Mission
The core mission of the Prevention Science Institute is to improve the lives and well-being of at-risk children, individuals, and families throughout the lifespan. PSI’s three major focus areas are consistent with the field of prevention science: translational neuroscience, prevention and intervention, and implementation science. PSI researchers seek to identify effective intervention strategies and the outcomes associated with these interventions across multiple domains of functioning, including biological, social, and contextual. The PSI is committed to research that expands our understanding of interventions and development among diverse populations and actively seeks to promote research that reduces health disparities in service utilization. Collaboration is fostered in all areas of prevention science and among researchers and faculty across disciplines, including psychology, social and affective neuroscience, development, and education. Our work is conducted in partnership with local, state, national, and international organizations and researchers, including child welfare service providers, school district leaders, mental health providers, criminal justice system leaders, and policy makers. Together, we work to understand and promote healthy adaptation in children and families, with a particular emphasis on the dissemination of effective interventions to real-world settings.
The Prevention Science Institute at the University of Oregon is a multidisciplinary research institute where scientists seek to understand human development, prevent behavioral health problems, and implement effective interventions in community settings.

History and Background
For more than two decades, the University of Oregon has maintained a strong presence in the field of prevention science, with extensive federal grant-funded research in all areas of prevention relevant to the human lifespan. The field has been rapidly expanding to include the study of new populations (e.g., those with autism spectrum disorders) and new methodologies (e.g., neuroimaging) and an emphasis on the interplay between neuroscience and intervention science. Earlier, the university's programs of research had been spread across departments (psychology), colleges (College of Education), and centers (Child and Family Center), and it was difficult to bring together the various areas of interest. Fortunately the university’s strengths in all the areas of prevention science made it well situated to capitalize on these competencies through an organized focus that has brought together faculty expertise in the Prevention Science Institute.

Research Foci
PSI’s research is guided by a synergetic emphasis on translational neuroscience, prevention/intervention science, and implementation science. In each of these areas, the understanding of basic developmental processes is incorporated into models of risk and adaptation that predict behavior across the lifespan, from early childhood to adulthood. This synergism is a key strength of our collaborative team as we develop and test theories of change.

Graduate Education
Enhancing interdisciplinary graduate education in prevention science is a core focus of the PSI. The institute provides multiple opportunities for graduate training by (1) housing an NIH-funded T32 training grant that supports predoctoral and postdoctoral trainees; (2) obtaining predoctoral minority supplements to funded R01 grants to support qualified minority doctoral students; (3) providing a research training structure for graduate students in the new prevention science master’s program offered by the university’s counseling psychology and human services program; (4) providing applied settings for students in counseling, school, and clinical psychology for training in evidence-based practice; and (5) providing mentorship and support for graduate students submitting applications for independent funding, such as NRSA and NSF fellowships and foundation fellowships.

The PSI is entirely funded by federal grants and other sponsored research. Our primary funders include the National Institutes of Health and the U.S. Department of Education. The PSI includes faculty from across campus who work together to understand prevention and health promotion through translational science and applied intervention research. The future of the PSI involves a continued focus on understanding and testing effective prevention strategies and an expanded focus on understanding how effective prevention strategies affect not only social and behavioral outcomes, but biological outcomes, such as brain development. Our collective research emphasizes understanding the interplay between biological mechanisms, social ecologies, and contextual risk and interventions that change these multiple systems.

The theme “Old Growth, New Growth” captures the PSI at this critical juncture. The institute has been built on a strong foundation of support from UO and from past leaders in the field of prevention science who have contributed to building the university’s emphasis on research. PSI’s work is consistent with the values of the larger Oregon community, which emphasize healthy lifestyles, creating supportive communities for children, and preventing problems before they occur. PSI’s continued success will rely on our work as a team and our continued support from UO and the Oregon community.

Beth Stormshak, PhD, Director Prevention Science Institute
Prevention Science and Neuroscience

The integration of intervention science with neuroscience is a key synergetic focus of the Prevention Science Institute. A group of PSI researchers, including Drs. Elliot Berkman, Philip Fisher, and Jennifer Pfeifer, embraces the “translational neuroscience” approach of leveraging methods and knowledge from cognitive and affective science to develop and refine efficacious interventions to improve mental and physical health (see figure). Translational neuroscience is on the cutting edge of intervention science. In early 2014, National Institute of Mental Health director Dr. Tom Insel indicated a major pivot in NIMH policy toward translational neuroscience: “New clinical trials will need to identify a target or mediator; a positive result will require not only that an intervention ameliorated a symptom, but that it had a demonstrable effect on a target, such as a neural pathway implicated in the disorder or a key cognitive operation” (A New Approach to Clinical Trials, February 27, 2014, blog post). At the PSI, much of this work is done by using functional magnetic resonance imaging, or fMRI, to measure brain activity during basic social, affective, and cognitive operations, such as viewing images of adolescent peers, regulating emotions, or intentionally directing attention away from evocative stimuli. The neural circuits identified during such tasks are candidate target systems for intervention in the translational neuroscience approach.

All fMRI research at the PSI is conducted at the Lewis Center for Neuroimaging at the University of Oregon. The LCNI houses a state-of-the-art Siemens Magnetom Skyra 3T full-body MRI system capable of producing structural and functional images of the human brain at resolutions of 1 millimeter³ or less. The LCNI offers a range of advanced services to facilitate this research, including a full-time director, magnetic...
Translational neuroscience is an innovative approach that leverages knowledge and methods from neuroscience to develop and refine risk-reducing interventions. Candidate brain systems are associated with known risk factors and health-related outcomes. The systems are studied directly and targeted for change with behavioral interventions.

