

Autism Speaks and Plum™ Analytics Team Together

Autism Speaks is the world's leading autism science and advocacy organization, dedicated to funding research into the causes, prevention, treatments and a cure for autism; increasing awareness of autism spectrum disorders; and advocating for the needs of individuals with autism and their families.



Reporting to Donors and ROI

It is important to Autism Speaks to tell their donors what impact their donations are having. Ed Clayton, Autism Speaks Senior Director for Strategic Funding and Grants Administration describes his donor base, "We are not funded by one or two or three very wealthy individuals, a lot of our money is coming from people giving \$25 or \$50 at a time at a walk or a fundraiser event." As a progressive research funding organization, Autism Speaks has worked hard to track the effect or return on investment (ROI) of their grants so they can tell this donor base what is happening with the money they donate. But as Clayton comments, "It's really a challenge for all funding organizations, big or small to track return on investment."

Clayton describes the efforts they put forth in tracking ROI. One of the things they do is look at publications – How many publications? Where were they published? They also look at funding leverage. For example, if they gave a \$150K pilot grant to an investigator, did he or she turn the data they generated from that grant into a bigger \$2.5M grant with NIH? They check if an investigator received a patent, or if they were on the nightly news. They also track their investigators for three years after a grant has ended.

But, this wasn't enough. As Clayton puts it:

You know, when you are going back to your donors, the people that are actually holding up your organization with their donations and you're telling them, or they are asking you, "what happened with the money I gave you?" and the only thing you can really tell them is, "Oh well, with that grant they published three papers, one was in a decent journal and two were in middling journals" what does that mean to them? It doesn't really mean anything to them; it doesn't make any kind of impact on them. They can't really see what their dollars have turned into and what's



impacting their lives or the lives of their children with autism. So, it's a struggle for us and we've always tried to look for another way.

A Fateful Meeting

Plum™ Analytics is a company founded at the beginning of 2012 with the vision of bringing modern ways of measuring research impact to individuals and organizations that fund, perform and use research. A year later, Plum Analytics launched their product, PlumX™. PlumX is an impact dashboard that provides information on how research



output is being utilized, interacted with, and talked about around the world. Harvesting metrics from a wide array of sources, PlumX gives you insight soon rather than

waiting years until the research is eventually cited.

In looking for another way to measure ROI, Autism Speaks Chief Science Officer, Rob Ring, was aware of an upcoming meeting about the article-level metrics movement that was funded by the Sloan Foundation in the fall of 2013 in San Francisco. Ring sent Clayton and one of his colleagues, Ryan Butler, to the meeting where they saw Andrea Michalek, Co-Founder and President of Plum Analytics, present what they were doing with the University of Pittsburgh and their product PlumX.

During her presentation, Michalek described what they were doing with Pitt and how they were tracking and aggregating metrics at multiple levels within the organization including researcher, lab, department, etc.

As Clayton tells it, while he listened to Michalek talk about how PlumX tracks research output and he heard her describe tracking by an investigator and that investigator is part of this department and that department is part of this school, he realized that she was really describing how Autism Speaks tracks grants, "As she's talking I'm just in my head saying this would be a very easy way for us to look at the output from our funded grants," said Clayton. At Autism Speaks, there is a grant that is tied to an investigator, and that grant that is part of a portfolio – etiology, public health, medical research – and that investigator is part of a university, that university is part of a specific part of the country. These are the areas or levels that are important to them.

As Michalek continued the presentation she talked about the different metrics that PlumX tracks and Clayton started to realize that Autism Speaks could see more of the social impact of their grants. This included how many times something has been discussed on Facebook, how many times research has been tweeted, or when something is blogged. Clayton relates that Autism Speaks always asks for major press



but “not everything can get on the nightly news.” After hearing Michalek at the San Francisco meeting Clayton and his Butler looked at each other and said, “that’s what we are looking for.” Further, Clayton said:

PlumX can give our donors and our community a way to really visualize the actual impact of their donations and a way that frankly, no other biomedical organization is doing; no one else is really putting it out there that way. So we viewed it as a unique opportunity for us, as a non-profit, to take that first step forward and say this is what we are going to do for our community. We are really going to, for the first time, show you exactly what you’re getting for your money. So, that is why we wanted to work with Plum and work with Andrea.

Autism Speaks + Plum Analytics = New Territory

Since that meeting in San Francisco, Michalek and others at Plum Analytics worked with Clayton and others at Autism Speaks to create a pilot PlumX site with their grant data to test the theories Clayton and Butler envisioned. This pilot project went well and in June 2014, Autism Speaks moved forward on licensing PlumX.

PlumX is gathering and aggregating research output and metrics at the levels Autism Speaks views their grants. These include:

- Grant ID
- Investigator
- Institution
- Research Topic
- Grant Type
- Geography

“I know I speak for the entire Plum Analytics team when I say that we feel honored to work with Autism Speaks and be part of the mission to communicate research output and impact that goes beyond looking at where scholarly articles are published, and starts to illuminate the social impact that affects everyday individuals,” said Michalek.

An example of the kind of impact that Autism Speaks can begin share with their community is a recent article in the Journal of the American Academy of Child and Adolescent Psychiatry called “A Comparison of DSM-IV PDD and DSM-5 ASD Prevalence in an Epidemiologic Sample.” This article was just published in May 2014; it is too early for any significant citations that might typically lead you to believe that it is impactful. Yet, there has been a lot of interaction with it already. Below is a picture from PlumX of this interaction.





You can see that despite the newness of the publication, it is already receiving a lot of attention and usage. This helps Autism Speaks to see the impact of the research they fund and tell the stories about their research.

Autism Speaks has big plans for PlumX and the research output and metrics it tracks. They plan to link it to their grant search site where people in the community can log on and look up the grants that they have funded. Further, they plan is to link from the grant site to PlumX. In this way, someone can take a look at what grant they helped fund and with one click and see all of the output from the grant. As Clayton says,

That's going to be the big use of it. That was the selling point for us; we're interested in the metrics and all of that as well, but for us the big selling point really is going to be when we go live and actually start sharing the site with the community. That's the ultimate goal.

Plum Analytics is excited to be part of delivering on this goal and helping the autism community by showing the output and impact of the research they help fund.

