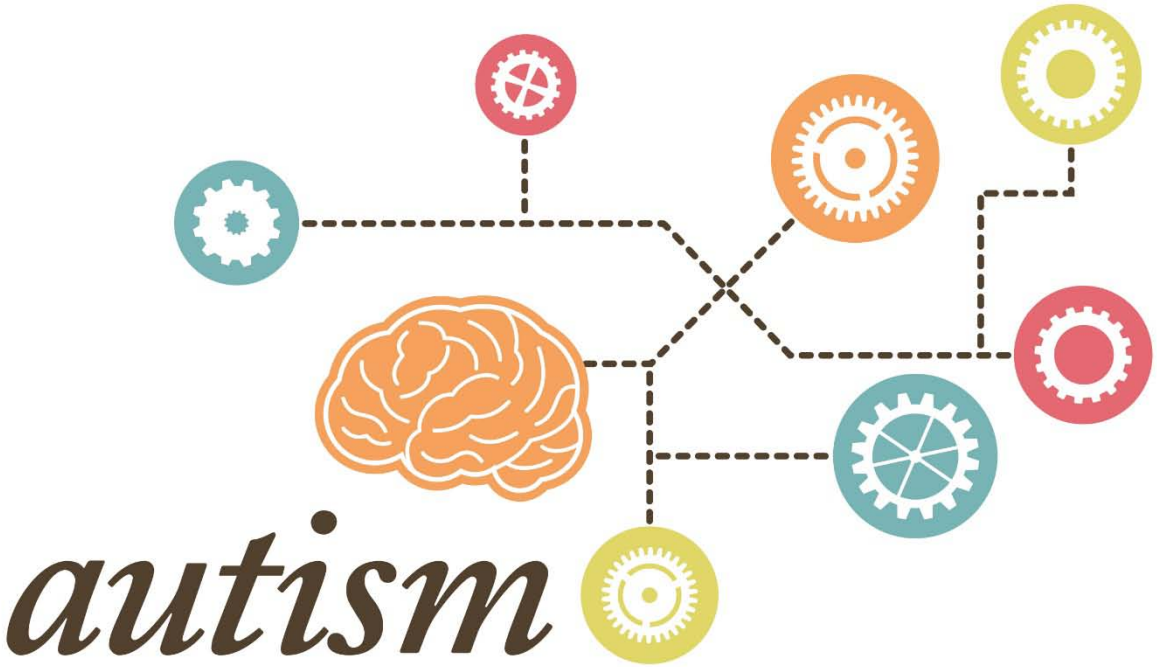

autism
BRAIN
NET

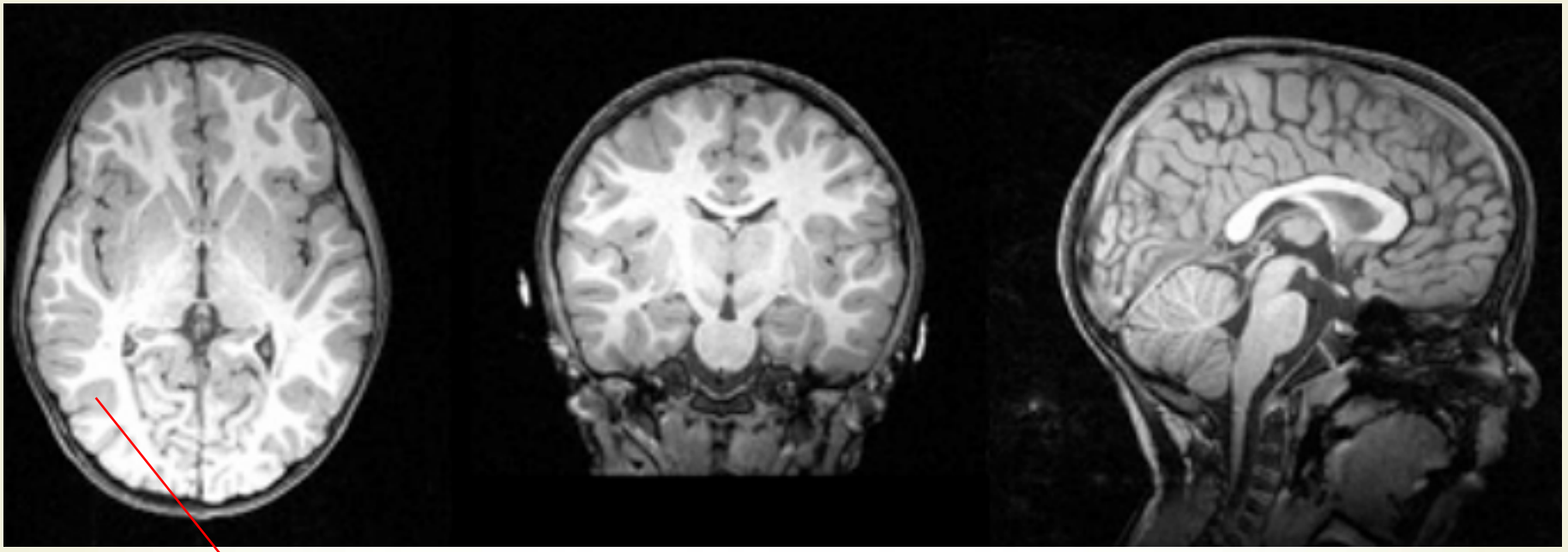
SFARI SIMONS FOUNDATION AUTISM RESEARCH INITIATIVE

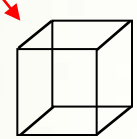
AUTISM SPEAKS®
It's time to listen.