Inhibitory control and its neural systems are also disrupted by early adverse experiences, such as poverty, abuse, and neglect, suggesting that improving inhibitory control among individuals who have experienced early adversity might reduce the onset of a range of disorders associated with disinhibition. Dr. Berkman is testing whether a focused inhibitory control training for adolescents who have experienced early adversity will show improved functioning in the right inferior frontal gyrus—a region critically involved in inhibitory control—and, through that improved functioning, also show better inhibitory control on a set of neurocognitive tests used to assess general functioning and risk for subsequent mental health and behavioral problems. The intervention he developed has already been shown to be efficacious in young adults, and now he is using insights from neuroscience to refine and test an intervention tailored for at-risk youths.
Maltreatment and Foster Care Studies

Child maltreatment affects close to one million children in the United States each year. In Oregon alone, nearly 70,000 reports of abuse and neglect were filed in 2012, and more than 12,000 children spent time in foster care. At the PSI, scientists are attempting to combat the societal problem of maltreatment and its impact on children through a number of innovative research efforts funded by the National Institutes of Health. This research encompasses three main focus areas: (1) understanding how child maltreatment and related problems, such as family instability and domestic violence, affect the developing brain; (2) developing family-focused interventions to prevent child abuse and neglect; and (3) following high-risk families over time to see if our interventions are successfully breaking the cross-generational cycle of abuse. Here’s a snapshot of some of our work in this area:

Studies led by PSI scientist Dr. Elizabeth Skowron are investigating the characteristics of moment-to-moment interactions between maltreating mothers and their young children. What can we learn about how maltreating mothers’ physiological responses while interacting with their child might interfere with their ability to use positive parenting strategies? Skowron and her colleagues invite mothers and children to the lab so that time-synchronized observational and cardiac physiology data can be collected from them. Her studies have shown that in abusive mothers, increases in positive parenting lead to changes in a mother’s physiology (i.e., changes in heart rate variability), which results in subsequent use of more strict/harsh control behaviors toward her child. These associations suggest that a physically abusive mother’s efforts to provide warm support to her child ends up taxing her physiologically, leading her to become more controlling toward her child in strict and hostile ways. These findings underscore the challenges that abusive mothers face while they attempt to provide adequate caregiving, given the heightened arousal they experience in particular while engaged in positive parenting. Skowron’s findings further suggest that the parenting capacities of abusive mothers are uniquely challenged by deficits in physiological regulation. Her upcoming work is designed to test whether evidence-based parenting interventions that teach, reinforce, and support greater use of positive parenting strategies by abusive parents not only strengthen their positive parenting skills, but also lead to secondary benefits, that is, improvements in physiological regulation.

Research by PSI scientist Dr. Philip Fisher focuses on the use of video coaching in combination with parenting groups to help foster families with preschool-age foster children more effectively care for their children. Fisher’s prior research in this area has found that similar programs can help increase the security of foster children’s attachment to their caregivers and increase their likelihood of maintaining stable placements. In addition, Fisher and colleagues have found that foster children who receive these interventions show more stable stress hormone
levels over time, whereas many children in conventional foster care show altered levels of stress hormones. The alteration in stress hormone levels among children in conventional foster care appears to be associated with the stress levels of their foster parents: the greater the foster parents’ stress, the more the children’s stress hormone systems appear to become dysregulated. On the positive side, Fisher and colleagues’ interventions also have been found to reduce the amount of stress reported by foster parents. Fisher and his graduate students and staff are also studying the extent to which video coaching interventions for neglectful parents to support positive parenting affect the brain functioning of those parents in ways that increase their ability to be responsive to their child. This investigative work is being conducted in a number of sites in Oregon, Washington, Connecticut, Canada, and England.

In a third study, PSI scientist Dr. Leslie Leve is interviewing women who experienced abuse and neglect as children, became involved in the juvenile justice system as teens, and are now in their 20s and 30s and are having families of their own. When they were teens, all the women in this study received intensive out-of-home intervention services either through foster care (Multidimensional Treatment Foster Care; MTFC) or by living in a therapeutic group home. In the earlier years of this study, Leve and her colleagues at the Oregon Social Learning Center found that MTFC was more successful than group care for preventing future juvenile arrests, preventing teen pregnancies, and reducing depressive symptoms. Interviews with these women 10 years later are suggesting that these effects are sustained into adulthood and that compared with those who did not receive MTFC as teens, fewer of the women are now involved in the child welfare system for suspected abuse and maltreatment of their own children.

Although these PSI scientists are making progress in terms of understanding the origins and prevention of maltreatment, there is still work to be done to increase the impact and reach of our interventions, to better understand how they affect brain development and to get successful intervention services into the hands of community partners who can implement them within their agencies. This year, they were awarded a multiyear National Institute on Drug Abuse Center of Excellence grant to further their research efforts in this area. In collaboration with the Oregon Social Learning Center, this grant comprises a constellation of integrated research projects, pilot studies, and training and outreach activities. This Center of Excellence will be a national resource for cutting-edge, multidisciplinary, innovative research in the prevention of child maltreatment.

The estimated average lifetime cost per victim of nonfatal child maltreatment is $210,012 in 2010 dollars, including $32,648 in childhood health care costs, $10,530 in adult medical costs, $144,360 in productivity losses, $7,728 in child welfare costs, $6,747 in criminal justice costs, and $7,999 in special education costs. The estimated average lifetime cost per death is $1,272,900, including $14,100 in medical costs and $1,258,800 in productivity losses. The total lifetime economic burden resulting from new cases of fatal and nonfatal child maltreatment in the United States in 2008 was approximately $124 billion. In sensitivity analysis, the total burden is estimated to be as large as $585 billion.

