



NICHD 10th Structural Birth Defects Meeting

Fishers Lane Conference Center • Rockville, Maryland • December 8–10, 2014

Tips for Best Practices: from the discussion “Establishing Successful Basic Science and Clinical Collaborations to Study Structural Birth Defects”

Formulate a collaborative framework for more than just “this gene” – where do you want to be in 5 years? Don’t think in incremental steps. Invest in the process up front – it could change how you approach collaborations.

Seek mentoring: it is helpful to have guidance in developing collaborative and professional relationships.

Seek new colleagues who have synergistic (non-overlapping) skills.

Understand that finding the right collaborator may take a lot of time, but it should be considered an investment in your future success.

Collaborators are often just a phone call away. Most are willing to listen and help.

Beyond the phone call, collaborations take time! Get exposure to the collaborator’s field. It may take years to teach each other what needs to be known for a really successful collaboration to move the science forward. It’s an investment in the future.

If you are a developmental biologist, self-identify as a structural birth defects researcher and reach out to appropriate clinical colleagues.



Be persistent when reaching out to clinicians and realize that their time is constrained. “Stalk” them by attending weekly clinical grand rounds. Volunteer to present rounds as a way to get to know clinicians on their turf.

Basic scientists should take the time to learn about the culture of medical training: what are the specialties? What is a medical fellow? What is the NICU, PICU, what role do pediatric surgeons play? Take Human Subjects Research Training to understand what it means to interact with patients and to do research with humans.

If possible, it may be helpful to establish a joint appointment in a clinical department having investigators with shared interests.

If you are a clinician, remember the fundamentals of evolution: functional conservation of underlying genes and genetic networks exists between humans and animals.

Remember the commonality of underlying genetic pathways between organ systems during development; look beyond your organ system of interest for collaborators.

Clinicians need to remember that the basic sciences are there for them to tap in their quest to understand how to help their patients.

“Social networking” for genes: see <https://genematcher.org/> designed as a freely accessible web-based tool to enable connections between clinicians with clinical WES data and basic scientists working with animal models from around the world who share an interest in the same gene or genes. Submit your gene of interest (by gene symbol, base pair position, [Entrez-](#) or [Ensembl-Gene ID](#)) and it automatically will connect you with investigators who post the same gene. Follow-up is at the discretion of the submitters.

Consider a collaboration as an exciting opportunity in addition to what “has to get done.”

Junior people are playing an important role in collaborations these days; they are often most effective in driving collaborations as they can be perceived as non-threatening and as experts in new technologies. Everyone will take a meeting with them!

Junior scientists should consider writing a review article as a means to get their name out there and broaden the impact of their research. It will help others find them.

Keep your website up to date so that potential collaborators can find you!

Collaborations are essential for high quality research; first and last authorships don't necessarily count for everything (*but do understand the "rules of the game" for promotion and tenure at your institution*).

The culture surrounding collaboration and how it is evaluated is changing, so be prepared to describe what your role is and what value you bring to the team approach.

Conference attendance is a great way to meet future collaborators. Look for conferences with a good balance of basic and clinical topics.

Academic societies need to commit a portion of their annual meetings toward fostering a culture of collaboration and building bridges by inviting speakers and running sessions to present their constituents with the "other" point of view. As a member you should play a role in this process.

Funding for *initiating* collaborations likely is available from your institution, from foundations, or from patient advocacy groups.

Recognize that research is funded through taxpayer dollars; therefore, continued funding rests on solid scientific literacy. You have a role to play in this!