AUTISM SCIENCE FOUNDATION

autism BRAIN NET

Resolution of MRI is too low to see neurons and networks



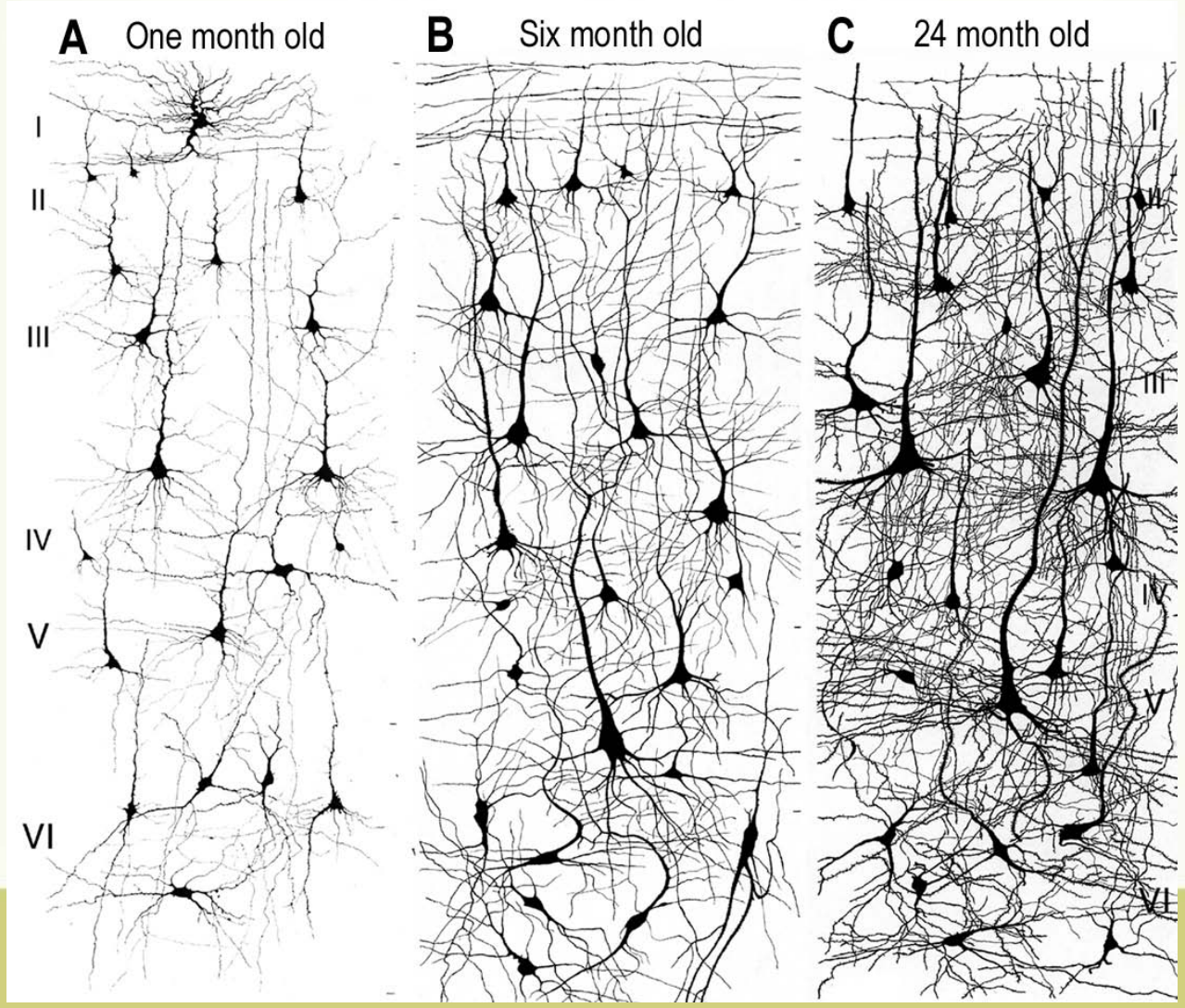


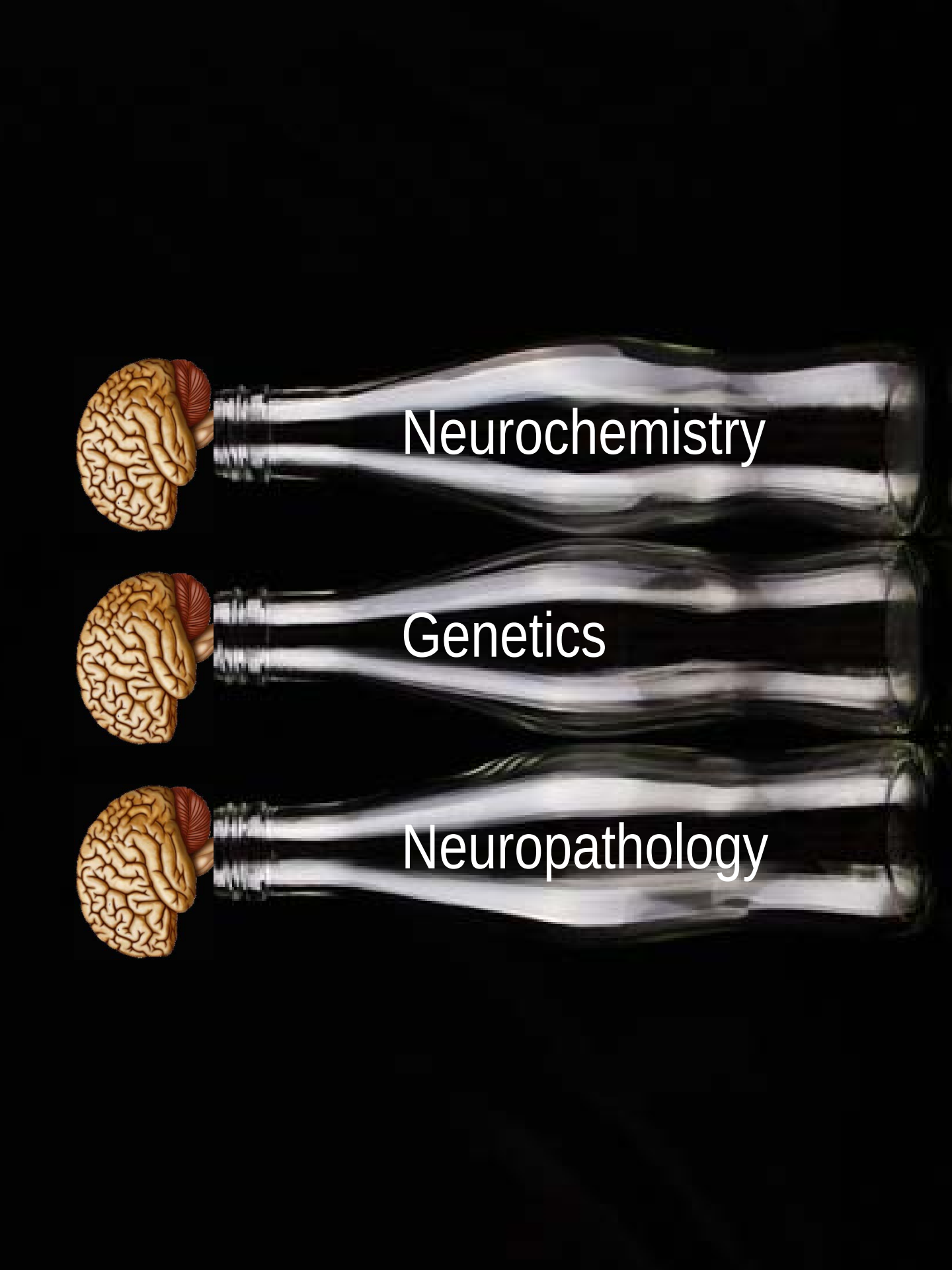
Voxel = 1 mm^3

Voxel = 50,000 neurons

Voxel = 100-300 million synapses

Resolution of MRI is too low to see neurons and networks



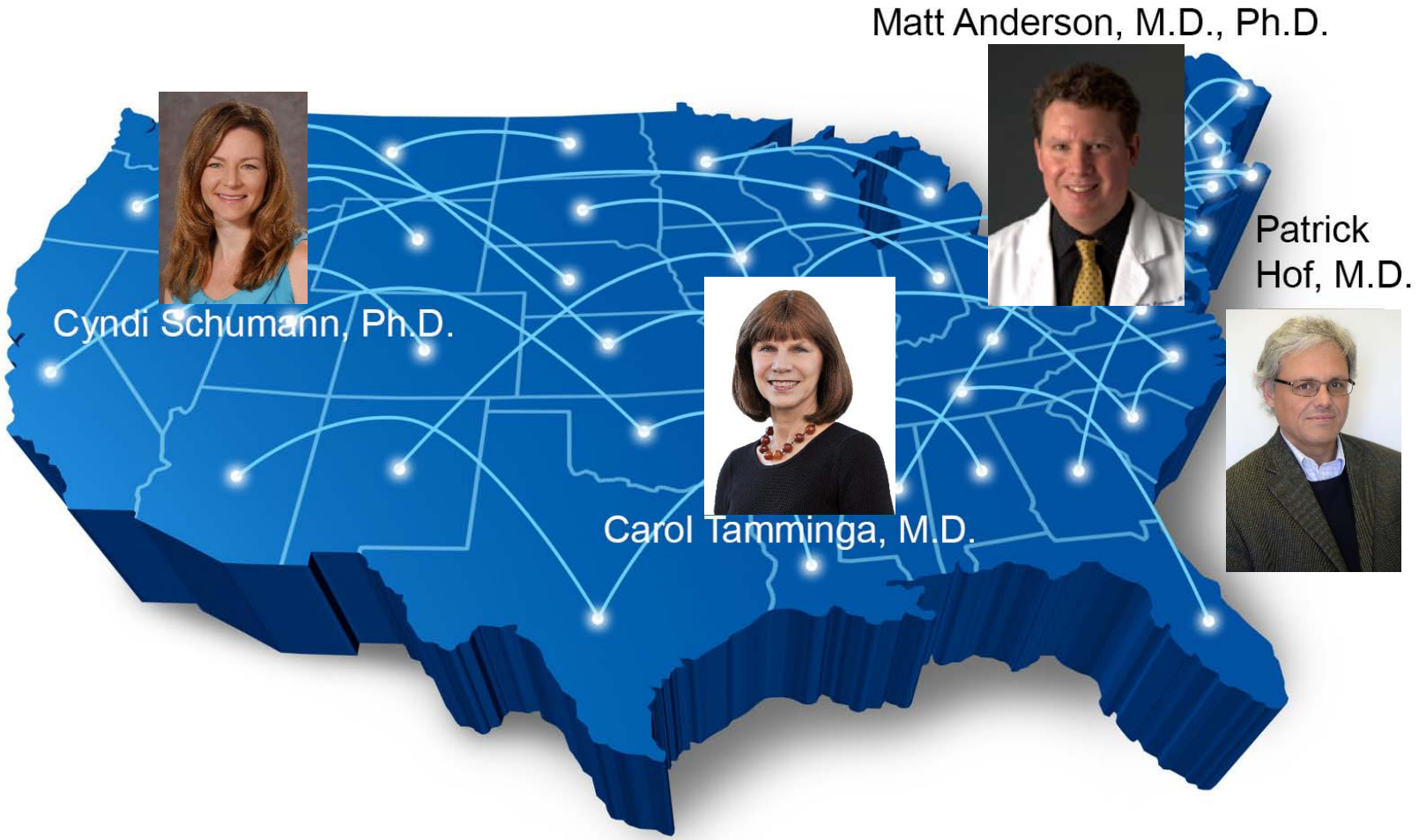

Neurochemistry
Genetics
Neuropathology

Based on findings from MRI, postmortem studies will require:

- A large number of clinically and genetically well-characterized brains for analysis
- Appropriate control brains for comparison
- Well organized cohorts to optimize research replication and complementarity.