The PSI Portland research base, opened in 1995, was first located in the northeastern sector of the city in a renovated house situated in a residential neighborhood. The location gave the nascent research staff easy access to a potential study sample for the earliest studies conducted there. At that time only one grant was housed in this location, and the operation functioned with minimal staff. Since that time Portland Public Schools and surrounding districts, such as North Clackamas, have been partners with the UO mission and eventually enabled us to study and work with children and families in the Portland area for 20 consecutive years. Our collaborations with community health agencies, such as Trillium Family Services, have also been instrumental in moving our research forward. Our Portland research office enables the UO to not only accomplish research and at the same time furnish support to this urban community, it also provides us with the opportunity to test our models on a diverse population that faces unique challenges of living in an urban area.

Our Portland base of operations was moved to the UO’s White Stag Building in 2012. Four grant-funded research studies are now being conducted there by 15 staff members distributed across these projects. Each project is community based and provides support for children and families in the Portland area while helping us understand effective interventions for families that reduce risk and promote healthy adjustment throughout the lifespan.

Two major grant awards have been funding longitudinal studies that have followed a sample of 999 youths, now adults, from sixth grade through the emerging adult years and another sample of 593 young adults who started the project in 2005 as sixth graders. The first sample was originally recruited from three schools in Northeast Portland, and the first wave of data was collected in 1995. Project Alliance, the overarching
name of the project that has been funded by more than five individual grants since its inception, has generated one of the most interesting datasets housed at the PSI. During the middle school years, half the families were randomly assigned to receive the Family Check-Up (FCU) intervention or school as usual. This was the first of several randomized trials of the FCU, which eventually led to more than 100 publications focused on the prevention and treatment of substance use in middle school and adolescence. Retention for this sample is high, with 80% of youths and families continuing to participate after nearly 20 years. Findings from this project support the FCU as a strategy to prevent a range of risk behaviors, including substance use, antisocial behavior, high-risk sexual behavior, school failure, depression, and family conflict.

Current research in the Portland office focuses on collecting genetic data from the entire sample (R01 DA070301) and collecting videotaped observations of young adults and their romantic partner (R01 AA022071). This information will greatly inform our understanding of substance use prevention at this age. The genetic data will help us understand genetic liability for substance use and the potential benefits of family-centered interventions that reduce risk even in those youths with the genetic propensity for substance abuse. The relationship study will help us understand how intimate relationships either protect and reduce risk of substance use at this age or enhance use through dynamics within the relationship that support risk behavior.

Allison Caruthers, PhD, has been employed in University of Oregon research since 2008, when she began working as a project coordinator in the PSI’s Portland office. Since the beginning she has been instrumental in conducting the research and shaping the goals and specific aims of the grant-funded studies she has been involved in. Dr. Caruthers now serves as the Oregon-based principal investigator on two studies in the Portland location, funded by NIDA and NIAAA, which are sub-awards from Arizona State University, where Dr. Thomas Dishion is the PI. In 2005 Dr. Caruthers received her PhD in developmental psychology from the University of Michigan. Her research emphasis is on high-risk sexual behavior and risk outcomes in late adolescence and early adulthood. “Now that our samples are in the developmental phase of emerging adulthood, I am excited to study the risks and protective factors associated with this important time period, which has been understudied in community samples,” says Dr. Caruthers. Her work has been critical to the success of the Portland office, staff, and the overall research mission of the PSI.

Department of Education–Funded Study Shifts Into Gear

In July 2014 the Prevention Science Institute team in the Portland office began work on a new study funded by an Institute of Education Sciences award to Dr. Elizabeth Stormshak, professor in the University of Oregon’s College of Education and director of the Prevention Science Institute. This research builds on a history of successful projects that have examined the effectiveness of the Family Check-Up (FCU) intervention in schools. Our school-based work to date has focused primarily on the middle school years. We have found that children in families who participate in the intervention engage in less risky behavior, such as substance use, in high school and show better achievement and school success during the transition to high school. The new study will evaluate the efficacy of implementing the FCU and our Positive Family Support model, a school-based, ecological approach to supporting families and enhancing family–school partnerships, during the transition into elementary school. The transition to elementary school is a critical time for the development of key skills that are necessary for school success, and effective parent support at home and home-to-school communication is associated with school readiness indicators that predict successful adaptation to school. It is anticipated that children and families who receive the support provided through this intervention will show more improvement in academic skills and behavior throughout the early elementary school years. Five elementary schools in Oregon’s North Clackamas School District will participate, with an ethnically and economically diverse population of 560 children and families randomly assigned to receive the intervention program or the services typically provided by this school district. Data will be collected for three years from teachers, families, and children, from kindergarten through second grade.
Grant-Funded Research at PSI

Development and Psychopathology Research Training Program

Funding period: June 30, 2009–June 30, 2014
Principal Investigator: Dr. Elizabeth Stormshak
Faculty/Mentors in 2013–2014: Dr. Krista Chronister, Dr. Philip Fisher, Dr. Elizabeth Skowron, Dr. Elizabeth Stormshak
Funded by: National Institute of Mental Health
Grant number: T32 MH20012

In this program graduate-level predoctoral trainees and postdoctoral fellows are trained in child and adolescent mental health, with an emphasis on developmental psychopathology research and the science of developing effective interventions for youths and families. Connections between neurobiology and developmental, clinical, and school psychology are emphasized. The program is guided by a developmental–ecological model, addresses questions from multiple domains of development (e.g., neuroscience and parenting interventions, culture and school success) and includes training in methodology and theory. A seminar series organized by themes, with particular relevance to emerging issues in development and psychopathology and the specific interests of research trainees, is also provided.

