



Ances Bioimaging Laboratory Presents:

DS Participant Meeting

Beau Ances, MD, PhD

Daniel J Brennan MD Professor of Neurology

Saturday, February 26, 2022



Washington
University in St. Louis

SCHOOL OF MEDICINE

Housekeeping

- Thank you for joining us today for our First Annual Participant Meeting!
- This presentation is being recorded, if you don't want your video and/or name to appear in the recording, please please turn off your video.
- Please remain muted throughout the presentation, you can unmute for the question/comment session at the end.
- You can type your questions in the chat, please mention the name or organization if you have a specific question.
- If we don't get to your question, please email Brittany at bmnelson@wustl.edu and I will work to find your answers.
- If you registered for the zoom and you selected to be contacted in the future, we will be contacting you with study related information. You can always opt out by emailing Brittany at bmnelson@wustl.edu

Today's Outline

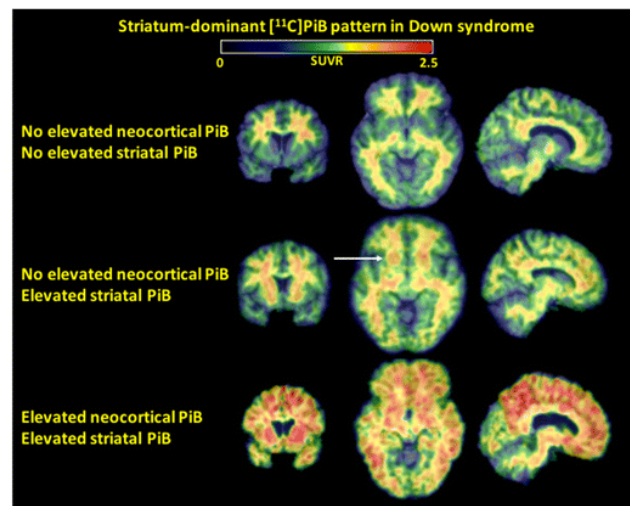
- Review of study data from previous DS research
 - Beau Ances, MD, PhD
- Introduction into new available DS research studies
 - Beau Ances, MD, PhD
- Introduction of community programs:
 - Washington University DS Clinic
 - Liz Hall, NP
 - Down Syndrome Association of Greater St. Louis (DSAGSL)
 - Erin Suelmann, MA, MPH and Makini Anwisye
 - St Louis Arc (SLARC)
 - Mary Anne Tolliver and Sharon Spurlock
 - Pujols Wellness Center
 - Stacey Laughlin, LMSW
 - Artists First
 - Sheila Suderwalla
- Comments and Questions (please use chat feature for questions and we will get to them at the end of the talk)

The background features a series of concentric circles and curved lines in a light gray color, some of which are dashed. A prominent red callout box is centered on the page, containing the text "Study Results".

