



**WHAT IS THE BSRC?**

The BSRC, or Baby Siblings Research Consortium, is a network of over 20 highly productive research groups in the United States, Canada, Israel and the United Kingdom. All share a common goal of understanding the very earliest behavioral and biological features of autism spectrum disorder (ASD) in order to improve early autism detection, diagnosis and treatment.

They have joined together to address important research questions with high-impact, ‘real life’ implications. For example, together they have calculated the recurrence risk in infants with an older sibling with autism, and they have discovered new signs that can help families get a diagnosis even earlier. They have identified differences in brain structure and function that are seen before symptoms emerge. In addition, clinicians now have a better understanding of the needs and challenges in siblings who do not go on to be diagnosed with ASD and can more confidently say when an ASD diagnosis is stable.

**WHAT HAVE WE LEARNED?**

As many as one in five younger siblings of children with autism will also be diagnosed with ASD. The majority of diagnosed children exhibit differences in social communication, play interests and/or behavioral flexibility by age 2. And in many children, subtle signs of ASD might be identifiable by the child’s first birthday before the full symptoms are clear.

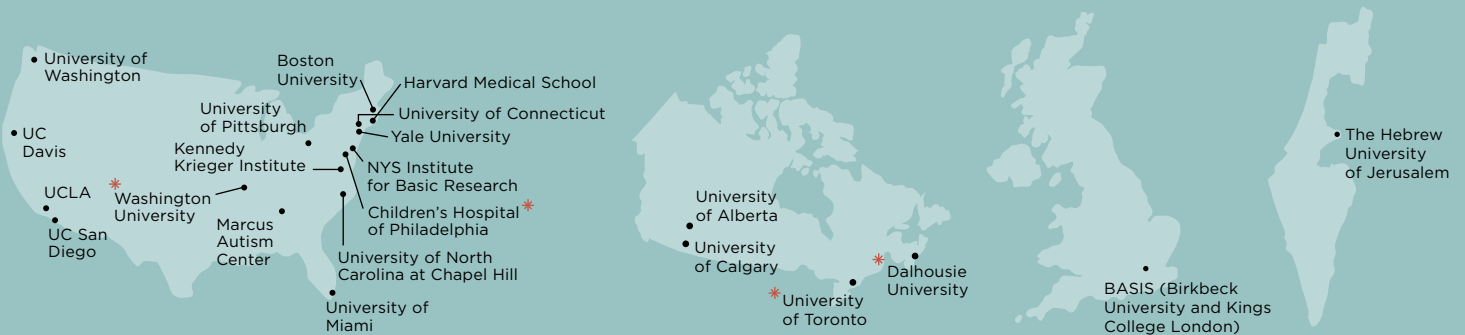


**WHAT ABOUT THOSE WHO DON'T END UP WITH AUTISM?**

Among siblings not diagnosed with autism, as many as 20% show delays in language skills or other areas of development and/or some degree of difficulty in social communication and/or behavioral flexibility. Even without a diagnosis, twice as many siblings show ASD-like features and symptoms as compared to those who don’t have a sibling with ASD.

**BSRC RESEARCH GROUP**

\* Affiliates



## CAN AUTISM SHOW UP LATER IN SIBLINGS?

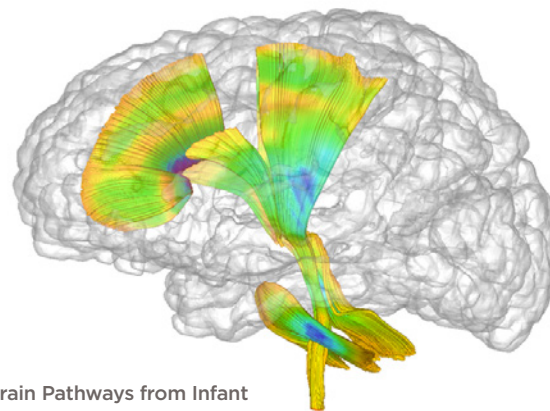
Autism diagnoses at 18-24 months of age are usually as stable as those established in 3-year-olds. However, for some children, particularly those who do not have developmental delays or who have milder symptoms, diagnoses are not usually made until age 3 or later, emphasizing the need for careful monitoring and repeat assessment.

## HOW EARLY CAN CHANGES IN THE BRAIN BE SEEN?

Studies of brain development in younger siblings of children with ASD have found differences in brain structure and brain organization (networks) as early as 6 months of age. These studies help support the idea that there are neurobiological causes of ASD and may enable early identification of autism before behavioral symptoms are apparent.

## WHY IS COLLABORATION ACROSS THESE RESEARCH SITES IMPORTANT?

The greatest strengths of the BSRC are the collaborative projects and the existing multi-site database. By pooling data from around the world, researchers can confidently provide families, clinicians and educators with accurate information about development before and after an autism diagnosis.



Brain Pathways from Infant Later Diagnosed with Autism

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## WHY THIS IS IMPORTANT FOR FAMILIES WITH AUTISM

By closely studying the younger siblings of children with ASD, researchers are working together with public health advocates to identify the very earliest signs of autism. This information can inform family members, clinicians, health care providers and the general public about early signs and symptoms so that targeted interventions can be developed. Researchers can also now see changes in brain structure and activity before symptoms emerge, widening the possibilities for treatment and putting children on the best possible trajectory for later development. This will allow for more preemptive interventions to support outcomes and attenuate symptoms. Finally, the BSRC takes a family-centered approach, helping to understand challenges and strengths in both siblings and parents to improve services and ensure that all family members receive the best possible care.

## WHAT IS THE BSRC DOING NEXT?

Members of the BSRC also work with other infants (not sibs) who are at increased risk for autism. The BSRC is expanding efforts to better understand early development of autism by working with diverse populations with a high probability of an autism diagnosis.

BSRC members are beginning to combine datasets that use similar brain recording methods, like EEG and ERP, to study brain development and potential genetic mechanisms.

We are expanding outreach efforts to make sure what we have learned is widely shared with the community through the internet, social media, community interactions and scientific meetings.

The BSRC is committed to combining scientific efforts to develop and evaluate intervention strategies that target early signs associated with ASD, with the goal of enhancing the development and outcomes of these infants.