Early Family-Centered Prevention of Adolescent Alcohol, Drug Use, and Psychopathology (Early Steps)
Funding period: May 1, 2014–April 30, 2019
Principal Investigators: Dr. Leslie Leve, University of Oregon; Dr. Thomas Dishion, Arizona State University; Dr. Daniel Shaw, University of Pittsburgh; Dr. Melvin Wilson, University of Virginia
Funded by: National Institute on Drug Abuse
Grant number: R01 DA036832

This randomized prevention trial is testing the long-term effects of the Family Check-Up (FCU) for enhancing parenting practices from toddlerhood through adolescence. The sample was originally recruited from WIC centers in three geographically, socioeconomically, and ethnically diverse communities: Pittsburgh, Pennsylvania; Charlottesville, Virginia; and Eugene, Oregon. The children and families were initially assessed at child age 2 years and then yearly through age 10.5. In this follow-up study families are being interviewed at child age 13.5 and 15.5, DNA samples are being collected from youths, and the long-term effects of the FCU intervention on adolescent problem behavior are being tested.

Early Growth and Development Study: Family Process, Genes, and School Entry
Funding period: September 1, 2007–July 31, 2014
Principal Investigator: Dr. Leslie Leve
Funded by: National Institute of Child Health and Human Development, National Institute on Drug Abuse, Office of Behavioral and Social Sciences Research
Grant number: R01 HD042608

This study builds on emerging evidence about the relationship between heredity and the family environment, that is, nature and nurture, and how the two work together and separately in child development. It is the first of its kind to examine these issues while also examining general adoption issues, such as openness. The study follows a linked sample of adopted children, adoptive parents, and birth parents as the children enter the early school-age years; each birth parent is surveyed once and each adoptive family three times (child age 4.5, 6, and 7 years).

Ecological Approach to Family Intervention and Treatment
Funding period: March 1, 2009–February 28, 2014
Traditional thinking was that nature or nurture influences a child’s development. Recent research shows that nature and nurture are closely connected and both, together, may influence the same area of a child’s development.

Early Growth and Development Study

Principal Investigators: Dr. John Seeley, Oregon Research Institute; Dr. Thomas Dishion, Arizona State University
Co-Investigators: Dr. Elizabeth Stormshak, University of Oregon; Dr. Keith Smolkowski, Oregon Research Institute
Funded by: Institute of Education Sciences
Grant number: R324A090111

This project began as a collaboration between Oregon Research Institute and the University of Oregon. Funded as a Goal 4 study, the primary aim was to scale up the Family Check-Up (FCU) model for schools across Oregon, test primary outcomes, and measure implementation constructs. The FCU was adapted as the Positive Family Support program, now the school-based model for dissemination that integrates three levels of intervention. In Level 1, a family resource center provides information and educational support for parents. In Level 2, home-school partnerships are created, and parents receive daily or weekly data about their child’s attendance, homework completion, and behavior. Level 3 includes the FCU, which is delivered to parents who need additional support and focuses on specific skill enhancement and home-to-school coordination of effective intervention strategies. School-level data about implementation and fidelity have been collected and will help us understand the factors that increase uptake and the success of large-scale, family-centered interventions in schools.

Family Check-Up for Early Childhood
Funding period: December 1, 2013–December 31, 2015
Principal Investigators: Dr. Laura Lee McIntyre, Dr. Elizabeth Stormshak
Funded by: Ford Family Foundation
Grant number: 20130431

The overarching goal of this project is to partner with rural Oregon communities to increase the number of children who enter kindergarten school ready. PSI scientists and staff are identifying local staff to be trained in implementation of the Family Check-Up (FCU), recruiting participant families, and supporting assessment and tailored intervention. Fidelity of intervention uptake and of implementation will be measured and evaluated as it relates to anticipated outcomes. Outcomes of interest to families receiving the FCU include reductions in child problem behavior, increased attention and self-regulation skills at school, increased positive parenting skills, and increased language development and early literacy skills. Researchers will work with community stakeholders to develop a plan for sustaining the model in the preschool setting after funding has ended.

Gene–Environment Interplay and Childhood Obesity: An Adoption Study
Funding period: September 1, 2011–May 31, 2016
Principal Investigators: Dr. Leslie Leve, University of Oregon; Dr. Jody Ganiban, George Washington University
Funded by: National Institute of Diabetes and Digestive and Kidney Disease
Grant number: R01 DK090264

This study is exploring child physical growth and health. The focus is on the eating habits and behaviors of adopted children, adoptive parents, and birth parents from birth to middle childhood, and the researchers are examining family dietary habits, food preferences, physical activities, and child growth patterns when children are 7–9 years old. Of particular interest is identification of environmental and genetic factors that promote physical growth and healthy weight over time.

Gene–Environment Interplay and the Development of Psychiatric Symptoms in Children
Funding period: September 28, 2010–June 30, 2015
Principal Investigators: Dr. Leslie Leve, University of Oregon; Dr. Jenae Neiderhiser, The Penn State University
Funded by: National Institute of Mental Health
Grant number: R01 MH092118
This study is examining the interplay between genetic, prenatal, and postnatal environmental influences on early pathways to conduct, anxiety, and depressive behaviors by interviewing adoptive parents about child behavior and symptoms between ages 6 and 8 years. Adoptive parents are also interviewed about their own mental health.

Inhibitory Control Training to Remediate the Effect of Early Adversity in At-Risk Youth
Combined funding period: January 1, 2014–June 15, 2015
Principal Investigator: Dr. Elliot Berkman
Funded by: Center on the Developing Child at Harvard; National Institute on Drug Abuse Translational Drug Abuse Prevention Center
Grant number: P50 DA035763
This combined study evaluates the feasibility of an intervention to reduce peer-linked risk behaviors by increasing inhibitory control in a sample of at-risk adolescents. Peer-associated risk behaviors and their sequelae are pronounced among individuals with high levels of early adversity (EA), and EA is associated with inhibitory control deficits throughout childhood and adolescence. This research seeks to quantify the effects of EA on inhibitory control and the neural mechanisms through which those effects might be remediated with intervention. Groups with high and with low levels of EA will be compared in terms of their underlying neural systems for inhibitory control and how those systems respond differently to intervention.