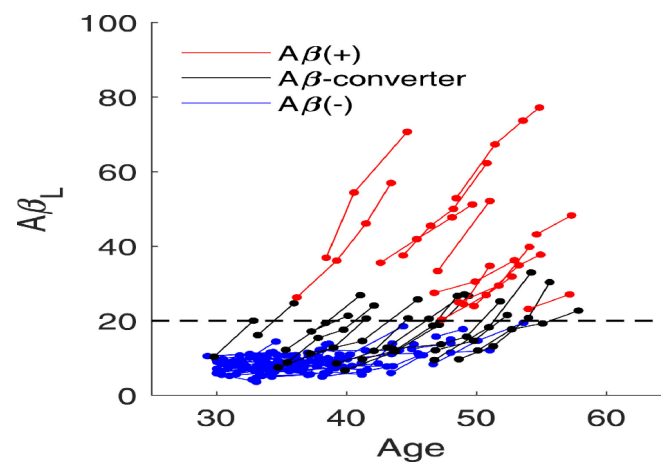
Study Results

Amyloid PET in Adults with DS

There exists considerable variability regarding conversion



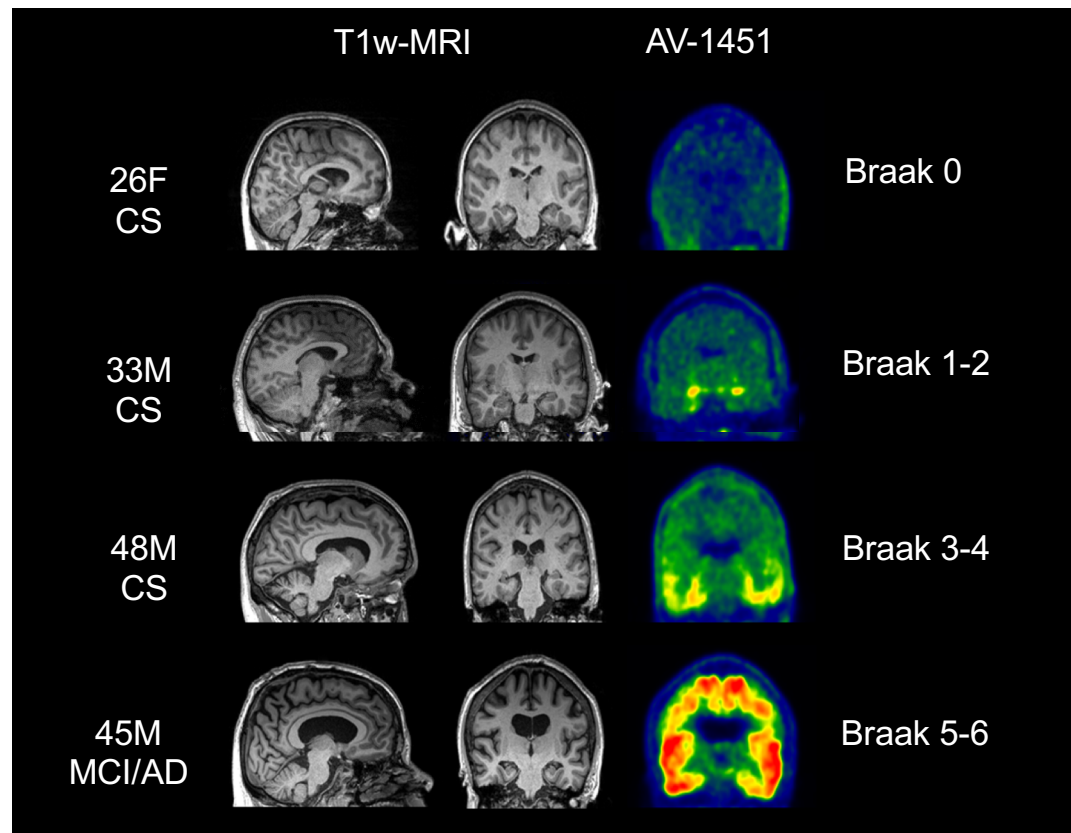
Lao et al., 2019



Zammit et al., 2021

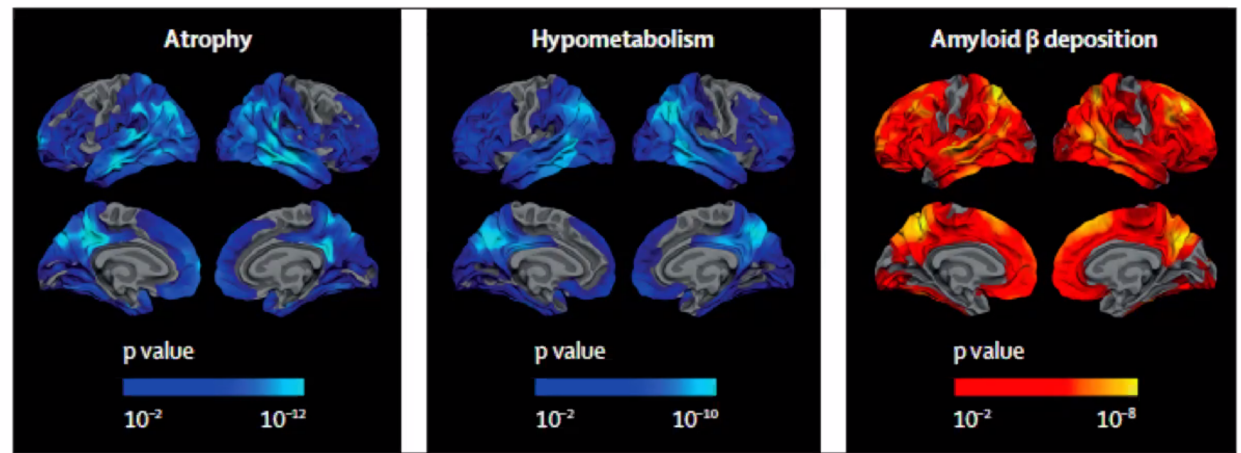
Tau PET in Adults with DS

Tau PET is typically elevated in DS
adults who are amyloid PET positive



Rafii et al., 2017; Zammit et al., 2020

Comparison of Neuroimaging Signatures of AD in Adults With DS



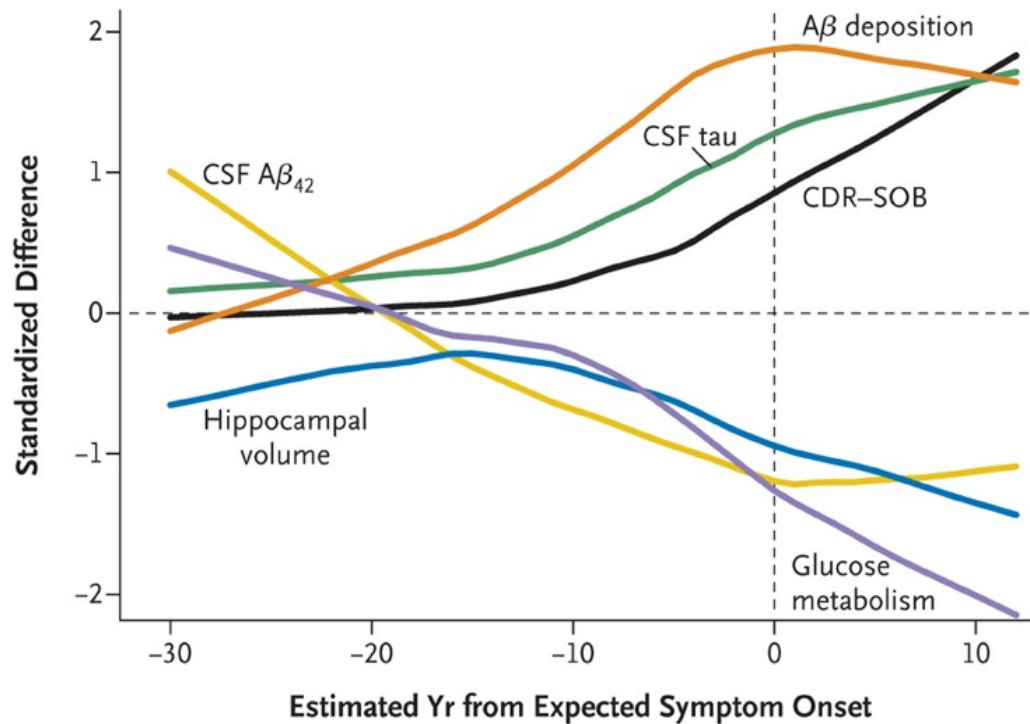
Fortea et al., 2020
Head and Ances, 2020

**Drugs Currently
Approved for Late
Onset AD Have
Not Translated to
AD in Adults with
DS**

- 5 drugs have been approved for late onset AD (Tacrine, Donepezil, Galantamine, Exelon, Memantine)
- Studies for donepezil in adults with DS are mixed. Most studies have had a relatively small sample size and shown modest to no effect with some demonstrating adverse side effects.
- A more recent study of memantine in adults with DS showed no improvement but also no increase in adverse side effects.
- Galantamine – no studies have been performed to date
- Tacrine – no studies have been performed to date

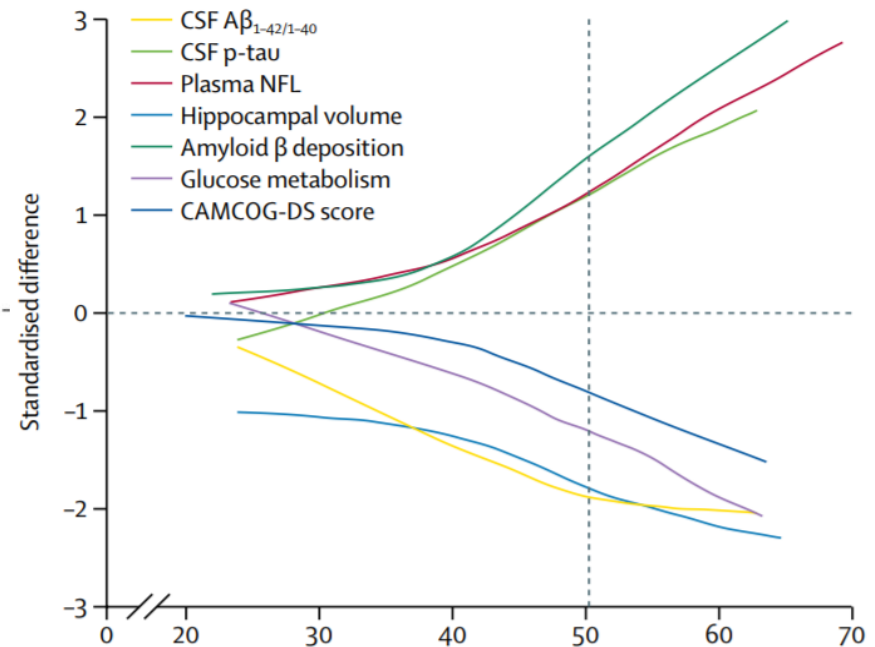
Proposed Cascade of Biomarkers for ADAD and DSAD

