



Dear colleague,

It is with great pleasure that we write to share information about the next conference of the Preimplantation Genetic Diagnosis International Society (PGDIS). The key dates for your diary are Monday 17th of April until Wednesday 19th of April, with the conference taking place in the beautiful and vibrant city of Paris. Our previous meeting, in Berlin, was a great success (https://pgdis.org/pgd_past.html), and it was such a pleasure to see our community coming together again after two long years of COVID-induced separation. With travel restrictions continuing to ease around most of the world, we look forward to an even greater opportunity for us all to reconnect and exchange ideas in Paris next year.

This will be a landmark meeting, not only because it will be the 20th PGDIS conference, but also because it comes at a time when technical advances are creating exciting new possibilities for the diagnosis (and even treatment) of embryos, offering hope to patients, while simultaneously creating new ethical and regulatory challenges.

The theme of the conference will be 'PGT – The Next Generation', reflecting two important aspects of the meeting. Firstly, the strong desire of the PGDIS to encourage young scientists - the future of our field and of this Society - to attend and contribute to the meeting. Early-career basic and clinical scientists are urged to submit their research, or summaries of their experience, for presentation. Secondly, there is a sense that PGT is entering a new phase, as some strategies, formerly considered experimental or niche, reach maturity and enter mainstream use, while innovative technologies begin to open entirely new avenues for understanding and interacting with gametes and preimplantation embryos.

The possibility of a shift away from observation and diagnosis of embryos, towards intervention and cure, will be key area for discussion during the meeting. As a community, it is critical that we understand what is possible right now and have a chance to evaluate the opportunities (and potential difficulties) on the near horizon. The PGDIS 2023 conference will provide a forum for sharing information about approaches such as genome editing and spindle/pronuclear transfer, allowing discussion of experimental successes, technical limitations encountered, as well as safety and ethical concerns.

While hearing about new strategies and novel technologies will undoubtedly be a highlight of PGDIS 2023, one of the most practically valuable aspects of the conference will come in the form of updates concerning some of the traditional forms of PGT. Over recent years, we have seen ever more referrals for PGT-M, illustrating the extent to which this valuable reproductive option has become an accepted strategy in many countries. Meanwhile, PGT-A continues to gain momentum, with hundreds of thousands of embryos now being tested annually worldwide. Some PGT methods appear to have reached a technical plateau, for example PGT-A methods have converged on the use of next generation sequencing (NGS), giving the appearance that there is little more to discuss in terms of methodology. However, this is an illusion. The reality is that substantial differences remain between alternative PGT-A platforms and that levels of accuracy and validation vary widely. Differences in performance have contributed to some of the controversies that have dogged PGT-A, leading to variation in the reported rates of mosaicism, and even aneuploidy.

The PGDIS 2023 conference will provide an opportunity to discuss what approaches we should take to maximise the accuracy of PGT-A and to evaluate how well current methods are performing clinically. The thorny issue of mosaicism will be discussed in the light of the recent statement made by the PGDIS (*RBMO, 2022; 45:19-25*), the soon-to-be-published guidance from ESHRE, and important papers on this subject presented at the ASRM in October. What is the best available evidence concerning the outcomes of mosaic embryo transfer? Have changes to society guidelines/opinions gone far enough?

Other areas to be covered by the conference include non-invasive PGT, which has generated substantial interest over the past few years, but still appears to fall well-short of the accuracy delivered by trophoctoderm biopsy. Is there hope for further improvements to accuracy? Will there be a clinical place for niPGT, if it fails to match the accuracy of more 'invasive' methods? With falling costs of next-generation sequencing, the conference will also consider whether whole genome sequencing of embryos is now desirable from technical, economical and ethical perspectives. Finally, fascinating new insights into the biology of human gametes and embryos will be shared, with relevance for embryo selection, PGT and future efforts aimed at genome editing.

PGDIS 2023 is shaping up to be a memorable meeting and we very much hope you will be able to enjoy it with us.

Looking forward to welcoming you in Paris!

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