KEEP-P, a Prevention Intervention for Foster Preschoolers
Funding period: July 1, 2013–April 30, 2018
Principal Investigator: Dr. Philip Fisher
Funded by: National Institute of Child Health and Human Development
Grant number: R01 HD075716
The KEEP-P study is a randomized clinical trial of a low-cost, group-based intervention for foster preschoolers and their caregivers. Foster/kinship caregivers attend 16 weekly support group sessions. Some participating families complete a 10-week video coaching program designed to reinforce and strengthen supportive interactions between children and their caregivers. Goals are improved parenting, reduced rates of disrupted placements, and improved child outcomes among this population, who are otherwise at high risk for numerous negative outcomes, particularly those associated with foster placement disruptions.

Oregon Parent Project (OPP)
An RCT of Parent Training for Preschoolers with Delays
Funding period: June 1, 2011–February 29, 2016
Principal Investigator: Dr. Laura Lee McIntyre, University of Oregon
Co-Investigator: Dr. Thomas Dishion, Arizona State University
Funded by: National Institute of Child Health and Human Development
Grant number: R01 HD059838
This study is examining child and family well-being during the preschool period in 200 families with young children with developmental delays or disabilities. Children and families participate in six assessments during a two-year period. Half of the families are invited to attend OPP parent education classes based on a modified version of the Incredible Years parent training program. The Oregon Parent Project examines the effects of various early childhood interventions and services on children’s adaptive behavior, problem behavior, and family well-being during early childhood.
Parent training programs are highly beneficial for parents with preschool-age children, and they allow professionals to intervene during a time when the children are still young and negative family interactions are malleable.
of the Family Check-Up intervention being used in the study is designed to (a) prevent escalation of substance use, (b) focus on parent–youth relationships that foster independent living, (c) discourage unhealthy peer relationships and activities that promote drug use, and (d) provide support to enhance adaptive behavior and healthy adult outcomes during the transition to adulthood.

Self-, Peer-, and Distant Other-Authored Messages for Cigarette Smoking Cessation

**Funding period:** September 1, 2012–August 31, 2014  
**Principal Investigator:** Dr. Elliot Berkman  
**Funded by:** National Cancer Institute, University of Michigan Center for Excellence in Cancer Communications Research  
**Grant number:** P50 CA101451

This research seeks to make health messages about cigarette smoking cessation self-relevant by personally tailoring them to increase their persuasiveness and effectiveness. Self-relevance activates the brain’s medial prefrontal cortex, which is predictive of health behavior change. It is not known if self-authored messages are more effective than other messages or if distance from the self improves effectiveness, nor is it known if self-authored messages recruit the same or different neural systems as other-authored messages. Neural, self-report, and behavioral measures of health-related message effectiveness are used, as are predictive statistics and computational linguistic analyses.

Siblings Reared Apart: A Naturalistic Cross-Fostering Study of Young Children

**Funding period:** September 30, 2013–May 31, 2017  
**Principal Investigator:** Dr. Leslie Leve  
**Funded by:** National Institute on Drug Abuse  
**Grant number:** R01 DA035062

A naturalistic human cross-fostering design is being used to examine childhood pathways to development by identifying nuances in the rearing environment associated with specific child risk behaviors and competencies. The sample consists of 7-year-old sibling pairs in which one sibling was reared from birth by an adoptive family and the other sibling was reared from birth by their biological mother. As such, effects of the rearing environment are isolated from effects of genes shared between parent and child. Two supplemental grants support a graduate student and an undergraduate student to participate in the research activities.

Translational Drug Abuse Prevention Center (TDAP)

**Funding period:** September 1, 2013–April 30, 2018  
**Principal Investigators:** Dr. Philip Fisher, University of Oregon; Dr. Patricia Chamberlain, Oregon Social Learning Center  
**Funded by:** National Institute on Drug Abuse  
**Grant number:** P50 DA035763

The TDAP aims to improve outcomes for children and families involved in U.S. child welfare systems (CWS) by broadening understanding of mechanisms that contribute to healthy child development and testing practical interventions and implementation strategies. It targets three key areas specific to youths involved in the CWS: (1) underlying mechanisms and processes associated with exposure to high levels of early life adversity and specific to risky decision making in certain social contexts during early adolescence, (2) high rates of drug use and engagement in HIV-risk behaviors in adolescent girls, and (3) implementation of extant evidence-based interventions into real-world CWS settings with high fidelity and empirical measurement of implementation success/failure.
Children and adolescents involved in child welfare are among the most disadvantaged individuals in American society and are at greatly elevated risk for drug use and related problems, including delinquency, teen pregnancy, poor physical and mental health, homelessness, incarceration, and HIV-risk behaviors.

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### Prevention Science Institute Grants Active During Fiscal Year 2014

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Elliot Berkman, PhD, studies the factors that contribute to success and failure at health goals, such as cigarette smoking cessation and dieting. His research leverages the distinct strengths of several research methods, including functional magnetic resonance imaging, longitudinal survey methods, and laboratory experiments. This work adopts a translational neuroscience approach by using knowledge of brain function, structure, and connectivity to design and improve interventions on health behavior.

The research interests of Allison Caruthers, PhD, center on adolescent gender and sexual socialization and their relationship to sexual behavior, sexual risk taking, and emotional well-being in adolescence and adulthood. She is examining the distinction between normal, healthy sexual exploration and truly problematic behavior, as well as possible mechanisms by which intervention services reduce risky sexual behavior.

