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FROM THE MEETING

# Spawn again — 14th BoS Meeting swims into Sheffield

Delegates from around the world have met in the historic Hassop Hall near Sheffield, UK, to attend the 14th Biology of Spermatozoa (BoS) meeting.

Originally conceived by Tim Birkhead and Harry Moore at the University of Sheffield, UK, as a one-off 'sperm day' in 1992, BoS has become a biennial event with a remit much more wide ranging than simply sperm biology, including topics such as sperm–ova interactions, evolutionary genetics, and genital anatomy and function. Although Birkhead remains closely involved in the meeting, it is now organized by a steering committee led by Rhonda Snook, also from the University of Sheffield.

"The ethos of this conference has always been to foster highly interactive discussions on work in progress," Snook told *Nature Reviews Urology*. "There is such enthusiasm that discussion continues through both formal and informal parts of the programme, with every meeting stimulating new research ideas and collaborations. Personally, seeing how the field moves on every other year is both energizing and amazingly good fun."

Most delegates return to the meeting year on year, with many having attended all 14 of the BoS conferences spanning 25 years. First-time attendees are treated to a meeting in which the focus is on discussion and collaboration, with 30-minute presentation slots to enable lively debate.

After the five-course dinner provided by Hassop Hall — a tradition of the conference — this year's meeting formally opened with Tim Birkhead's retrospective plenary on his life as a sperm biologist. Birkhead fondly described his early career and his long-term study of guillemots on Skomer Island.

BoS presentations are diverse, in terms of both the wide range of topics under discussion and the species under examination. The first day's plenary from Simone Immler at the University of East Anglia, UK, discussed germline–soma interactions, primarily in fish species. Immler described how maintaining genetic stability of the germline to keep the mutation rate low seems to be costly to the organism. Germline-free fish were used as a model and exposed to radiation before the dorsal fin was clipped and regeneration measured as a marker of somal fitness. At 9 days postradiation, germline-free fish regenerated their fins more quickly than normal fish; Immler hypothesizes that this effect reflects that these individuals do not have to maintain a germline and can, therefore, focus their energy on somal regeneration.

By contrast, the Day 2 plenary, from Steve Publicover at the University of Birmingham, UK, presented his work on calcium signalling and sperm behaviour in human sperm.

"I knew very little about BoS before the meeting as I work on human sperm physiology rather than evolutionary aspects of reproduction such as sperm competition and male–female conflict," comments Publicover, a first-time BoS delegate. "I really enjoyed the meeting and found many of the talks fascinating — the approach is very different from but complementary to how I'm used to looking at sperm function." Publicover's plenary session discussed the functional significance of sperm behaviour in humans and the evidence that behaviour is controlled by intracellular calcium concentration ($[Ca^{2+}]_i$), considering how cues from the female reproductive tract might use $[Ca^{2+}]_i$ signalling to control sperm behaviour to ensure that the location and timing of such behaviour are optimized.

As well as humans, data were presented on species as diverse as *Drosophila*, deer mice, zebra finches, salmon, dung flies, flatworms, and dolphins. Highlights of the poster sessions included work on vaginal shape in cetaceans from Patricia Brennan at Mount Holyoke College, USA, and a presentation of novel approaches to sperm cryopreservation in endangered species at the Allwetterzoo Münster, Germany, from Jens Ehmcke.

The next BoS meeting is planned for 2019.

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