and actomyosin orchestrates neural morphogenesis.
	16:00 - 16:40	<i>Afternoon refreshments with mini cakes</i>
	16:40 - 17:00	Talk 7 - Leon Peshkin Xenopus Protein Atlas: missing proteins turn up in frogs !
	17:00 - 17:20	Talk 8 - Mustafa Khokha Discoveries in metabolism via embryology. - Patient driven gene discovery.
	17:20 - 17:40	Talk 9 - Marthe Boelens Uncovering Immune Dynamics in Wnt-Driven Desmoid Tumors
	17:40 - 18:00	Talk 10 - Taiyo Yamamoto Mechanisms of cyst formation in a Xenopus model of Autosomal Dominant Polycystic Kidney Disease.
	18:00 - 18:20	Talk 11 - Irwin Phanada Investigating the effect of strain rate on the cell cycle and nuclear morphology
	18:20 - 18:40	<i>Short break</i>
	18:40 - 19:00	Talk 12 - Karel Dorey Using a multi-scale approach to understand spinal cord regeneration from frogs to mammals
	19:00 - 19:20	Talk 13 - Shuyi Nie Cytoskeletal machineries in adaptive neural crest cell migration
	19:20 - 19:40	Talk 14 - Esther Pearl Key points from the UK's 2024 Amphibian Welfare Workshop
	19:40 - 20:00	Talk 15 - Anna Philpott To be or not to be (a neuron) - that is the question.
	20:00	<i>BBQ & Social until the last one standing</i>

DAY 02 - MONDAY - 18 AUGUST	08:20 - 08:40	<i>Start</i>
	08:40 - 10:00	Workshop 1
	10:00 - 10:20	<i>Coffee break with biscuits</i>
	10:20 - 10:40	Talk 16 - Jakub Sedzinski Single-cell morphodynamics predicts cell fate decisions during <i>Xenopus</i> mucociliary differentiation
	10:40 - 11:00	Talk 17 - Brandy L. Walker Deciphering the role of Dnmbp in kidney development: implications for CAKUT
	11:00 - 11:20	Talk 18 - Valentina Trivigno Ciliary dynamics and apical constriction shape rhombomere boundaries and stem cell niches in the developing <i>Xenopus laevis</i> hindbrain
	11:20 - 11:40	Talk 19 - Christof Niehrs 5-Formylcytosine is an activating epigenetic mark for RNA Pol III during <i>Xenopus</i> zygotic reprogramming
	11:40 - 12:00	Flash 1-min Talks
	12:00 - 14:00	<i>Lunch & Posters</i>
	14:00 - 14:20	Talk 20 - Carole LaBonne The Evolution of Gene Regulatory Networks: A View From the Crest
	14:20 - 14:40	Talk 21 - Michael Forsthofer Characterizing behaviour and neural activity from embryo to frog
	14:40 - 15:00	Talk 22 - Jakub Harnos Wnt-Notch cross and its impact on embryonic epidermis development using <i>Xenopus</i>
	15:00 - 15:20	Talk 23 - Leslie Sepaniac Synthetic control of Rho GTPase waves at the cell cortex

		15:20 - 16:00	<i>Afternoon refreshments with mini cakes</i>
		16:00 - 16:20	Talk 24 - Cecilia Cirio Exploring CHD7's Role in Developmental Disorders
		16:20 - 16:40	Talk 25 - Alice Blythe Functional evaluation of the presentation of a neurodevelopmental disease phenotype associated with genetic changes to the MED22 gene in <i>Xenopus tropicalis</i>
		16:40 - 17:00	Talk 26 - Nicole Edwards Disrupted endosomal trafficking of polarity proteins causes congenital trachea-esophageal separation defects
		17:00 - 17:20	<i>Short break</i>
		17:20 - 17:40	Talk 27 - Caroline Beck Pre-clinical models of developmental and epileptic encephalopathy (DEE) using <i>Xenopus laevis</i> tadpoles
		17:40 - 18:00	Talk 28 - Magdalena Brislinger Foxi1 regulates multiple steps during the patterning of the <i>Xenopus</i> mucociliary epidermis in a concentration dependent manner
		18:00 - 18:20	Talk 29 - Raghavan Thiagarajan Spatio-temporal dynamics and sub-cellular patterning of Basal bodies (BBs)
		18:20 - 18:40	Talk 30 - Emily K. Mis Leveraging <i>Xenopus tropicalis</i> as an ideal high-throughput model for epilepsy
		18:40 - 19:00	Talk 31 - Hui Chen Spatial Asynchrony of RNA Modifications Orchestrates Maternal-to-Zygotic Transition
		19:00 - 20:20	<i>Dinner</i>
		20:20 - 21:20	IXB Young Investigator Award Winner
		21:20	<i>Networking</i>