Autism BrainNet

Autism BrainNet



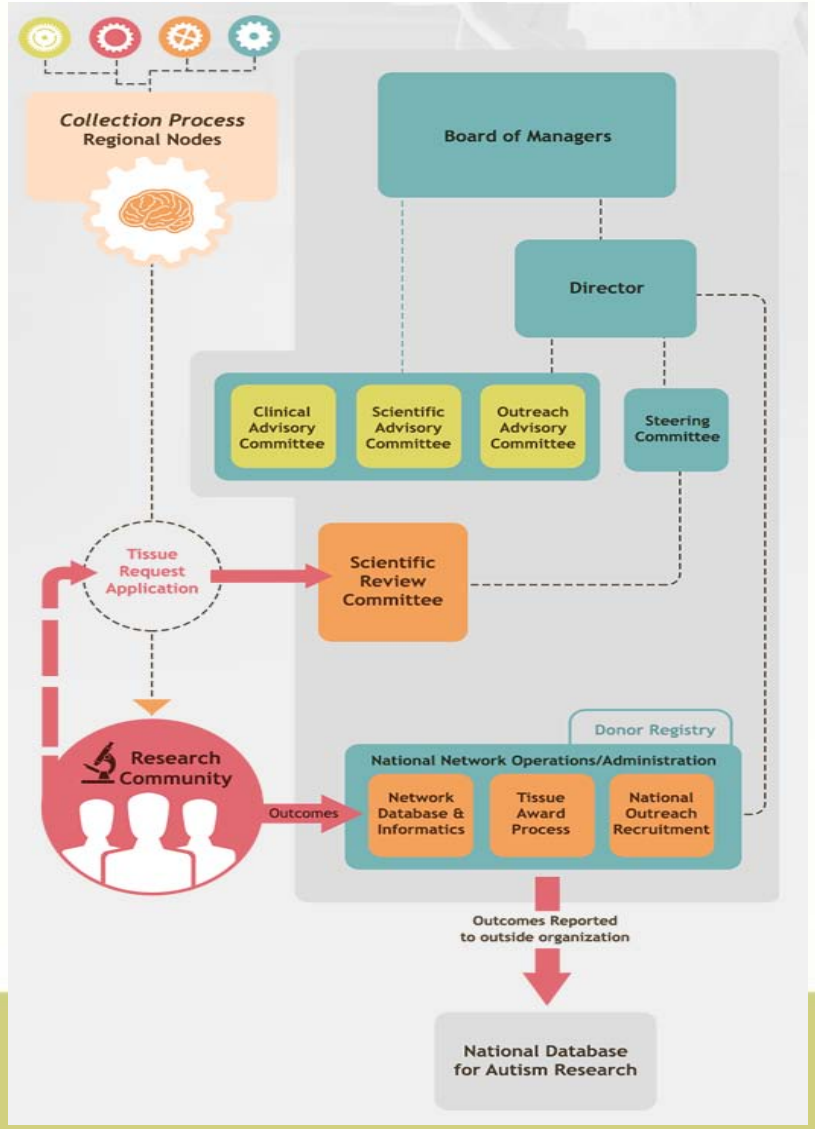
Autism BrainNet International

Oxford University

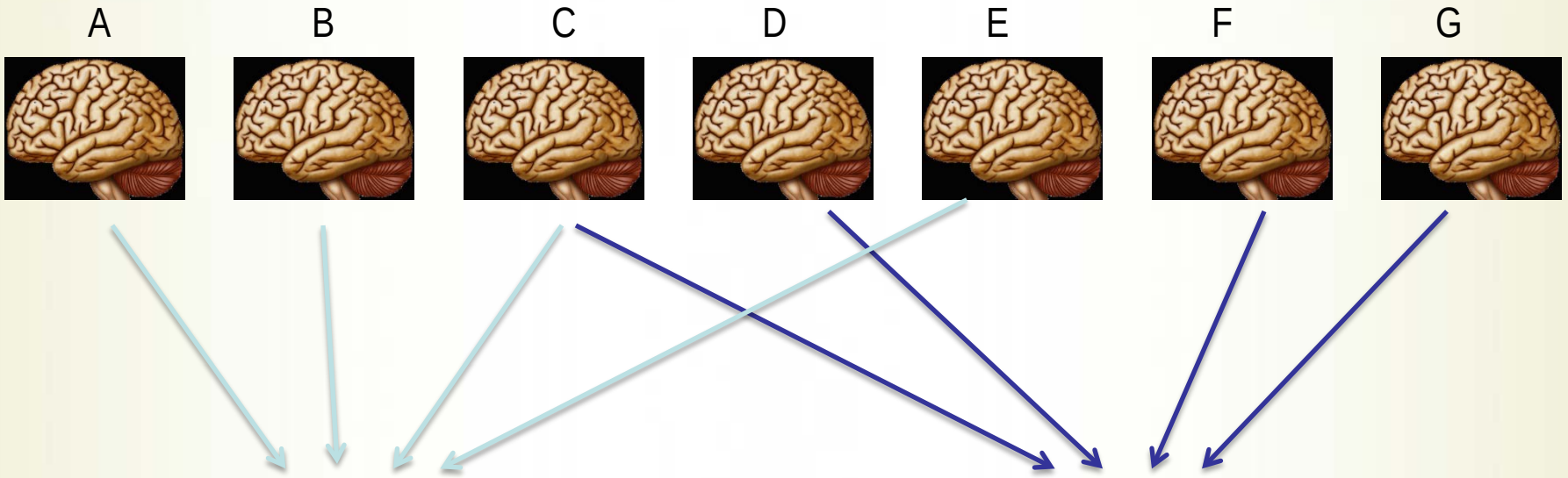
Olaf Ansorge, M.D

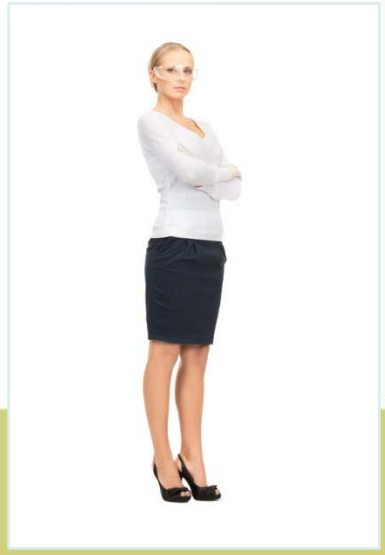
Autism BrainNet Web Site: AutismBrainNet.org

AutismBrainNet Organization



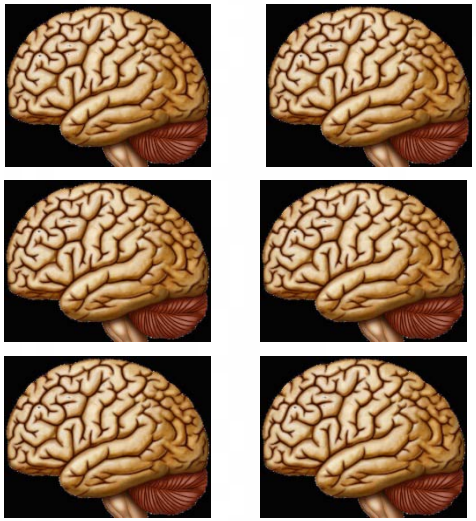
Development of cohorts of research brains