The research focus of Krista Chronister, PhD, is domestic violence prevention and community-based intervention, including women survivors’ economic and vocational development, community mental health interventions with ethnic minority and immigrant families experiencing domestic violence, and couple interventions for young adults at risk for domestic violence and substance use.

Dave DeGarmo, PhD, is interested in family stress models and evaluation of preventive intervention and treatment programs for families at risk for compromised parenting, including families of divorce, families in child welfare systems, and military families. A major focus of his work is on independent and interactive effects of fathering and prevention science methodology. Dave is director of the Center for Assessment, Statistics and Evaluation in the Office of Research Innovation and Graduate Education at the University of Oregon.

The research and clinical endeavors of Melissa Donovick, PhD, are broadly centered on Latina/o mental health, parenting, and prevention science with Spanish-speaking Latina/o families and are aimed at improving child mental health outcomes. Her research agenda focuses on decreasing mental health disparities among Latinas/oos by promoting culturally competent research, including developing, implementing, and evaluating culturally relevant preventive interventions for Latina/o families.

Phil Fisher, PhD, is on the effects of early stressful experiences (trauma, maltreatment, poverty) on children’s neurobiological and psychological development, and in designing and evaluating prevention and
treatment programs for improving children’s functioning in areas such as attachment to caregivers, relationships with peers, and functioning in school. He is also interested in the brain’s plasticity in the context of therapeutic interventions. Particular areas of neurobiological functioning studied by Dr. Fisher are the hypothalamic-pituitary-adrenal axis, the prefrontal cortex, and neural reward pathways. His laboratory, the Stress Neurobiology and Prevention lab, includes graduate students, postdoctoral fellows, and other researchers with similar interests.

Andy Garbacz, PhD, is interested in promoting positive social behavior outcomes for children and adolescents by partnering families and educators to create sustainable systems of support across homes and schools. His research focuses on prevention and intervention within a tiered framework, conjoint (parent–teacher) consultation, and Positive Family Support. Andy is an assistant professor of school psychology at the University of Oregon. He is a licensed psychologist, licensed school psychologist, and nationally certified school psychologist.

Kristina Hiatt Racer, PhD, is interested in individual differences in attention and emotion regulation and how they interact with parenting and peer experiences to promote or prevent the development of psychopathology. She has used behavioral and event-related potential techniques to examine individual differences in the attention, inhibitory control, and reward/punishment sensitivity in children and adolescents.

The core research focus of Atika Khurana, PhD, is on understanding and preventing the onset of health risk behaviors during adolescence. She uses an ecological systems approach to examine the interplay of individual and environmental risk and protective factors as they relate to adolescent substance use, risky sexual behaviors, academic disengagement, and mental health problems. Her current research is focused on examining the role of executive functions (e.g., working memory) and impulsivity in predicting adolescent risk behavior trajectories, with an emphasis on the role of families in the development of adolescent self-regulation.

The translation of basic research to inform preventive interventions is the research focus of PSI’s associate director, Leslie Leve, PhD. Her studies focus on developmental pathways and intervention outcomes for at-risk youths and families. Her research includes intervention studies aimed at preventing risk behaviors and improving public health outcomes among youths in foster care and with adolescents in the juvenile justice system. She is also overseeing adoption studies that examine the interplay between biological (genetic, hormonal), psychological, and social influences on development. Her published work in the area of gene–environment interplay emphasizes the translation of basic research findings to help refine the selection of malleable environmental targets in the context of prevention and intervention studies. She is also
Laura Lee McIntyre, PhD, is interested in early identification and treatment of childhood developmental and behavioral problems, with an emphasis on the multiple systems of care that support children (e.g., families, schools, healthcare). Within this broad framework, three specific lines of research emerge: (1) parent training, education, and support; (2) transition to kindergarten; and (3) child risk factors and family well-being. She is especially interested in early intervention and prevention work with families who have young children with developmental problems who are at risk for negative social, emotional, and behavioral outcomes at home and at school. She is the codirector of training in the School Psychology program, a licensed psychologist, certified school psychologist, and board-certified behavior analyst.

Kevin Moore, PhD, has focused his professional and scientific career on the development and implementation of evidence-based and evidence-informed behavioral health treatments for children, youths, and families. He has extensive experience in researching, implementing, clinically supervising, and consulting on evidence-based treatments for externalizing and internalizing disorders across educational, community-based mental health, social welfare, residential, and juvenile justice settings. He is also interested in methodological and analytic techniques for the study of naturally occurring clinical events in the psychological and medical treatments of children.

PSI’s National Collaborations

Arizona State University
The Family Check-Up, developed at PSI’s Child and Family Center, is one of the key interventions being implemented and disseminated through the REACH institute at Arizona State University, in collaboration with colleagues at the PSI and with the University of Pittsburgh. REACH is dedicated to the implementation and dissemination of family-centered interventions for children and families. It focuses on research and education that advances children’s health (REACH; http://reachinstitute.asu.edu); Dr. Thomas Dishion, formerly at the Child and Family Center, is the REACH director and the developer of the Family Check-Up.

Harvard University
PSI scientist Dr. Philip Fisher holds an appointment as a senior fellow at the Center on the Developing Child at Harvard University. The focus of Fisher’s work at the center is in two areas: (1) translating scientific knowledge about how early stress affects healthy brain development into information that can be useful for policy makers, health care professionals, and the general public; and (2) supporting the development of innovative, neuroscience-based intervention strategies in community settings. The Harvard Center will be funding Fisher’s team at PSI to develop a multisite database that will facilitate the evaluation of these novel, community-based interventions, all of which are based on a core theory of change regarding the importance of promoting “serve and return” interactions between young children and their caregivers.