ADAD



Bateman et al., 2011

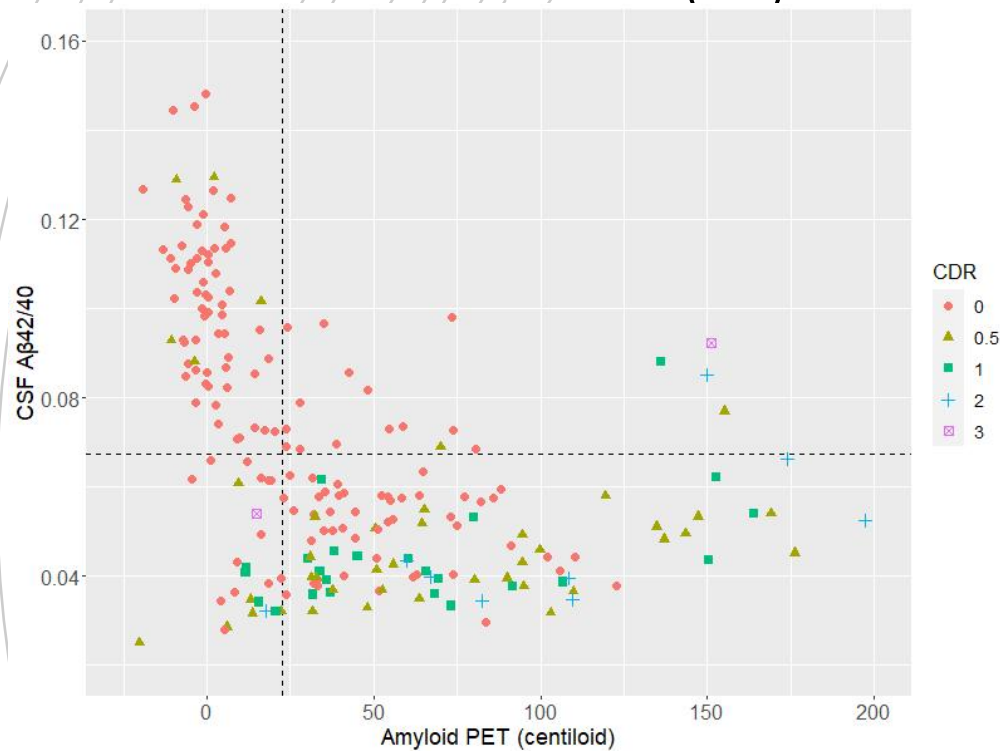
DSAD



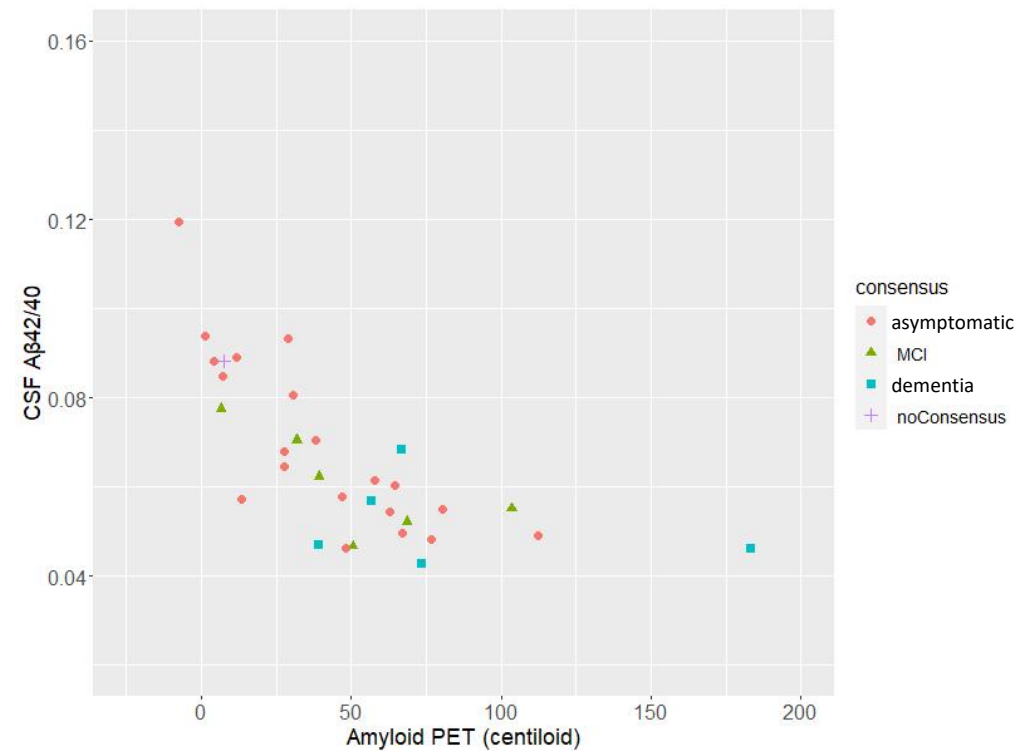
Fortea et al., 2020

Comparison of Amyloid PET With CSF $A\beta_{42}/40$ Ratio in ADAD and DSAD

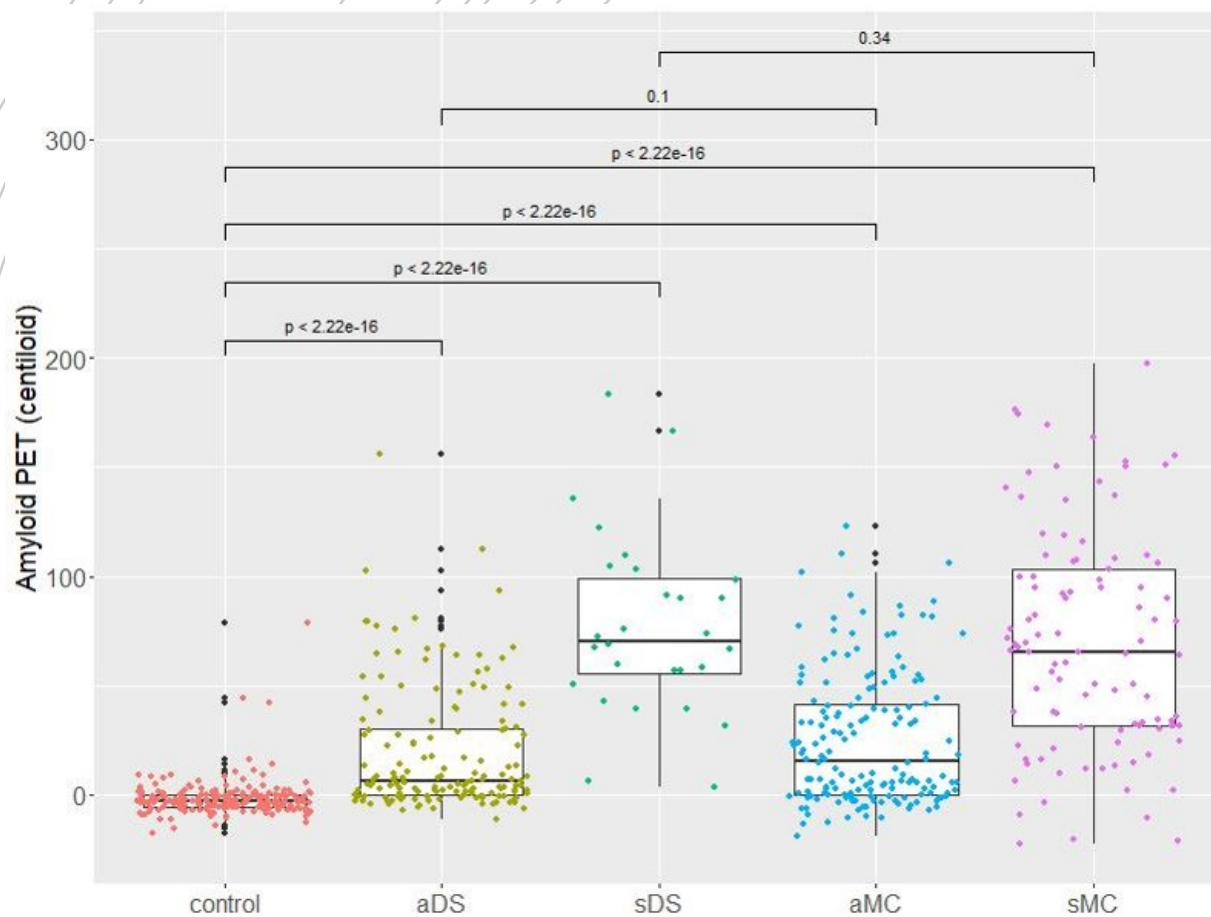
DIAN mutation-carriers (MC)