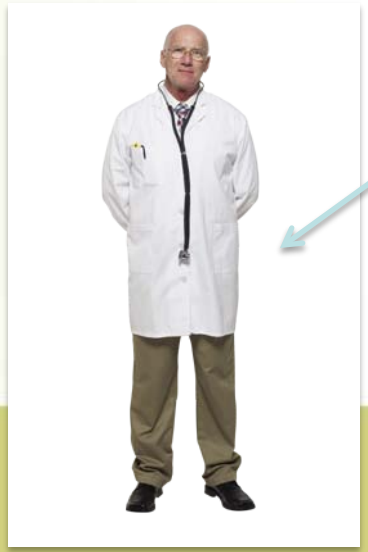




Development of cohorts of research brains

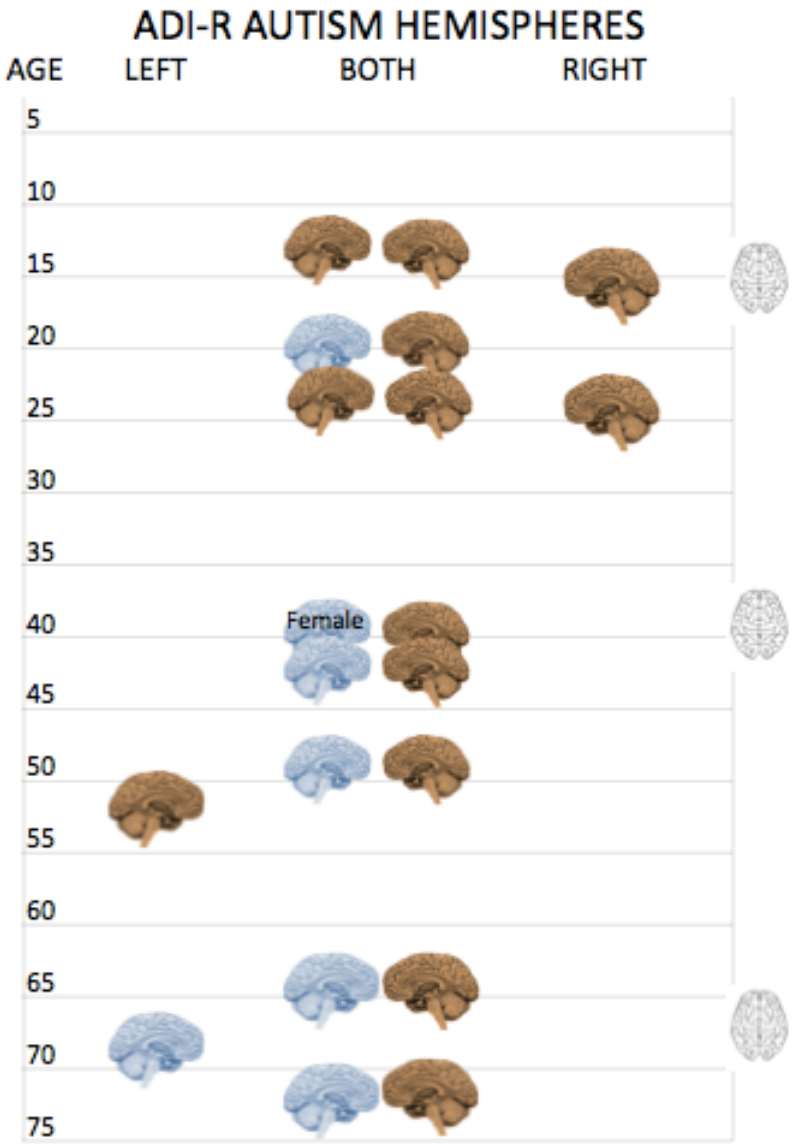
Cases Controls





Development of cohorts of research brains

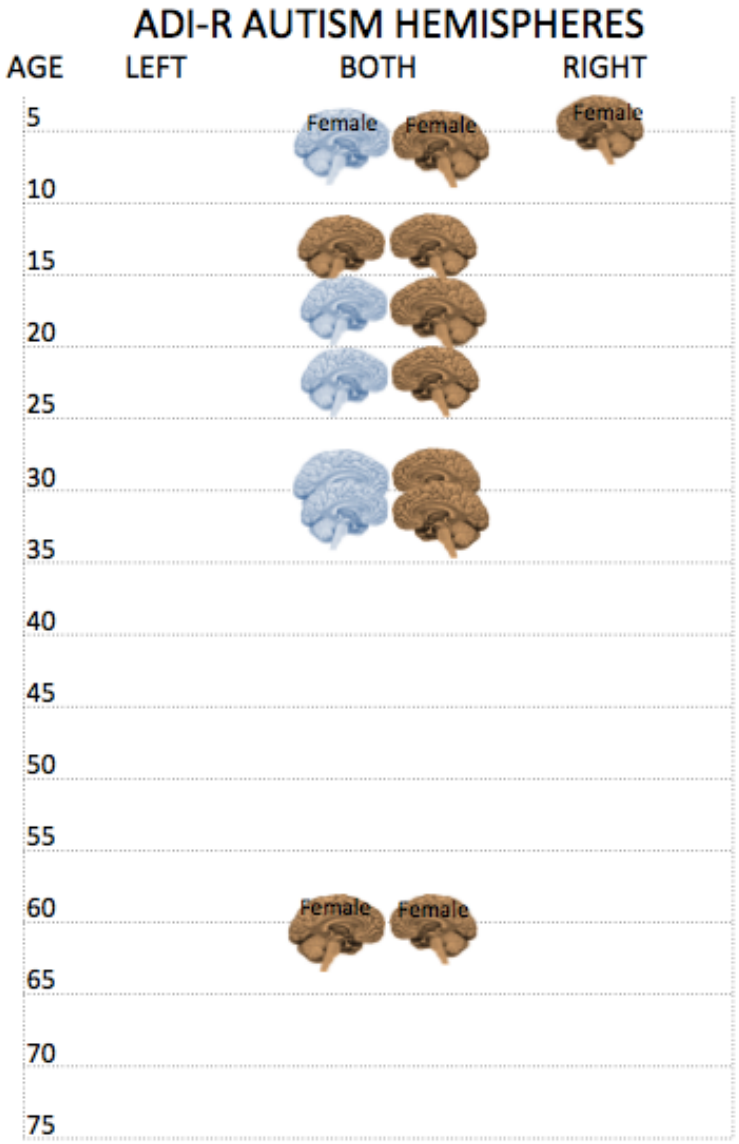
- ASD versus Age-matched Controls
- ASD versus Epilepsy versus Controls
- ASD with 16p11.2 deletion and Controls