DAY 03 - TUESDAY - 19 AUGUST	08:20 - 08:40	<i>Start</i>
	08:40 - 10:00	Workshop 2
	10:00 - 10:20	<i>Coffee break with biscuits</i>
	10:20 - 10:40	Talk 32 - Anne-Helene Monsoro-Burq Insights into neural crest cell emigration regulated by PRDM12
	10:40 - 11:00	Talk - 33 Nydia Tejeda-Muñoz Interactions between genistein and Wnt pathway in colon adenocarcinoma and early embryos
	11:00 - 11:20	Talk 34 - Engin Deniz Xenopus as a Model for Hydrocephalus: Emerging Insights
	11:20 - 11:40	Talk 35 - Muriel Perron Signaling circuits linking inflammation to retinal regeneration
	11:40 - 12:00	Flash 1-min Talks
	12:00 - 14:00	<i>Lunch & Posters</i>
	14:00 - 14:20	Talk 36 - Lora Sweeney Innovations in spinal cord cell-type heterogeneity across vertebrate evolution
	14:20 - 14:40	Talk 37 - Artur Llobet Bilateral equalization of synaptic output in olfactory glomeruli of <i>Xenopus</i> tadpoles
	14:40 - 15:00	Talk 38 - Hyo Jung Sim Studying R-loops in development and disease
	15:00 - 15:20	Talk 39 - Rachel Miller HOP-loid p53 Variants in Li Fraumeni Syndrome: What <i>Xenopus</i> Reveals About Cancer Genes and Congenital Kidney Defects
	15:20 - 16:00	<i>Afternoon refreshments with mini cakes</i>

		16:00 - 16:20	Talk 40 - Rob Grainger Novel insights regarding the role of transcription factor Six3 in regulating early regional gene expression controlling initial events in retina patterning as revealed by single-nucleus RNA- sequencing comparing wildtype and mutant embryos of <i>Xenopus tropicalis</i> .
		16:20 - 16:40	Talk 41 - Arne Christiaens Monogenic inactivation of microRNA processing genes drives liposarcoma formation in <i>Xenopus tropicalis</i>
		16:40 - 17:00	Talk 42 - Adam Session Comparative genomics of allopolyploid <i>Xenopus</i> informs patterns of vertebrate genome evolution
		17:00 - 17:20	<i>Short break</i>
		17:20 - 17:40	Talk 43 - Jacques Robert Biological impacts of exposure to microplastics water contaminants during the development in <i>Xenopus</i>
		17:40 - 18:00	Talk 44 - Camille Boutin Shedding light on deuterosome to understand the control of centriole number in MCCs
		18:00 - 18:20	Talk 45 - Sulagna Banerjee Tadpoles in Focus: a functional model for AP3B2-linked epilepsy and therapeutic discovery
		18:20 - 18:40	Talk 46 - Stefan Hoppler Context-specific Wnt/ β -catenin signalling in early embryonic development: Exploring TCF/LEF isoform evolution, expression and function
		18:40 - 19:00	Talk 47 - Lance Davidson Supracellular mechanics of counter-rotational flows that initiate tailbud morphogenesis
		19:00 - 20:20	<i>Dinner</i>
		20:20 - 20:40	Resources Talk 1 with Peter Vize
		20:40 - 21:00	Resources Talk 2 with Filip Janiak
		20:40 - 20:40	General discussion on <i>Xenopus</i> resources with Mustafa Khokha
		21:40	<i>Networking</i>

DAY 04 - WEDNESDAY - 20 AUGUST

08:20 - 08:40	<i>Start</i>
08:40 - 09:00	Talk 48 - Soeren Lienkamp Precise, predictable genome integrations by deep learning–assisted design of microhomology-based templates
09:00 - 09:20	Talk 49 - Silvia L. López Early dorsoventral axis development: a Notch perspective
09:20 - 09:40	Talk 50 - Ira L. Blitz Foxi2 and Sox3 are master regulators of ectoderm specification
09:40 - 10:00	Talk 51 - Dave Thornton Defining the control of mucus structure and function using <i>X. tropicalis</i> embryos
10:00 - 10:40	<i>Coffee break with biscuits</i>
10:40 - 11:00	Talk 52 - Can Aztekin Oxygen sensing connects limb regeneration in amphibians and mammals
11:00 - 11:20	Talk 53 - Hyeyoon Lee Shaping an FGF signaling gradient directs <i>Xenopus</i> left-right axis formation
11:20 - 11:40	Talk 54 - Helen Willsey Using frogs to treat autism-associated constipation
11:40 - 13:30	<i>Lunch & Posters</i>
13:30 - 15:00	<i>Xenopus tropicalis</i> session
15:00 - 15:10	<i>Please head to the historic dockyard promptly!!!</i> <i>Group 1 (Names up to the letter L) will go first.</i>
15:15 - 18:30	The Mary Rose Tour & Talk What sank the Mary Rose? – Explore the ongoing mystery of the sinking of Henry VIII's favourite warship
19:00 - 20:30	<i>Dinner</i>
20:30 - 22:30	<i>Social with DJ Set</i>

