



VELO CULT BICYCLE SHOP + TAVERN
 1969 NE 42ND AVE, PORTLAND, OR WWW.VELOCULT.COM

BRAINS, BIKES & BEER
 A FUNDRAISER FOR NEUROSCIENCE OUTREACH
WWW.NWNOGGIN.ORG

JOIN US FOR A NIGHT OF
 BRAINS, BIKES AND
 BEER! DOES BICYCLING
 CHANGE YOUR BRAIN?
 WHERE IS THE BUZZ OF
 AN IPA? LEARN ABOUT
 SCIENCE OUTREACH IN
 PORTLAND PUBLIC
 SCHOOLS, TOUCH REAL
 HUMAN BRAINS, MAKE
 ART AND MORE!

MAY 29TH
6-8 PM



Velo Cult is (was!) the best of Portland, and the Pacific Northwest – a friendly community gathering space replete with suspended bicycles, welcoming velocipedal experts, rich coffee, and a rotating tap list of superlative, flavorful beers!



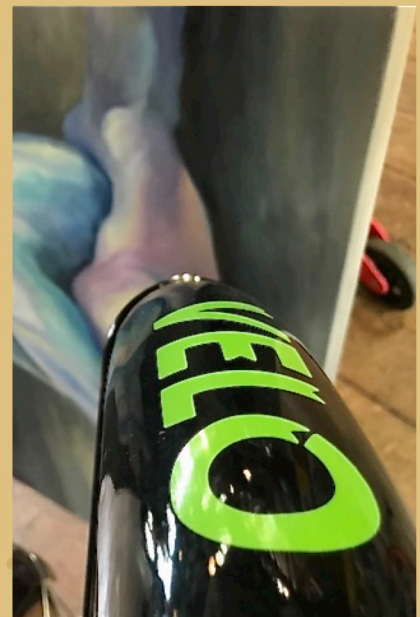
And brains, too!



And ART, like the pipe cleaner neurons created by area high school students which dangled above graduate students describing their research on drugs, memory, pain, ADHD, peri-neuronal nets, adolescent brain development, hearing loss, stress...



And artists — including musicians, visual artists, painters, sculptural metal artists, graphic designers — who collaborated with graduate students on accessible public presentations of their cutting edge work...



Velo Cult & NWNOGGIN
Present
Get caught in our net:
Memory, Drugs, and Perineuronal nets

Megan Slaker
WSUV
Neuroscience, Ph.D. Candidate

With

Dawn Nielson
PNCA, BFA '14
Sculptor, Painter, Encaustic Wax
& Installation Artist

Join us for an evening of science & art
6-8 pm October 23rd
at

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WITH GENEROUS SUPPORT
FROM
WASHINGTON STATE
UNIVERSITY
VANCOUVER



Artist and NW Noggin Art Coordinator Jeff Leake created some eye (and brain!)-catching posters, highlighting area advances in neuroscience research and art...



His posters for NW Noggin outreach events at Velo Cult attracted many to free, collaborative science/art presentations in Portland, and informed and excited the public about current research and artwork in the Pacific Northwest...



**VELO CULT & NWNOCGIN
PRESENT**

**Song of the noggin:
how your brain processes sound, speech, and music**

Sound matters!
Detecting, interpreting and
perceiving sounds are critical tasks.
WSU Vancouver PhD candidate Elena
Mahrt, and acclaimed classical
guitarist Ryan Walsh reveal the
beautiful complexities of every day
sounds and how your brain responds.

Join us
for an evening
of science and art
Jan 22nd 6-8
at

Three acoustic guitars are arranged horizontally. Below the middle guitar is a small silhouette of a person playing a guitar. The background features musical notes and a stylized map of British Columbia.