Autism BrainNet Cohort Candidates

Formalin Fixed

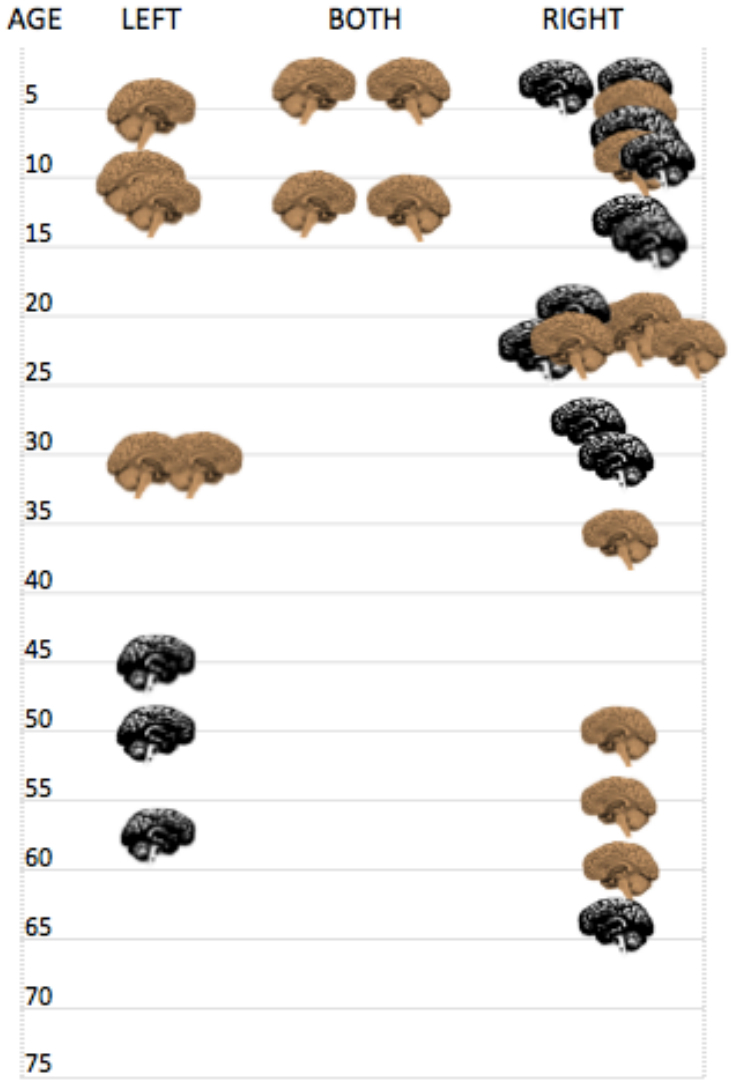
Liquid Nitrogen Frozen



BEARS
Cohort Candidates

Formalin Fixed

Frozen



Autism BrainNet Celloidin Cohort

#	Age	Diagnosis	Sex	Laterality
1	4	Autism - ADI-R	M	L
2	4	Autism - ADI-R	M	R
3	4	Control	F	R
4	4	Control	F	R
5	5	Autism - ADI-R	F	L
6	5	Autism - ADI-R	F	R
7	7	Control	M	R
8	8	Autism - ADI-R	M	R
9	8	Control	F	R
10	11	Autism - ADI-R	F	L
11	13	Autism - ADI-R	M	L
12	14	Control	M	R
13	15	Control	F	R
14	20	Control	F	R
15	21	Autism - ADI-R	F	R
16	22	Autism - ADI-R	M	R
17	23	Autism - ADI-R	M	R
18	23	Control	M	R
19	28	Control	M	R
20	32	Autism - ADI-R	M	L
21	32	Autism/Fragile X	M	L
22	32	Control	M	R
23	36	Autism - ADI-R	M	R
24	48	Control	M	L
25	51	Control	M	L
26	52	Autism - ADI-R	M	R
27	52	Control	M	R
28	56	Autism - ADI-R	M	R
29	59	Control	M	L
30	60	Autism - ADI-R	M	R
31	64	Control	M	R

Need for Community Involvement

This will only be successful if the community is fully engaged and supportive. This will require a nationwide outreach effort to communicate the message that

It Takes Brains to solve autism.

It Take Brains to Solve Autism

Alison Singer
Autism Science Foundation

IACC Meeting
July 8, 2014

IACC Strategic Plan (2009-2013)

Question 2: How Can I Understand What is Happening?