ABC-DS



Amyloid PET As A Function of Cognitive Status in ADAD and DSAD



aDS = asymptomatic DS

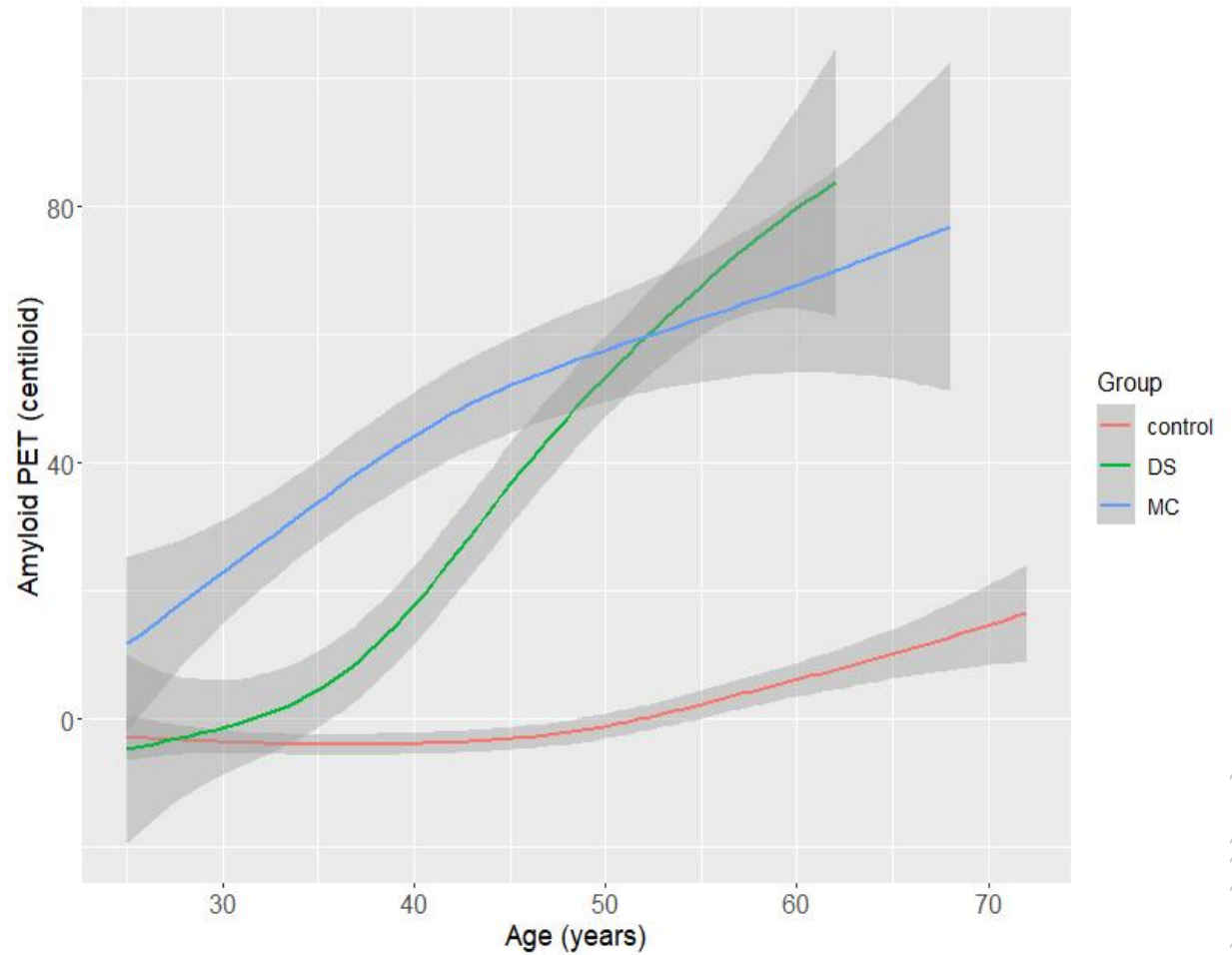
sDS = symptomatic DS

aMC = asymptomatic MC

sMC = symptomatic MC

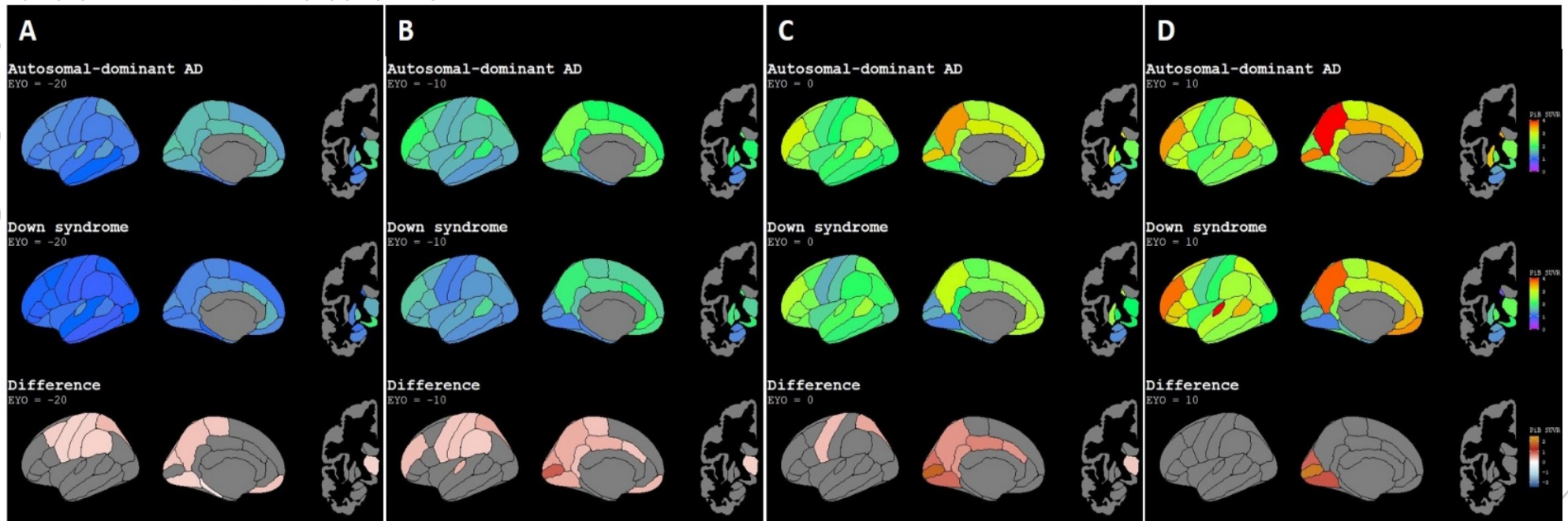
Boerwinkle et al., *to be submitted*

Amyloid PET as function of age for ADAD and DSAD



Boerwinkle et al., *to be submitted*

Regional Changes in PET Amyloid as a Function of EYO of ADAD and DS



EYO = -20

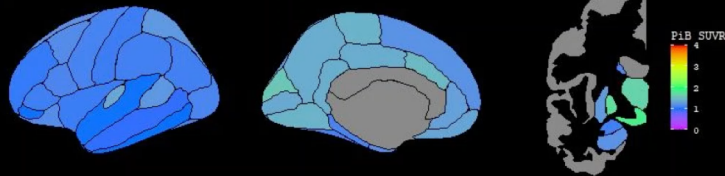
EYO = -10

EYO = 0

EYO = 10

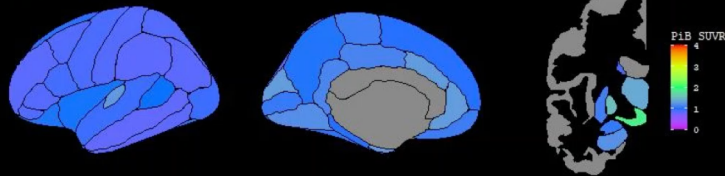
Autosomal-dominant AD

EYO = -25



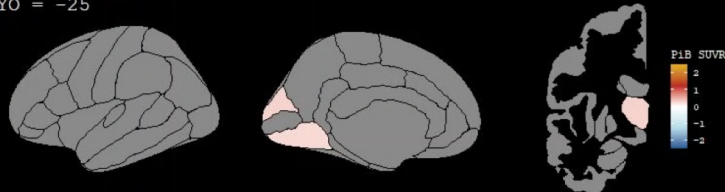
Down syndrome

EYO = -25



Difference

EYO = -25



- This video shows the accumulation of amyloid in different regions of the brain over time.
- The top row shows this in individuals with autosomal-dominant Alzheimer's disease.
- The middle row shows individuals with Down syndrome.
- The bottom row is the difference between the two.



New Research Opportunities

ABC-DS

Lifestyles

TRC-DS

DS Umbrella



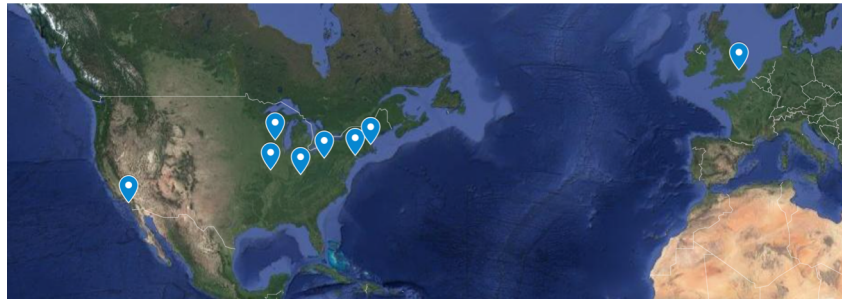
Alzheimer Biomarker Consortium – Down Syndrome

- This study aims to identify biomarkers for Alzheimer disease in adults with DS. We hope to identify individuals who are at increased risk for developing the disease later in life.
- We believe changes in the brain occur 10-15 years before an individual or caregiver notices changes in behaviors or memory.
- Alzheimer disease is due to the buildup of proteins which are building blocks of our body. In particular, amyloid and tau deposit in the brain. Over time, increases in these proteins lead to changes in how the brain works and communicates.
- We believe adults with Down syndrome are at a greater risk for developing Alzheimer disease because the 21st chromosome has a gene that codes for the amyloid protein.
- Because individuals with Down syndrome have an extra 21st chromosome, they have more amyloid deposited in the brain compared to someone without DS.