The Pennsylvania State University
The PSI’s three collaborative grants with Penn State are focused on investigating questions related to the nature–nurture debate. Dr. Jenae Neiderhiser, liberal arts research professor of psychology at Penn State, and PSI scientist Dr. Leslie Leve joined forces to recruit and interview 561 families who adopted a child domestically at birth. Participating families live in nearly every state in the United States and are interviewed in their homes. The collaboration with Penn State enables us to be especially efficient with our grant dollars, because PSI staff can interview families on the West Coast and Penn State staff can interview families on the East Coast.

I am broadly interested in the effects of early adversity on development in childhood, particularly within the domain of self-regulation, the neurobiology of parenting at risk, and interventions to prevent child maltreatment and improve positive parenting. Elizabeth Skowron, PhD
Implementation of the Family Check-Up

The Family Check-Up (FCU) was originally proposed in 1994 to the National Institute on Drug Abuse as a public health approach to the prevention of escalation in problem behavior and drug use among at-risk youths in school contexts. During the past twenty years the FCU has been found to be effective for improving the mental and behavioral health of young children and adolescents and for improving family climate and parenting practices. Researchers across university and research settings have also found that the intervention could be implemented in community mental health settings, using their own professional therapists, as well as in public schools throughout Oregon.

The world has changed in twenty years. On the positive side, there are now more than 100 evidence-based interventions that prevent and treat child and adolescent problems associated with mental and behavioral health. However, real-world community mental health services, public schools, pediatric care, and the like simply are not using the interventions. The challenges we face now are how to re-create interventions so they are user friendly and how to cost-effectively educate and train providers.

Efforts to develop an effective strategy for collaborating with agencies and schools to implement the FCU model are well underway and involve several key staff at the PSI: Nancy Weisel, LCSW, conducts workshops and consults with therapists who are using the FCU and organizes the team of fidelity raters who use the COACH rating system to improve therapist performance. Kevin Moore, PhD, is involved in the school-based implementation model (Positive Family Support) and in community mental health and also provides workshop and individualized consultation support. The FCU implementation team has actively collaborated with two community agencies in South Carolina, the state mental health network in Nevada, the public school system in Pennsylvania, and Lane County (Oregon) mediation services.

and in the development and use of low response-cost clinical monitoring tools.

Jennifer Pfeifer, PhD, is interested in how brain function related to affect, motivation, regulation, self-evaluation, and social context interact and influence adolescent behavior. She studies the development of these related phenomena at behavioral and neural levels, with the goal of enabling healthy transitions from childhood through adolescence and into adulthood. Her research is focused on building a knowledge base about normative and atypical trajectories of functional brain development in these content areas and using fMRI as a tool to advance understanding of neurobiological mechanisms that put some adolescents at risk for adverse outcomes. She is also interested in how functional brain development is related to various endogenous and exogenous factors, such as pubertal development and early adversity.

The research of Elizabeth Skowron, PhD, focuses on clarifying the individual and joint contributions of neurobiology and environment to the development of self-regulation and school readiness in at-risk children. She is especially interested in understanding the neurobiology of parenting at risk and mechanisms of change in interventions that are effective for reducing child abuse and neglect.

She and her research team use physiological, behavioral, and microanalytic coding techniques to model data streams in individual and dyadic family processes that are associated with neurobehavioral outcomes.

Beth Stormshak, PhD, PSI director, has expertise in the area of prevention, including prevention of substance use, problem behavior, and later mental health problems in children and youths. Her research focuses on the development of family-centered, model-driven interventions designed to reduce problem behavior and promote successful developmental transitions. She has served as the principal investigator on multiple grants, including randomized trials that tested the efficacy and effectiveness of family-centered models of prevention to reduce risk behavior in early childhood, in school-age children, and in adolescents, with a primary focus on enhancing parenting skills and behavioral management.

She currently is the principal investigator on Project Alliance 2, an NICHD-funded program to test the efficacy of the Family Check-Up (FCU) model of intervention during the early adult years. She has completed an effectiveness trial of the FCU in community mental health agencies and designed a website for dissemination and implementation of the model. She also was the principal investigator on an NIMH T32 award to support the training of predoctoral and postdoctoral students in translational research. She is currently starting a new study funded by the Department of Education to develop the Positive Family Support model and FCU for elementary schools in the Portland, Oregon, area.
**PSI 2014 Trainees**

**Postdoctoral Trainees**

Kimberly Rhoades, PhD, completed her doctorate in social/health psychology at Stony Brook University. Her primary research interest is the influence of stressful family processes on the development of conduct problems, delinquency, and substance use from infancy to young adulthood. Her research focuses on the longitudinal course of these behaviors and how family processes and genetic influences interact to influence youth adjustment over time. Kimberly is also interested in how family processes influence the development of healthy sleep patterns across childhood and adolescence. As an extension of this basic research, she is interested in the development and dissemination of empirically supported prevention and intervention programs. Dr. Rhoades is currently an assistant professor at Washington State University.

Argero Zerr, PhD, received her doctoral degree in developmental psychology from Arizona State University. Her research interests broadly focus on the study of cultural factors related to the development, measurement, and amelioration of internalizing problems in children and adolescents. In particular, she is interested in the design and evaluation of culturally informed intervention and prevention programs. At the PSI she studied child, familial, and cultural characteristics related to the development and prevention of youth internalizing problems. Dr. Zerr is now at the University of California–San Diego.

**Predoctoral Trainees**

Harpreet Bahia, MC, MS, is a counseling psychology doctoral candidate at University of Oregon. In 2013–2014 she was a first-year predoctoral DEEP fellow and a second-year clinical extern at the PSI. Her clinical and research interests include exploring relationship dynamics among marginalized families and couples, in particular, understanding intimate partner violence.