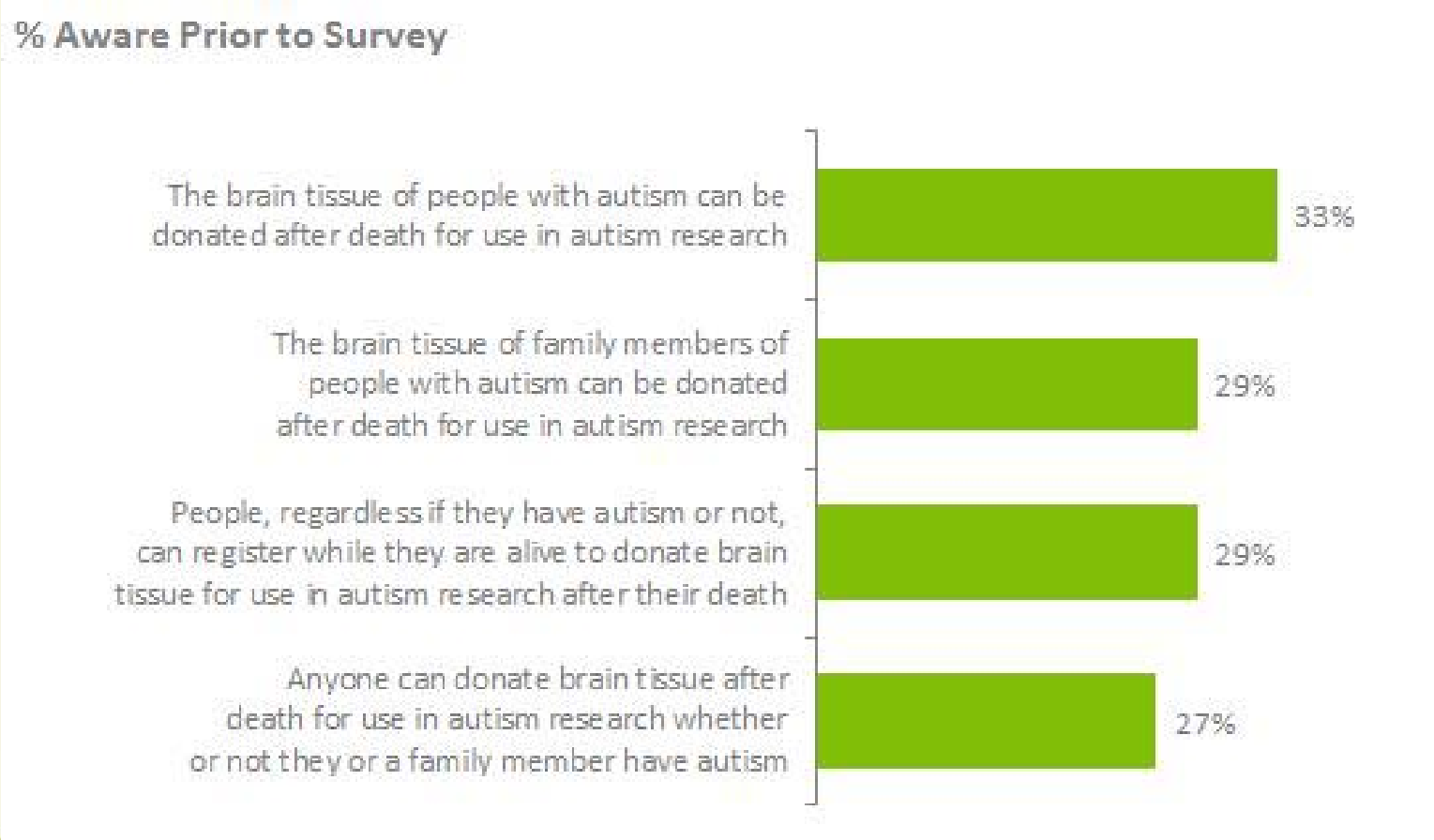
Short-Term Objectives

4. Identify ways to increase awareness among the autism spectrum community of the potential value of brain and tissue donation to further basic research..

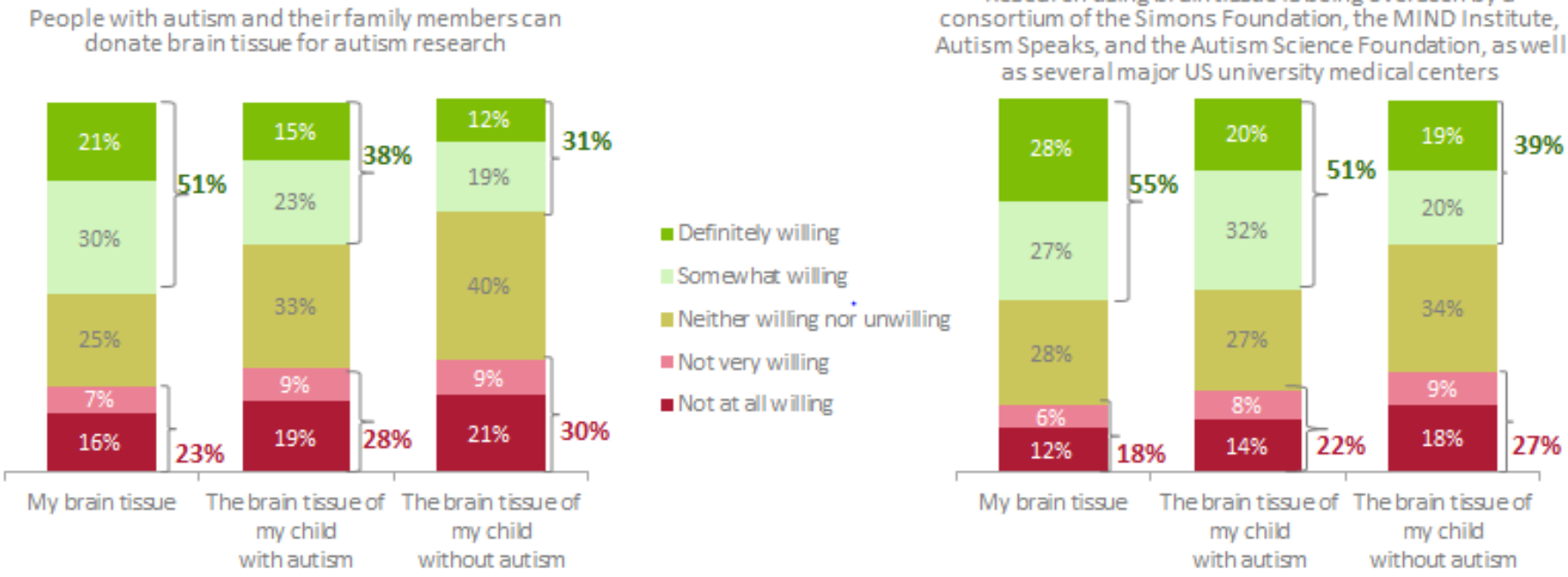
Focus Group Behavior Change

After seeing this campaign, I would [CHECK AS MANY AS APPLY]:	Group 1 Parents 3 – 10	Group 2 Parents 11 - 17	Group 3 Parents 18+	Group 4 Adults with Autism*
Probably do nothing	1			1
Think about the issue	3	4	2	3
Seek more information about brain tissue donation	1	3	3	
Go to the website listed in the advertising		2	3	1
Google brain tissue donation		4	2	1
Speak to someone about brain tissue donation at an autism walk or meeting	1	2	1	
Speak to a friend/family member about brain tissue donation	1	3	3	
Register myself to become a brain tissue donor		1		
Register my child with autism to become a brain tissue donor		1		
Talk to my child's doctor about brain tissue donation		2		

Pre-Wave Online Survey; N= 412 Sept 1 – Oct 2, 2013



Willingness to Consider Registering



Why Willing/Not Willing

- Would be Willing (55%)
  - Help other children (51%)
  - Support research (38%)
- Undecided (25-40%)
  - Wasn't aware (33%)
  - Haven't thought about it enough; need more info (27%)
- Are Unwillling (18-30%)
  - Unethical (28%)
  - Don't want to think about this topic while my child is alive (22%)

THE MATTHEWS, FROM BEACON, NY; CHRISTINE, MARK AND THEIR SONS MARK JR., TIMOTHY AND CASEY.

CASEY, AGE 14, HAS AUTISM.

IT TAKES BRAINS TO SOLVE AUTISM

The Matthews never saw themselves as a "super" family, yet when they bonded together to support their autistic son Casey, they were indeed super. And now the Matthews and families like them around the world are being looked upon as super heroes. Why?

They have all been united by one brave and heroic act…pledging to donate the brain tissue of their sons and daughters for when they are sadly no longer with us. It's difficult to think about, but the reality is that brain tissue is urgently needed for the scientific research that will help thousands of people with autism.

Join forces with the Matthews and other super hero families to help ensure a brighter future for all. Because it takes brains to solve autism.

Visit **TakesBrains.org** to learn more and see how your entire family can help build a better tomorrow.

it takes BRAINS …to solve autism

This initiative is guided by: AUTISM SCIENCE FOUNDATION · UCDAVIS MIND INSTITUTE · AUTISM SPEAKS It's time to listen. · SFARI SIMONS FOUNDATION AUTISM RESEARCH INITIATIVE

IT TAKES BRAINS ...to solve autism

IT TAKES BRAINS is the outreach program of the Autism BrainNet, a new network of research institutions that will collaborate on groundbreaking brain research. Brain study is the key to solving autism, and our mission is to urge families to make the heroic decision to register for brain tissue donation.

Read More +

Q&A

Topics include:

- THE FACTS
- REGISTRATION
- DONATION

RESEARCH

Studies focusing on differences in brain structure, development, and genetic function will transform the understanding and treatment of autism.