Study Introduction

- ABC-DS is a multidisciplinary, multi-site longitudinal study that examines biomarkers of AD in a large cohort of adults with DS.
- It is comprised of 8 Locations across the United States and one in the United Kingdom
- The ABC-DS study sites plan to recruit and follow a total of 550 individuals and 50 sibling controls.
- ABC-DS is funded by NIH and includes multiple different institutes: NIA, NICHD, and the INCLUDE Project





Study Details

- We are actively recruiting adults with Down syndrome who are ages 25 years and older
- Assessments are every 16 months over 5 years.
- Study visits take place at Washington University in St. Louis
- Participants are compensated for their time (each procedure completed)
- Reimbursements are provided for mileage, parking, and stipends for meals and lodging (if traveling from a distance)
- Our plan is to enroll 45 adults with Down syndrome and 10 sibling controls.



Study Procedures

- Consent (assent) process
- Medical History
- Physical/Neurological Examination
- Cognitive testing with Participant
- Interviews with Study Partner (Caregiver)
- Blood Draws – examining genetics, fats and proteins in blood
- MRI Scan – uses a magnet to help us look at brain structures non-invasively
- PET Scans – inject a small amount of radiotracer that allows us to look at the amyloid and tau proteins in the brain
- Optional: Lumbar Puncture to look at spinal fluid that surrounds the brain and spinal cord





Schedule of Events

Month 0	Month 16	Month 32	Month 48
Demographics/ health history	Demographics/ health history	Demographics/ health history	Demographics/ health history
Caregiver Reports	Caregiver Reports	Caregiver Reports	Caregiver Reports
Cognitive Testing	Cognitive Testing	Cognitive Testing	Cognitive Testing
Physical/ neurological exam	Physical/ neurological exam	Physical/ neurological exam	Physical/ neurological exam
Blood draw	Blood draw	Blood draw	Blood draw
MRI	MRI	MRI	MRI
Amyloid PET	FDG PET	Amyloid PET	FDG PET
Tau PET	Lumbar Puncture	Tau PET	Lumbar Puncture

TRC^{DS}

Trial-Ready Cohort-Down Syndrome

Trial Ready Cohort – Down Syndrome

- Study Objective: Development of a well-characterized, trial-ready cohort to facilitate rapid enrollment into AD treatment and prevention trials for adults with DS.
- By the age of 35 years old, many adults with DS will already have amyloid plaques – a hallmark of AD
- Preliminary data show that adults with DS exhibit significant changes in AD-related biomarkers between the ages of 35-55. It is also within this age range that AD-related cognitive decline and dementia typically manifest in DS.
- AD is the primary cause of death in adults with DS over the age of 35. A need exists for including adults with DS in clinical trials for AD.

TRC_{DS}

Trial-Ready Cohort-Down Syndrome

Study Introduction

- Enroll 120 non-demented adults with DS across 15 sites into the TRC-DS.
- Washington University in Saint Louis is one of 7 sites in the US participating in both ABC-DS and this study
- We will be enrolling ~ 10 DS participants



USA

- Bloomington, IN
- Boston, MA*
- Boulder, CO
- Cleveland, OH
- Irvine, CA*
- Lexington, KY*
- Madison, WI*
- Nashville, TN
- Phoenix, AZ
- Pittsburgh, PA*
- Staten Island, NY*
- St. Louis, MO*

EUROPE

- Barcelona, ESP
- Cambridge, UK*
- London, UK

*Indicates co-enrolling site for ABC-DS and TRC-DS

TRCDS

Trial-Ready Cohort-Down Syndrome

Study Details

- Recruiting individuals with Down syndrome ages 35 to 55 years old.
- Assessments will be every 16 months.
- Study visits take place at Washington University in St. Louis
- Participants are compensated for their time (each procedure completed)
- Reimbursement will be provided for mileage, parking, stipends for meals and lodging (if traveling from a distance)

TRCDS

Trial-Ready Cohort-Down Syndrome

Study Procedures

- Consent (assent) process
- Medical History
- Physical/Neurological Examination
- Cognitive testing with Participant
- Interviews with Study Partner (Caregiver)
- Blood Draws – examining genetics, fats and proteins in blood
- MRI Scan – uses a magnet to help us look at brain structures
- PET Scans – inject a small amount of radiotracer that allows us to look at the amyloid and tau proteins in the brain
- Optional: Lumbar Puncture

TRCDS

Trial-Ready Cohort-Down Syndrome

Components by Visit

Month 0	Month 16	Month 32
Demographics/ health history	Demographics/ health history	Demographics/ health history
Caregiver Reports	Caregiver Reports	Caregiver Reports
Cognitive Testing	Cognitive Testing	Cognitive Testing
Physical/ neurological exam	Physical/ neurological exam	Physical/ neurological exam
Blood draw	Blood draw	Blood draw
MRI	Amyloid PET	MRI
	Tau PET	Amyloid PET
	Lumbar puncture	Lumbar Puncture



Lifestyle and Alzheimer Disease in Down Syndrome

- This study examines the effect of four lifestyle factors – *physical activity, sleep, cognitive stimulation, and social engagement* – on development of AD and cognitive decline in adults with DS.
- Growing evidence from non-DS populations implicates poor *physical activity, sleep, cognitive stimulation, and social engagement* can contribute to the early development of AD.
- The majority of studies on lifestyle factors, however, have focused on the later clinical stages of AD.
- Thus, across DS and non-DS populations, there is a critical need for studies to examine the effects of lifestyle factors on developing AD.



Study Introduction

- This is a supplemental study for ABC-DS and participants must be co-enrolled or plan to be enrolled in ABC-DS
- A total of 140 adults with Down syndrome will participate
- A total of 3 sites are participating:
 - University of Wisconsin-Madison
 - University of Pittsburgh
 - Washington University in St. Louis.



Study Procedures

- Daytime physical activity will be assessed continuously using an Actigraph that is worn for 7 days continuously.
- A Sleep Diary will be completed daily. The caregiver will help complete the forms with the input from the DS participant.
- On the first night (or an alternative night if preferred by the participant), the adult with Down syndrome will also wear the WatchPAT 300 sensors
 - This device uses a peripheral arterial tone signal to assess for sleep disordered breathing, and thus does not wear anything to be worn over the face.
 - This device will only be worn for ONE night.
 - Results of sleep study will be available for participant and their family.





Components by Visit

Month 0	Month 16	Month 32	Month 48
Demographics	Demographics	Demographics	Demographics
Health	Health	Health	Health
History	History	History	History
Sleep Diary	Sleep Diary	Sleep Diary	Sleep Diary
Actigraphy (1 week)	Actigraphy (1 week)	Actigraphy (1 week)	Actigraphy (1 week)
WatchPAT (sleep analysis – 1 night)	WatchPAT (sleep analysis – 1 night)	WatchPAT (sleep analysis – 1 night)	WatchPAT (sleep analysis – 1 night)
Sleep Analysis Report	Sleep Analysis Report	Sleep Analysis Report	Sleep Analysis Report



DS Umbrella Study

- Designed for individuals who are unable to complete the tasks involved in ABC-DS or TRC-DS and for individuals who are interested in completing other procedures.
- Limited cognitive assessments
- Annual Visits
- Funded by Beau Ances, MD, PhD Discretionary Fund



DS Umbrella Study

Study Procedures

- Consent (assent) process
- Medical History
- Physical/Neurological Examination
- Limited Cognitive testing with Participant
- Interviews with Study Partner (Caregiver)
- Blood Draws
- Stool Samples



DS Umbrella Study

Components by Visit

Month 0	Month 12	Month 24
Demographics Health History	Demographics Health History	Demographics Health History
Caregiver Reports	Caregiver Reports	Caregiver Reports
Cognitive Testing	Cognitive Testing	Cognitive Testing
Physical/ Neurological exam	Physical/ Neurological exam	Physical/ Neurological exam
Blood draw	Blood draw	Blood draw
Stool Sample	Stool Sample	Stool Sample

The background features a series of concentric circles and curved lines in a light gray color, some of which are dashed, creating a subtle, abstract pattern.