**Velo Cult & NWNOGGIN
Presents
Drugs, genes, and waltzing mice:
tales from genetic research.**

**Friday
November
7th
6-8 pm**

**Kelsey Holland-Rayle
PNCA
Illustration**

With

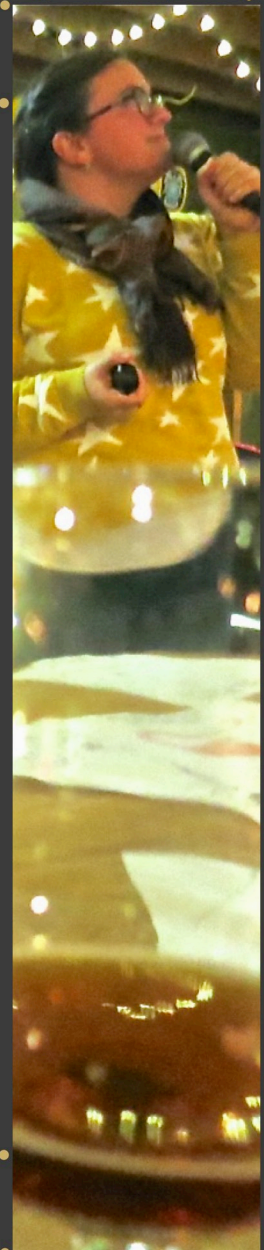
**Amanda Barkley-Levenson
PhD Candidate
Department of Behavioral Neuroscience
Oregon Health & Science University**

at

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BIYCELES-REPAIRS-PARTY-OWNERS-PIZZA-COLLECTOR



**WASHINGTON STATE
UNIVERSITY
VANCOUVER**





nwnoggin & Velo Cult
Presents **Your memories lie**
and how you can lie right back

What role does memory play in drug addiction, and PTSD? learn about the unreliable nature of memory through neuroscience and the visual arts...

With OHSU Graduate student **Christie Pizzimenti** and Artist **Shyla Villaneuva**

Join us
at **Velo Cult**
for an evening
of science and art
Feb 26th 6-8

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For more information
go to
nwnoggin.org

Explore the relationship
between pain and social
behavior

Through
neuroscience
and art

With

Monique L. Smith
PhD Candidate in
Behavioral
Neuroscience at OHSU

&

Marieka Glenn
an educator and
an art student at
PNCA

Join us for an evening
of science and art at
Velo Cult March 19th
6-8 pm

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For more information
go to nwnoggin.org

Pictures of the brain in action are everywhere these days, but what do these fMRI images really represent? How are they acquired, and what do they tell us about how the brain works.

nwnoggin & velo cult Presents
Revealing curves
Imaging the human brain

Sam Carpenter from the Fair lab at OHSU, and Kathryn McAnalley from PNOA, artfully reveal the promise and limitations of technologies that image the human brain...

Join us for an evening of art and science at Velo Cult
 April 30th 6-8 pm

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For more information go to nwnoggin.org

NWNOGGIN & Velo Cult
Present

Phil Uribe from the Coffin lab at WSU Vancouver and Kimberly Cordray from Art Practices at PSU

in

One Fish
Two Fish
Red Fish
Deaf Fish

What fish can tell us about hearing loss

Join us for an evening of art and science at Velo Cult, Thursday October 29th from 6-8 pm

For more information go to nwnoggin.org

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NWNOGGIN & VeloCult
presents

Remembering is who we become:
How neurogenetics influence our preferences, memories, and personalities.

International artist Kindra Crick and Dr. John Harkness from the Sorg lab at WSU Vancouver illuminate the mysteries of who we are through art and neuroscience.

Join us for an evening of art and science at Velo Cult, Wednesday January 27th from 6-8 pm

For more information go to nwnoggin.org

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NWNOGGIN & VeloCult
Present

Traumatic Brain Injury:
Comedy
Communication
Community

Speech-language pathology graduate student Lauren Ficker and media artist Cheryl Green take you on a multi-media tour of the brain and examine ways the community can better support peers with traumatic brain injury.

Join us for an evening of art and science at Velo Cult, Thursday March 10th from 6-8 pm

For more information visit nwnoggin.org

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Design Your Own
LAB MOUSE!