SIGN UP

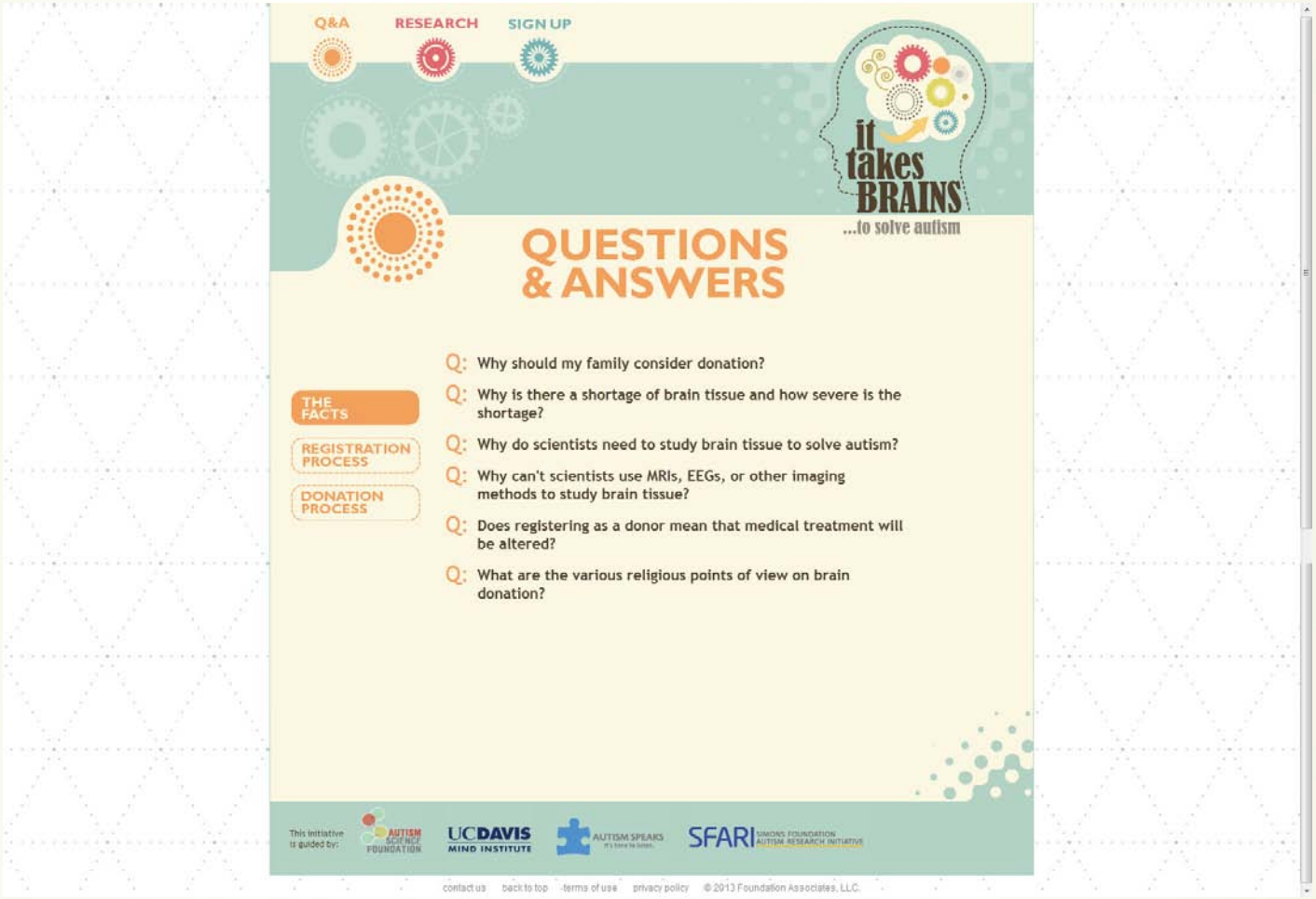
REGISTER TO DONATE

brain tissue and ensure a brighter future for all.

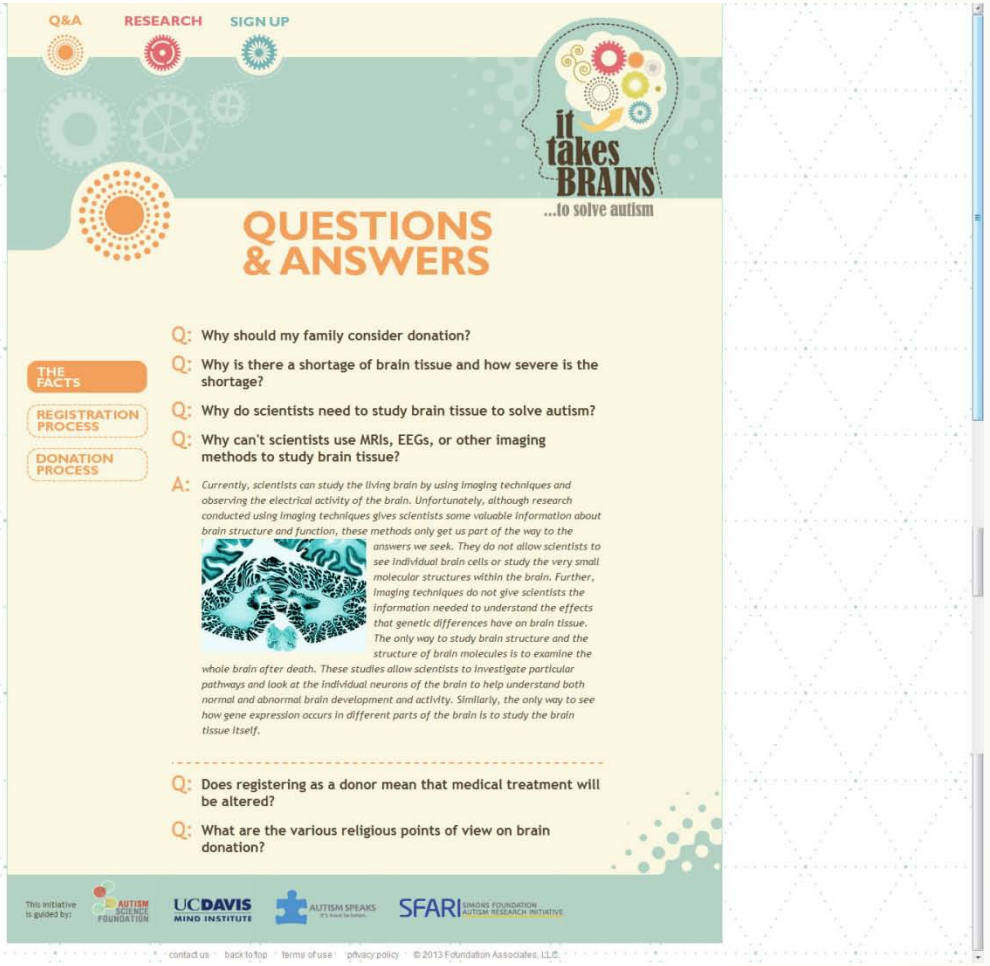
This initiative is guided by: AUTISM SCIENCE FOUNDATION · UCDAVIS MIND INSTITUTE · AUTISM SPEAKS · SFARI SIMONS FOUNDATION AUTISM RESEARCH INITIATIVE