Community Organizations

What's available for individuals with Down syndrome and their families



Down Syndrome Clinic:

Providing Comprehensive
Care for Patient and Family

Elizabeth Hall, NP

Washington University School of Medicine

St. Louis Children's Hospital

Down Syndrome Center St. Louis Children's Hospital

- Established in 2005
- Multidisciplinary clinic
- Currently >500 visits per year
- Birth through adulthood
- 4 in-person half days per week, plus telemedicine
 - St Louis Children's Hospital
 - Children's Specialty Care Center West County
 - Children's Specialty Care Center South County
- Adult Down syndrome Clinic established in 2021

Mission



- Maximize health by understanding and anticipating known health issues and risks.
- We strive to optimize the quality of life for people with DS and their families by offering comprehensive, individualized care in one setting

Major Health Concerns affecting individuals with DS

- Cardiology
- Gastroenterology
- Ophthalmology
- Audiology and ENT
- Hematology
- Immunology
- Orthopedics
- Neurology
- Urology
- Endocrinology
- Dermatology
- Pulmonary/Sleep Issues



Developmental and Behavioral Differences

- **Delays in certain areas of development**
 - Gross and Fine motor
 - Cognitive
 - Language
 - Expressive delays > Receptive
- **Excel in some areas of development**
 - Social
 - Visual memory
- **ADHD**
 - Management issues
- **Autism**
- **Sensory Integration Disorders**
- **Regression**



Contact Information

- Medical Director: Dr. Kathy Grange
- **Clinic Nurse Coordinator: Dawn Easterlin 314-273-7992**
- Nurse Practitioners: **Liz Hall 314-454-4832** and Laura White
- Genetic Counselor: Rachel Slaugh
- Genetics Main 314-454-6093





Down Syndrome Association
of Greater St. Louis

Who is the Down Syndrome Association of Greater St. Louis?



- Established in 1976 by a small group of parents
- Celebrated our 45th birthday on June 7th 2021
- Serve 1900 families in the greater St. Louis region (approximately 100-150 mile radius)
- Headquartered in Brentwood
- 11 staff – 4 PT & 7 FT



Mission:

DSAGSL serves, supports, and celebrates the lives of individuals with Down syndrome and their families, through every stage of life.

Vision:

An inclusive community in which all people with Down syndrome can reach their full potential.



SERVICES OFFERED BY DSAGSL:



Family Support & Workshops

Programs and services for parents, caregivers, and family members of people with Down syndrome

[Read More »](#)



Small Steps

Programs and services for individuals with Down syndrome ages 2-8

[Read More »](#)



Next Steps

Programs and services for individuals with Down syndrome ages 8-21

[Read More »](#)



SERVICES OFFERED BY DSAGSL



Ready 2 Work Employment

Programs and services for individuals with Down syndrome ages 21+ including individuals looking for employment

[Read More »](#)



Silver Steps

Programs and services for aging individuals with Down syndrome and their caregivers

[Read More »](#)



Advocacy & Awareness

The DSAGSL is involved in raising public awareness as well as advocating for the rights, dignity, and respect of individuals with Down syndrome in a variety of ways including hosting events, speaking with local news, and contributing to advocacy groups in the St. Louis area.

[Read More »](#)

SERVICES OFFERED BY DSAGSL



21 Club & Social Events

This social group is for individuals of all abilities 21+. Hosted by the Young Friends Board of DSAGSL, the social activities are an opportunity for individuals with Down syndrome to socialize with typical peers, fostering inclusion, acceptance, and understanding.

[Read More »](#)



In-Person & Virtual Programming

Virtual Programs through Zoom, Facebook, and YouTube. A variety of programs are available for all ages and abilities.

[Read More »](#)

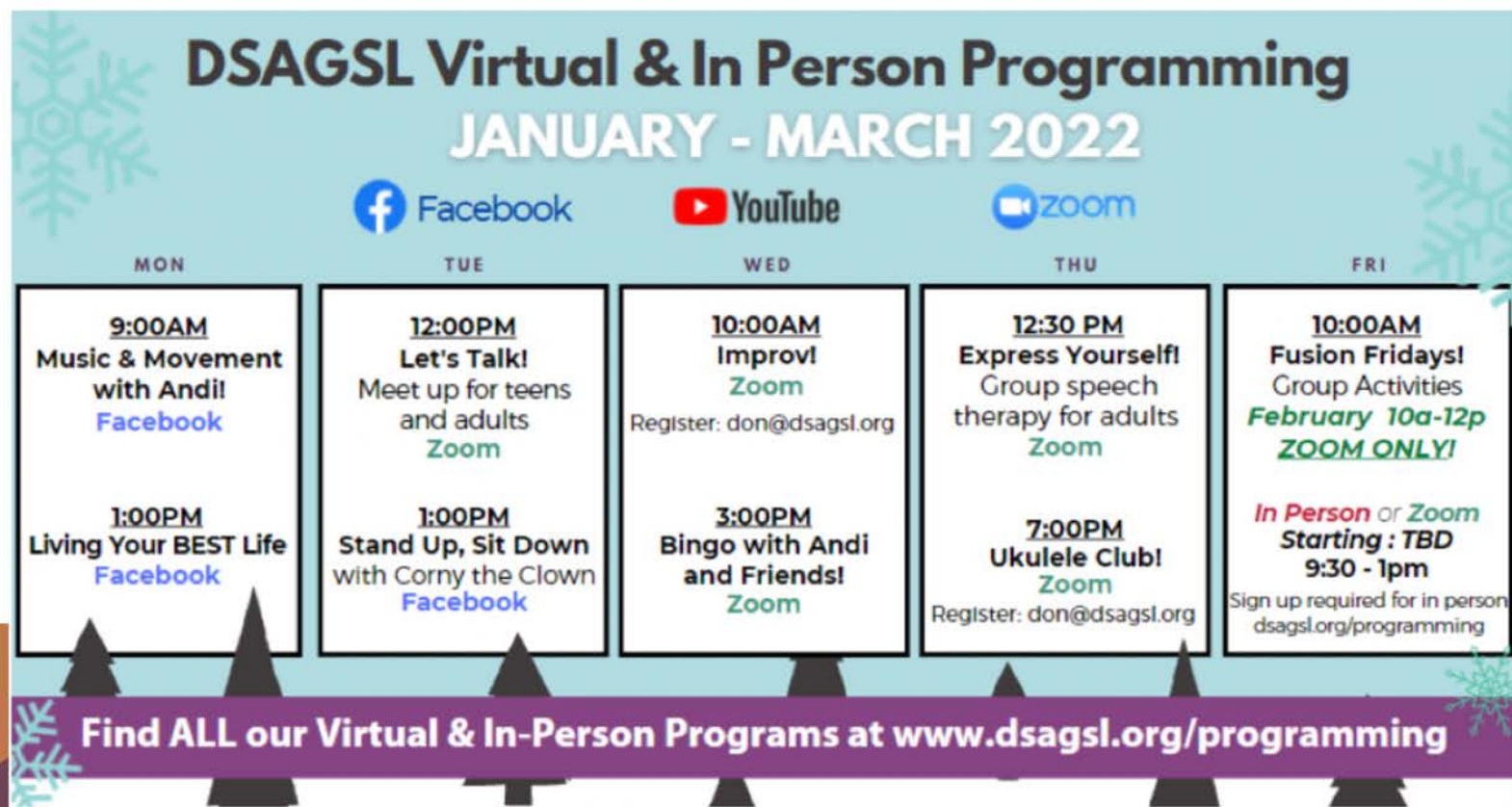


Summer 2021 Programs

Summer Programs 2021 We're finally getting back together in person this summer! Check out what we have planned for all ages! Please contact Andi McCormick

[Read More »](#)

SERVICES OFFERED BY DSAGSL



**DSAGSL Virtual & In Person Programming
JANUARY - MARCH 2022**

Facebook YouTube Zoom

MON	TUE	WED	THU	FRI
9:00AM Music & Movement with Andil Facebook	12:00PM Let's Talk! Meet up for teens and adults Zoom	10:00AM Improv! Zoom Register: don@dsagsl.org	12:30 PM Express Yourself! Group speech therapy for adults Zoom	10:00AM Fusion Fridays! Group Activities February 10a-12p ZOOM ONLY!
1:00PM Living Your BEST Life Facebook	1:00PM Stand Up, Sit Down with Corny the Clown Facebook	3:00PM Bingo with Andi and Friends! Zoom	7:00PM Ukulele Club! Zoom Register: don@dsagsl.org	In Person or Zoom Starting : TBD 9:30 - 1pm Sign up required for in person dsagsl.org/programming