DAY 05 - THURSDAY - 21 AUGUST

08:40 - 09:00

Start

09:00 - 09:20

Talk 55 - John Wallingford

Beating will continue... A novel protein complex in the tips of motile cilia

09:20 - 09:40

Talk 56 - Mohamed El AmriMarcks and Marcks-like 1 proteins promote spinal cord development and regeneration in *Xenopus*

09:40 - 10:00

Talk 57 - Ken Cho

Foxh1-Ezh2 complex controls spatial patterning of H3K27me3 deposition during zygotic genome activation

10:00 - 10:40

Coffee break with bisquits

10:40 - 11:00

Talk 58 - Gerhard Schlosser

Sox9 and Sox10 regulate different target genes during neural crest and otic placode

11:00 - 12:00

Plenary Talk 2 with Jerome Jullien

Epigenetic cues at the beginning of embryonic life

12:00 - 12:30

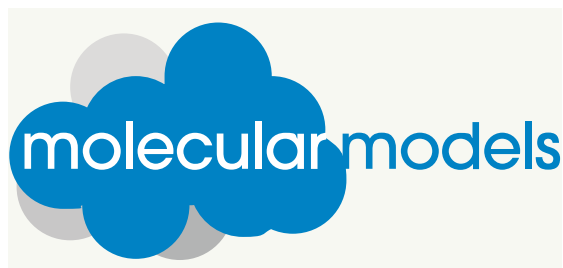
Conference finale

12:00 - 12:30

Conference finish

OUR SPONSORS

We extend our heartfelt gratitude to our generous sponsors, whose support has made this conference possible. Your commitment to advancing *Xenopus* research and fostering collaboration in our community is deeply appreciated.



NETWORKING EVENT

AT THE MARY ROSE MUSEUM



Source: <https://www.visitportsmouth.co.uk/things-to-do/the-mary-rose-p1560641>

- Time Travel to 1545: Explore a Tudor warship frozen in history.
- 19,000+ Artefacts: From weapons to personal items, every object tells a story.
- Meet the Crew: Learn about sailors, soldiers, and even a shipboard dog!
- Conservation Wonder: See the ship preserved through decades of careful care.
- Immersive Experience: Walk the decks, enjoy multimedia displays, and step into history.

Make the most of this fantastic networking opportunity at the iconic Mary Rose over a drinks reception with palatable cocktails and indulgent canapés.

WORKSHOPS OVERVIEW

MONDAY

18TH AUGUST - CONFERENCE DAY 01

- Workshop 1:

Disease, Welfare & Experimental Design (PO 1.51 - CR capacity 40) **Chairs:** Esther Pearl, Matt Guille, Gretel Nicholson, Kris Vleminckx
- Workshop 2:

Careers: mentoring, transitions & balancing family (PO 1.67 - CR capacity 40) **Chairs:** Helen Willsey, Richard Harland, Anna Philpott, Karel Dorey
- Workshop 3:

Getting grants: vision & approaches (UK, EU and US) (PO 0.41 - LT capacity 80) **Chairs:** John Wallingford, Mustafa Khokha, Peter Walentek, Sarah Woolner, Christof Niehrs
- Workshop 4:

Xenbase updates (title tbc) (PO 0.28 - LT capacity 80) **Chairs:** Christina James-Zorn, Aaron Zorn, Peter Vize (with EXRC and NXR representatives)

TUESDAY

19TH AUGUST - CONFERENCE DAY 02

- Workshop 1:

Disease, Welfare & Experimental Design (PO 1.51 - CR capacity 40) **Chairs:** Esther Pearl, Matt Guille, Gretel Nicholson, Kris Vleminckx
- Workshop 2:

Careers: mentoring, transitions & balancing family (PO 1.67 - CR capacity 40) **Chairs:** Helen Willsey, Richard Harland, Anna Philpott, Karel Dorey
- Workshop 3:

Getting grants: Promoting the Model (UK, EU and US) (PO 0.41 - LT capacity 80) **Chairs:** John Wallingford, Mustafa Khokha, Peter Walentek, Sarah Woolner, Christof Niehrs
- Workshop 4:

Xenbase updates (title tbc) (PO 0.28 - LT capacity 80) **Chairs:** Chris tina James-Zorn, Aaron Zorn, Peter Vize (with EXRC and NXR representatives)

THANK YOU
FOR VISIT
CONFERENCE
PROGRAM.



2025

CONTACT US

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