Kimbree Brown, MS, is a doctoral candidate in counseling psychology at the University of Oregon. Her research interests span three topics: the development of intervention strategies to prevent problem behaviors and academic failure in youths with disabilities, implementation and evaluation of mental health interventions in schools, and teachers’ use of behavior management strategies in classroom settings. While at PSI, she has worked as a Positive Family Support school consultant to Oregon public middle schools in the statewide implementation of an evidence-based prevention program designed to increase family–school partnerships and reduce student problem behavior. She also worked as a child and family therapist trainee to provide mental health and behavioral support to parents and youths to develop effective parenting.
practices and healthy child coping skills.

Elisa DeVargas, BA, is a third-year doctoral student in the Counseling Psychology program at the University of Oregon, under the mentorship of Dr. Elizabeth Stormshak. She is working at the PSI as a minority investigator on the Parenting to Prevent Substance Use in Late Adolescence project directed by Dr. Stormshak. She began working at PSI in October 2013 after having been awarded a supplemental research grant for ethnic minorities from the National Institutes of Health and Department of Health and Human Services. Her future career plans include working with children, adolescents, and families, specifically those living in monolingual Spanish-speaking homes. She is very interested in better understanding school and home environments and the experiences of Latino and other ethnic/racial minority children and adolescents in these contexts.

Research Training at PSI

A new master’s program in prevention science, which debuted in fall 2013, is a one-year, 45-credit program that provides training in psychological foundations, research competencies, and design, evaluation, and implementation of effective interventions to reduce risk and enhance protective factors in children, youths, and families. Students in the program have the opportunity to take graduate courses alongside doctoral students in counseling psychology and master’s students in couples and family therapy. They also gain experience conducting additional, elective research training at the PSI (collecting psychophysiological data from at-risk mothers and preschool children, conducting psychological assessments, coding behavioral data, and conducting statistical analyses) and participating in the implementation of evidence-based prevention programs with Lane County Prevention (assessing fidelity of implementation for the school-based Good Behavior Game). Following graduation, the students obtain employment in community prevention settings as research technicians and/or pursue further doctoral training or clinically oriented master’s programs. Interested students can complete both the M.Ed. and specialization in prevention science in one academic year. Students in the first cohort completed the program in June 2014, and we look forward to welcoming our second class of 14 students in fall 2014.

At the PSI we embrace UO’s membership in the Association of American Universities through training and supporting graduate education at many levels. First, the PSI houses a clinic for training graduate students in science-based practice. At the clinic, students learn cutting-edge interventions that can be put into practice among community populations and settings. Second, an NIMH-funded T32 training grant supports predoctoral and postdoctoral trainees at PSI. This grant has enabled us to develop a training and seminar series and to support graduate students across multiple disciplines in their research careers at UO. Third, graduate students across campus work with PSI’s multiple research data sets to develop research studies that not only meet the requirements of their program, but prepare them for future research careers. Numerous master’s and doctoral students in the College of Education and Department of Psychology have worked with ample data generated by PSI research throughout many years to develop independent research projects that not only exert a positive impact on the world of science, but enhance their futures as they complete their degrees and move on to professional research careers at other universities.

Undergraduate Fellowship

In summer 2014, PSI’s work was enhanced by a NIDA-funded summer fellowship to UO undergraduate Mariam Admasu, one of only 72 award recipients nationwide. The paid fellowship is designed to enable high school students and college undergraduates to intern alongside well-established scientists in the field of substance abuse and addiction to learn about risk behaviors and their consequences. Admasu participated in PSI scientist Dr. Leslie Leve’s study of the impact of family dynamics and parenting techniques on a child’s risk for substance use or dependence. Findings from Leve’s studies, which include elementary school youths and adolescents involved in the juvenile justice system, will eventually inform programs of intervention and prevention. Admasu, a native Oregonian from Portland, is an undergraduate in Family and Human Services, College of Education, at UO.
Ryan Giuliano, MS, is a doctoral student in developmental cognitive neuroscience, under the mentorship of Drs. Helen Neville and Elizabeth Skowron. His research is focused on individual differences in executive function across the lifespan, particularly in parents and their children. Ryan’s current projects are using electroencephalogram (EEG) and measures of autonomic physiology to examine how chronic life stress affects the development of selective attention and response inhibition.

The future career plans of Kenya Makhiwala, BS, include working with children with developmental disabilities and their families, specifically those from high-risk backgrounds in primary care. She seeks to better understand the experiences of children with disabilities and their families in the context of their school and home environments. She is interested in issues related to parent social support and sibling adjustment in the promotion of overall family well-being, particularly in ethnic minority families and families from impoverished backgrounds, and exploring differential treatment outcomes as a function of race, ethnicity, and social class. She seeks to better understand the role that protective factors play in treatment outcomes for children and families. Kenya has been working with the Oregon Parent Project directed by Dr. Laura Lee McIntyre. She is working toward her PhD in school psychology and is currently completing her predoctoral internship at the Munroe-Meyer Institute in Omaha, Nebraska.

Laura Noll, MSc, is a doctoral student in clinical psychology at the University of Oregon. Her research focuses on stress neurobiology and the intergenerational transmission of trauma. Currently she is exploring the impact of a strengths-based video-coaching intervention on EEG/ERP markers of parental function, such as inhibitory control and perceptual sensitivity. This study focuses on child welfare-involved mothers of children ages 0–3.

Shannon Peake, MA, is a doctoral student in developmental psychology at the University of Oregon. His research interests focus on the influence of social factors on cognitive skills and brain development. Currently, Shannon is exploring the effect of social rejection on adolescent risk decisions, with the intent of determining the extent to which certain adolescents may be more susceptible to making poor choices in social situations. The studies combine behavioral and neuroimaging approaches to explore how the development of social and emotional regions of the adolescent brain contribute to decision making.

The University of Oregon and the Prevention Science Institute are committed to excellence in research and in graduate education.


