

# Cognition, Affect, and Psychophysiology Lab at Virginia Tech

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# Areas of Research

## Typical Development

- global, representative patterns of change
- knowledge of typical development informs atypical development
- wide ranging individual differences (*that's the fun part!*)
- understand what contributes to developing behaviors

## Psychobiological conceptual framework

- effects of biological factors on behavior
- application of the principles of biology (in particular neurobiology) to the study of physiological and developmental mechanisms of behavior

## Frontal functioning (cognition, emotion, self-regulation processes)



## Findings to Date

current longitudinal study, 5 waves of data collection (5, 10, 24, 36, 48 mo)

### cohort 1 --- *Social Responsiveness Scale* at 48 mo

1) Temperament is a relevant source of variability in social responsiveness.

-canonical correlations between ECBQ/CBQ (NA, SURGE, EC)  
and SRS (5 scales) and gender at 24, 36, 48 mo

-24 mo --- negative affect (discomfort)

-36 mo --- negative affect (fear); surgency / impulsivity (shyness); effortful control (inhibitory control; attention shifting)

-48 mo --- negative affect (fear; sadness); surgency / impulsivity (shyness); effortful control

2) Different patterns of RSA development are associated with group differences in social responsiveness.

-typical and atypical patterns of RSA development 5 to 48 mo

-RSA group differences in SRS total score and soc cog and soc comm scales; with atypical pattern related to worse SRS scores

### cohort 2 --- *Vineland* at 24, 36, 48 mo (data not yet analyzed)

## Research Ideas

- continue focus on typical development
- reports from teachers --- NIH/NICHD “report card” now that our longitudinal study children are getting older
- want to begin examination of development of inhibitory control in infancy (temperament vs. cognitive)



## Current Relationships and Resources

### collaborators:

Kirby Deater-Deckard – VT Psyc

Jungmeen Kim-Spoon – VT Psyc

Rachel Diana – VT Psyc (will collaborate on pilot data this fall)

Cindy Smith – VT Hum Dev

Susan Calkins – UNCG Hum Dev Fam Studies

Stuart Marcovitch – UNCG Psyc

### resources:

NIH R01 --- ends 1/31/13

NIH R01 revised renewal application --- ages 6- and 9-year research visits for current sample --- study section review in Oct 2012

NIH R01 submission Oct 2012 --- development of decision making in middle childhood

NIH R03/R21 submission Feb 2013 --- development of inhibitory control in infancy

ISCE Senior Faculty Fellow

# Collaborators and Resources Needed

## short-term

- clinical graduate students or postdoctoral fellows with interests in typical development to help CAP Lab analyze our Vineland data

## long-term

- access to schools / teachers for our studies of typical development
- up-to-date recruitment database of typically developing children and manager of that database
- funding for pilot studies
- a pool of postdoctoral fellows working with our research labs that are funded partially by grants and partially by other non-PI means