Find ALL our Virtual & In-Person Programs at www.dsagsl.org/programming

SERVICES OFFERED BY DSAGSL



CONNECT WITH DSAGSL

Facebook.com/DSAGSL

Instagram.com/DSAGSL

DSAGSL.org



For more information



Down Syndrome Association of Greater St. Louis
1300 Strassner Drive | Brentwood, MO 63111
314.961.2504 | info@dsagsl.org | www.dsagsl.org







Services

FAMILY SUPPORTS

INDIVIDUAL SUPPORTS



Family Support

Family Workshops
Video Learning Library
Information & Referral
Prevention



Parent Cafe
Support Groups
SibShops
Advocate Groups



Family Navigation
Respite





Individual Services





Children's Services

Community
Embedded Services

Capable Kids
& Families

Parents Learning
Together



Transition to Adulthood

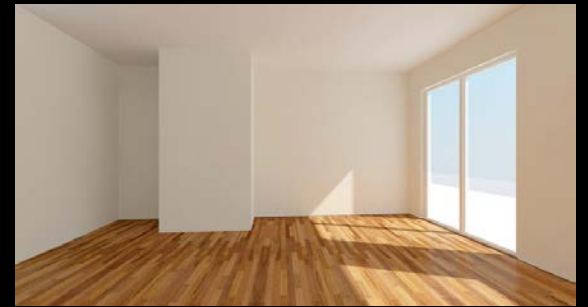
What will I do
as an adult?



Further Education



Employment/Meaningful Day



Community Living Skills





Adult

Community Engagement

LIFT

Supported Employment

Leisure Services

Behavior Supports

Residential





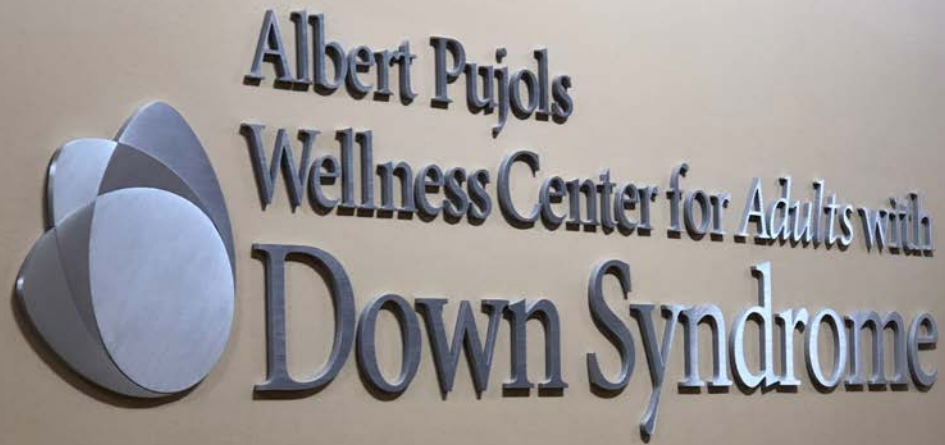
AGING

Residential Services
Aging With Empowerment
Nutrition Center



Albert Pujols Wellness Center for *Adults* with Down Syndrome





The Albert Pujols Wellness Center for *Adults* with Down Syndrome was the first of its kind in the area that specifically addressed the need for wellness services and programs dedicated solely for adults with Down syndrome. The Center opened it's doors in November 2009.

Services and programs provided at the Wellness Center



The Wellness Center's Clinic



Medical Director:
Dr. Cynthia Poelker

Our Center provides serves to individuals 17 years of age and older

- Comprehensive medical examination with a focus on:
 - ~ Transitional evaluations from pediatric care
 - ~ New patient evaluations
- Referrals to specialists as needed
- Psychosocial assessments by a licensed social worker
- Nutritional Assessments with a registered dietitian

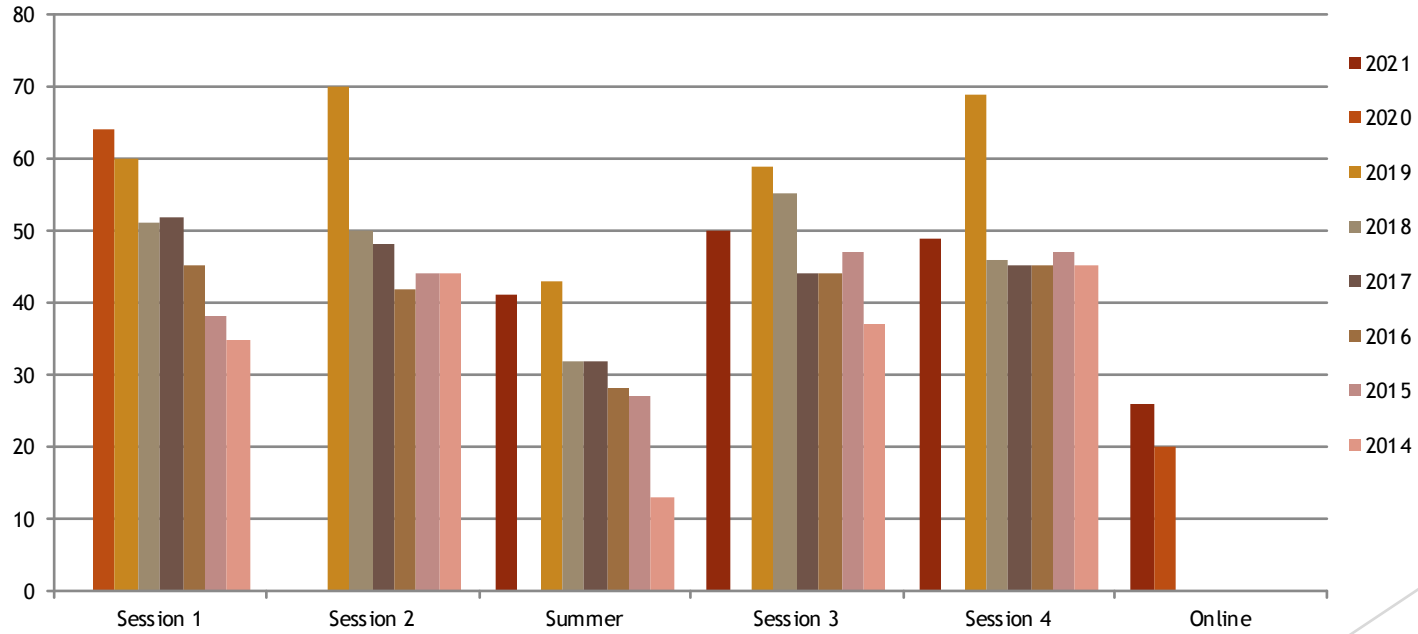
The other part of our Wellness Center: Our classes and programs

**For all new patients, a wellness visit must
first take place prior to signing up for our
classes**

Some of the programs we have offered at the Wellness Center

- ❖ Socialization programs (Friendship class)
- ❖ Fitness programs (Yoga, Kickboxing, strength training, cardio, balance training)
- ❖ Tai Chi
- ❖ Country Line Dancing
- ❖ Speech/Language programs
- ❖ Nutrition programs (cooking classes, portion control, Eat this not That, Fitness Focused)
- ❖ Music programs (Glee choir, hand chime choir, musical instrument groups)
- ❖ Arts and crafts programs
- ❖ Book Club

Growth Over Time






COVID: A Challenging Time

- ❖ In-person classes had to be put on hold
- ❖ So, how do we keep our clients engaged
- ❖ Like so many other agencies you had to think outside of the box



Online classes (virtual) has it's own unique problems

- ❖ Connectivity issues 
- ❖ Hearing & Vision issues 
- ❖ Some clients can't stay engaged with virtual programs 