it takes BRAINS ...to solve autism

TakesBrains.org



TakesBrains.org



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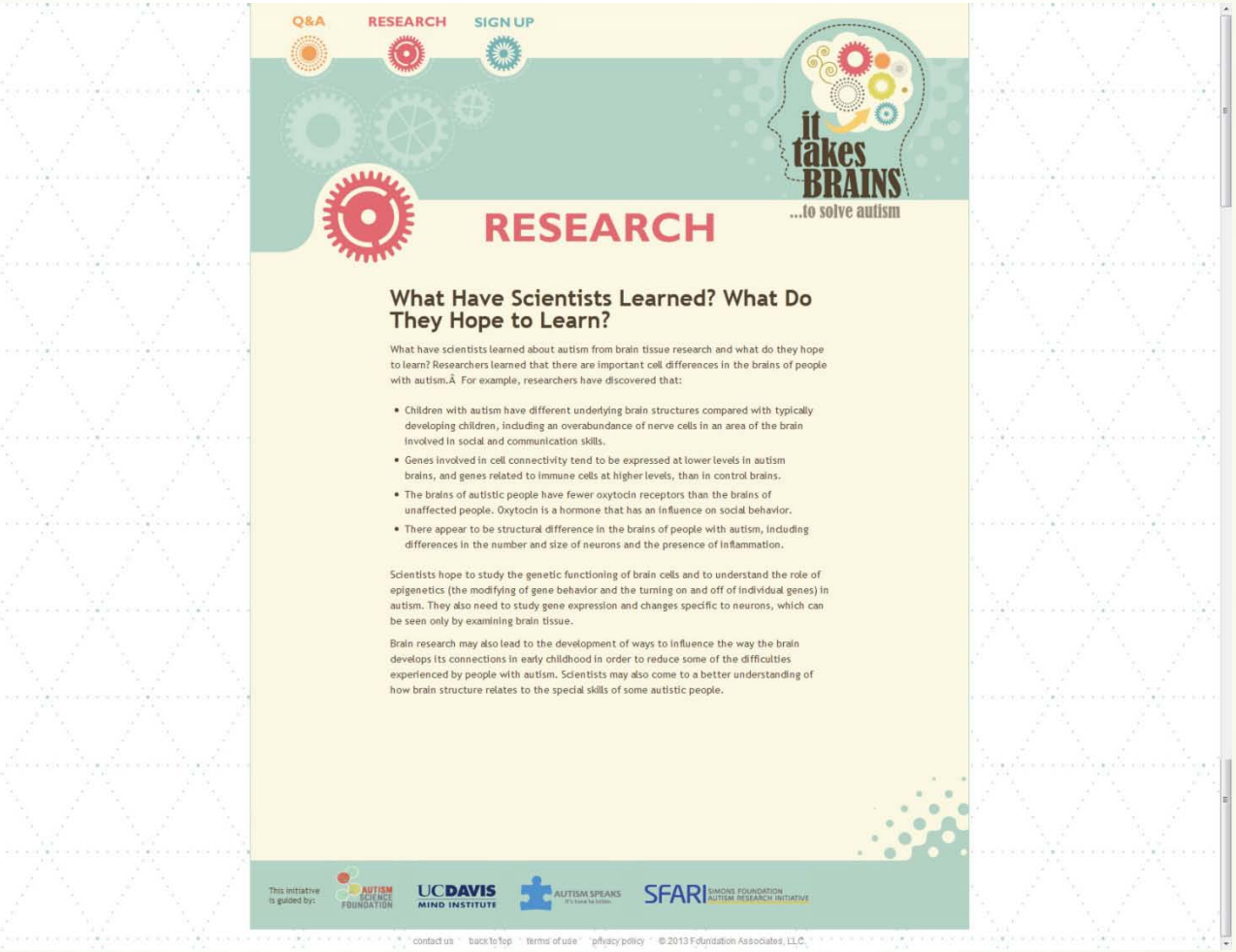

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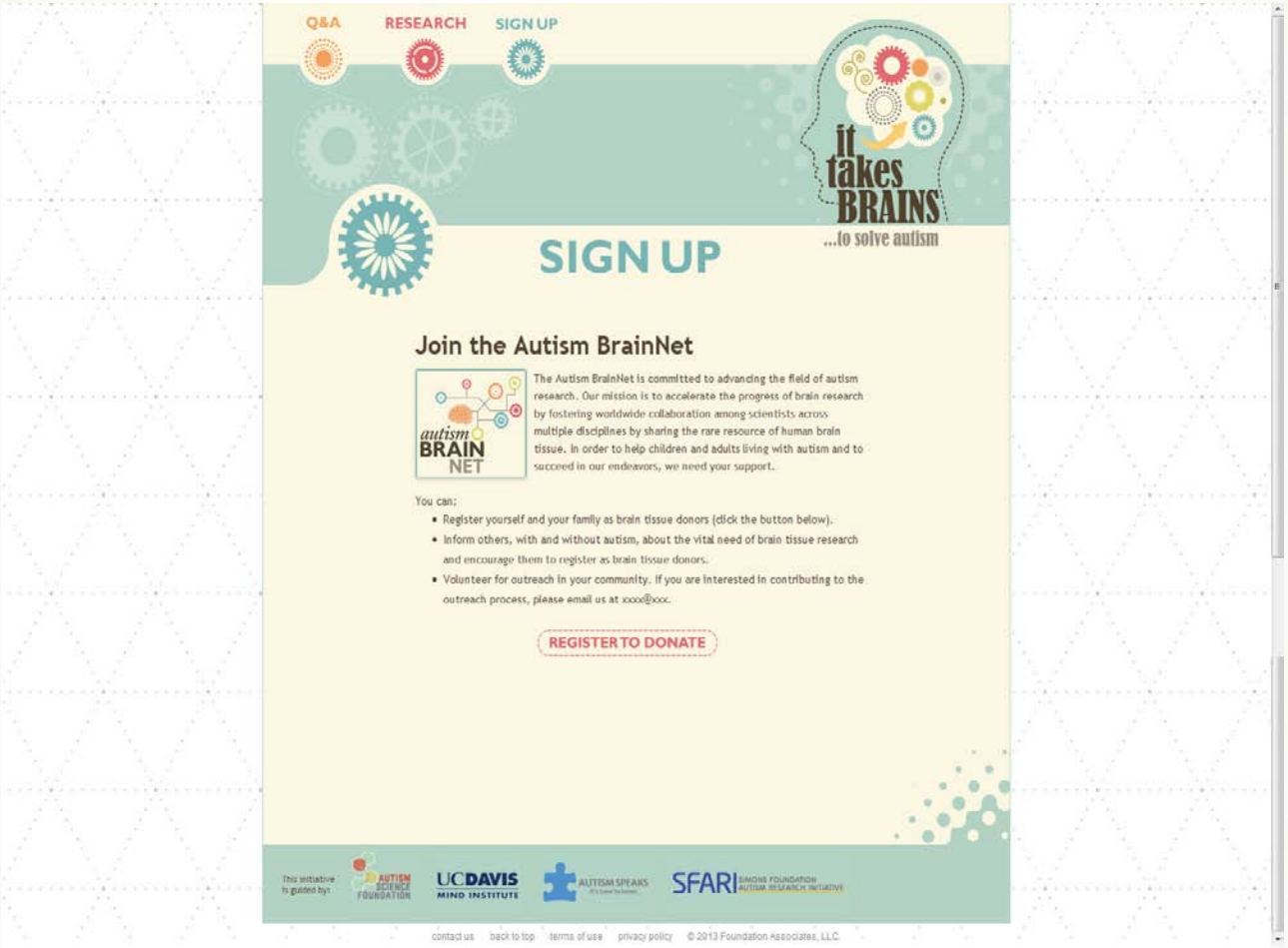

You Can Register Right Now!