**NWNOGGIN & Velo Cult
Present**

THE UNPREDICTABLE SCIENCE OF DRINKING TOO MUCH



**Professor of behavioral neuroscience at OHSU
Andrey Ryabinin (aka "crazy Russian scientist") and Rob Ober-
dorfer & the Neutral Spirits (members of Ages and Ages) ex-
plore mechanisms of alcohol addiction through science and
song.**

**Join us for an evening of art and
science at Velo Cult, Thursday
July 7th from 6-8 pm**

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RECYCLED-ROCK-PAINT-ON-GLASS-PROD-CULTURE



**For more information
visit nwnoggin.org**

NWNOGGIN & Velo Cult
Present

**DREADD decisions: Patterns, fractals
and drugs**



Join us for an evening of art and science
as
Jordan Blacktop, Ph.D.
(a.k.a., "the DREADDpool Dude"), a
postdoctoral neuroscience researcher at WSU
Vancouver, introduces DREADDs, a powerful
chemogenetic technique for switching brain
areas on, or off, and altering how networks of
brain areas function.

&

Sara McCormick, a Northwest artist fascinated by fractals,
discusses these compelling, evolving patterns in nature and
design, and presents visually striking consequences of change
to the underlying networks and algorithms that drive their
developing form, and behavior.

October 27 6:00 pm - 8:00 pm
at
Velo Cult




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NWNOGGIN & VeloCult
Present

Stressed out, burned out:
Strategies to stay balanced from
the studio and lab.




Tamasen Hayward, a Neuroscience graduate
researcher at WSU Vancouver, gives
you the inside scoop on stress,
discusses when stress is good and when
it's too much, and suggests ways to manage
stress based on proven research.

&

Inspired by anatomy, the body's
response to stress, and Eastern
art techniques, Portland artist,
Kanaani Miyamoto, creates
hanging scrolls and introduces
art making techniques that may
help calm your adrenals.

Join us for an evening of
art & science
November 30th from
6-8 pm at VeloCult



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**NWNOGGIN AND VELO CULT
PRESENT**

March For Science at Velo Cult

Support research, education, and outreach by making colorful pipe cleaner neurons for the march for science on April 22nd

Enjoy an evening of science and art while learning about the cells that make us who we are

March 29th 6-8 pm at Velo Cult



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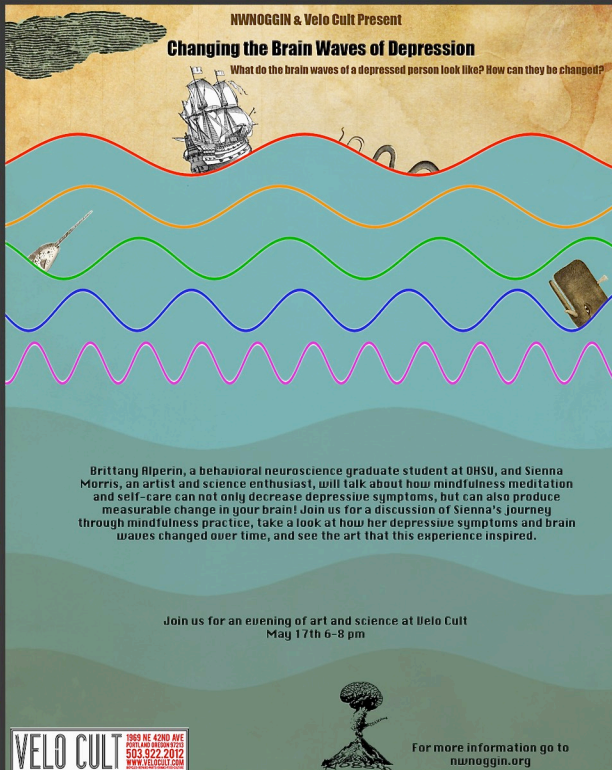
For more information go to
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NWNOGGIN & Velo Cult Present

Changing the Brain Waves of Depression

What do the brain waves of a depressed person look like? How can they be changed?