Speaking: Kathy Jones



Why we do what we do

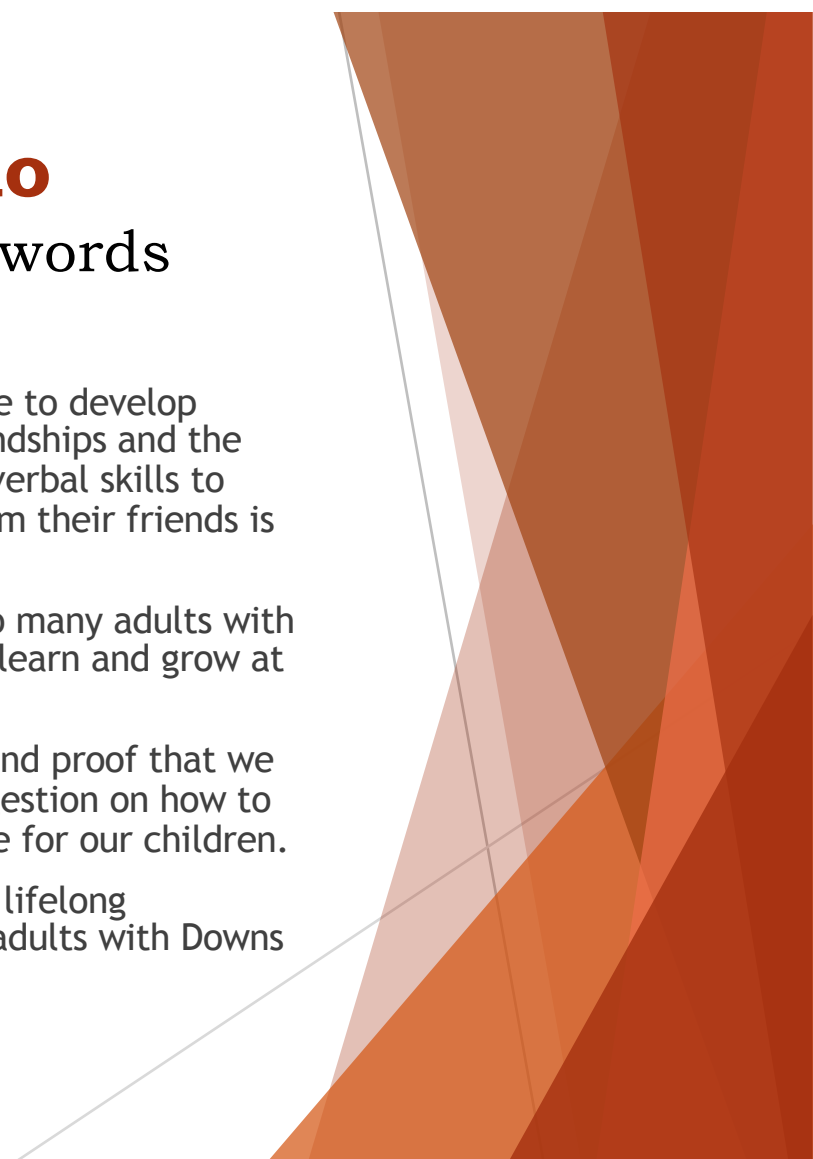
Janice Scully: parent in her own words

There are so few opportunities for our children with Down Syndrome to develop meaningful relationships with their peers. This center provides friendships and the sense of belonging to a community. Whether an individual has the verbal skills to carry on a conversation is unimportant. Just a smile and “hello” from their friends is enough to bring a smile to their faces.

The classes allow an exploration of skills that are rarely available to many adults with disabilities. The support of the staff is wonderful. Our children can learn and grow at their own abilities with guidance, fun and kindness.

For the parents, this center is an anchor. It is our therapy sessions and proof that we are not alone. Someone will always have a helpful comment or suggestion on how to solve a problem. We gladly share funny stories, challenges and pride for our children.

The St. Luke's community have given us the opportunity to develop lifelong friendships with the clients and parents while encouraging healthy adults with Downs Syndrome.



Why we do what we do (cont.)

Paige and Shari Brune: client and parent in their own words

First we would like to thank the Pujols Wellness Center for Adults with Down Syndrome and the hard work and dedication of Stacey and the staff at the center as well as all of the volunteers that make this operation run smoothly.

Paige has been involved with the Center for 11 years and we have seen the program grow and develop as the needs of the community have also developed. From a parent perspective, this Center has become a continuation of Paige's education and development post Highschool and vocational training.

The Center not only offers Paige a time of social engagement (even with COVID through WebEx classes) but, a chance to learn new skills. From Music & Art, Speech & Language, Health & Wellness and awesome Exercise classes, the Center has introduced many areas of extended learning and socialization.

Paige has so enjoyed expanding her love of music and art. The Hand chimes and Glee classes are always a highlight of her week. Learning to enjoy playing music and singing with others always brings a sense of joy and confidence to her life!! Paige also looks forward to the Craft Classes! No matter what project the group is working on Paige really gets into it and has fun. Stacey has been so creative in getting these projects together keeping in mind the skills needed to complete the project.

Paige has also enjoyed volunteering at the Center on occasion with mailing out flyers to helping organize the craft closet, she really enjoys helping others.

For many parents, the Center also serves as a meeting place to share ideas, communicate needs and be a true support for each other. It's such a wonderful feeling knowing that you can talk to parents that have either been through the same challenges or are facing the same challenges as you are. The Center has offered seminars on Estate Planning, Health in the Down Syndrome Community and others that have also enriched our lives which in turn enriches the adults we have in our care.

We feel so Blessed that the Center is available and has become such an important part of our lives as well as the lives of many Adults with Down Syndrome. When we talk to other families that do not live in this area, we are so proud to talk about the Wellness Center and what it means to us through programs and a true sense of community for our family. Again, we appreciate all that the Center does for us and Paige.

Thank you for all you do!

Kendall, Shari & Paige Brune

THANK YOU!





Artists First is an inclusive, non-profit art studio empowering artists of all abilities.

7190 Manchester Road Maplewood, MO 63143 (314) 781-4440 www.artistsfirststl.org



OPEN STUDIO PROGRAMS



The Integrated Adult Open Studio provides participants with a studio stocked with professional supplies and technical facilitation by professional artists.



Youth with and without disabilities in the Integrated Youth Open Studio collaborate in a diverse environment where they can develop artistic and social skills



Artists First for Veterans is a nontraditional creative support program for current and former Armed Services members that supports the development of positive self-identity, self-expression and community re-integration.



OPEN STUDIO PROGRAMS



OMA is an evidenced based intergenerational visual art program for people with memory loss.



Lifeworks is a program tailored to professionally minded artists with developmental disabilities to obtain their greatest potential and growth in employment, social, emotional and physical domains through the arts.



Artists First's In View Mural Project provides the community (businesses, residences, and public spaces) with high quality, hand-painted, custom murals. The project provides artists with disabilities, veterans, and at-risk youth with confidence-building opportunities, work experience, inclusion, and visibility.



CREATIVE SELF-EXPRESSION:



Contributes to the improvement of mental health in Individuals with developmental disabilities

(Grbić et al., 2018).



Improves cognitive, sensory-motor functions, fosters self-esteem, self-awareness, cultivates emotional resilience, promotes insight, enhances social skills, reduces and resolve conflicts and distress, and advance societal and ecological change

(American Art Therapy Association, AATA, June 2017).



Participatory art making offers the “means by which [people] acquire the skills, language and connectedness”

National Organization for Arts in Health. (2017).



ARTISTS FIRST^{STL}

Art For All

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ABL is Committed to the Saint Louis DS Community



Special Thank you

- We would like to extend a a huge thank you to the organizations who have joined us today:
 - WUSM Down Syndrome Clinic
 - Down Syndrome Association of Greater St. Louis
 - St Louis Arc
 - Albert Pujols Wellness Center for Adults with Down Syndrome
 - Artists First
- To all the past and future participants or clinic patients and families, we're so happy you could join today and look forward to working with you in the future. We can't do this without you!



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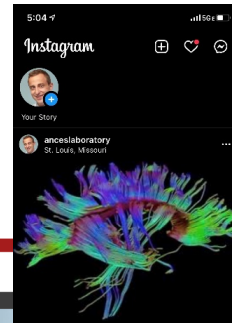


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Questions and Answers

- You can type your questions in the chat, please mention the name or organization if you have a specific question.
- If we don't get to your question, please email Brittany at bmnelson@wustl.edu and I will work to find your answers.
- If you registered for the zoom and you selected to be contacted in the future, we will be contacting you with study related information. You can always opt out by emailing Brittany at bmnelson@wustl.edu