Brittany Alperin, a behavioral neuroscience graduate student at OHSU, and Sienna Morris, an artist and science enthusiast, will talk about how mindfulness meditation and self-care can not only decrease depressive symptoms, but can also produce measurable change in your brain! Join us for a discussion of Sienna's journey through mindfulness practice, take a look at how her depressive symptoms and brain waves changed over time, and see the art that this experience inspired.

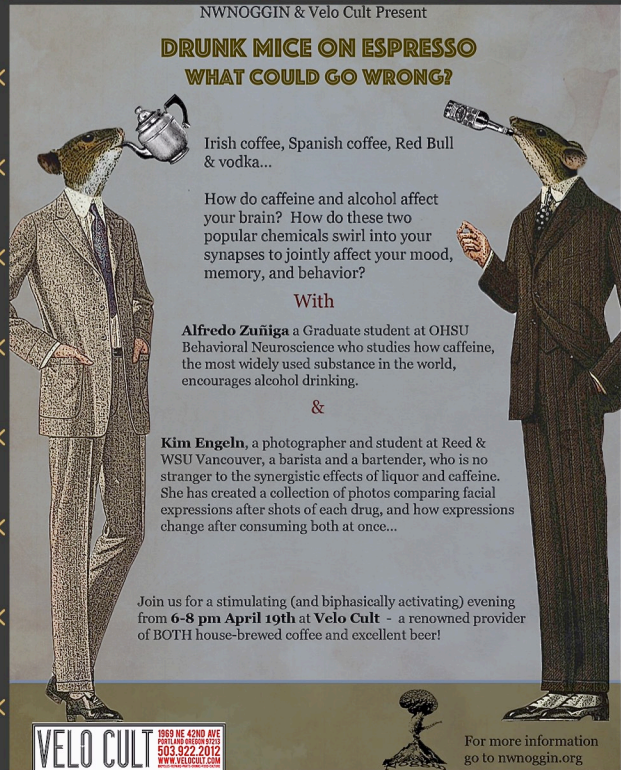
Join us for an evening of art and science at Velo Cult
May 17th 6-8 pm

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NWNOGGIN & Velo Cult Present

DRUNK MICE ON ESPRESSO WHAT COULD GO WRONG?



Irish coffee, Spanish coffee, Red Bull & vodka...

How do caffeine and alcohol affect your brain? How do these two popular chemicals swirl into your synapses to jointly affect your mood, memory, and behavior?

With

Alfredo Zuñiga a Graduate student at OHSU Behavioral Neuroscience who studies how caffeine, the most widely used substance in the world, encourages alcohol drinking.

&

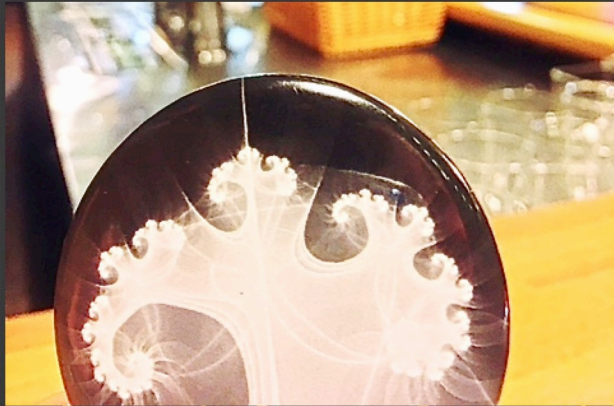
Kim Engeln, a photographer and student at Reed & WSU Vancouver, a barista and a bartender, who is no stranger to the synergistic effects of liquor and caffeine. She has created a collection of photos comparing facial expressions after shots of each drug, and how expressions change after consuming both at once...

Join us for a stimulating (and biphasically activating) evening from **6-8 pm April 19th** at **Velo Cult** - a renowned provider of BOTH house-brewed coffee and excellent beer!

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NWNoggin & Velo Cult Present

**Drink together, stay together:
Alcohol's effects on social relationships**

Does drinking keep a relationship healthy or split couples apart? Do you drink more, or less, than your partner? What if one person drinks and the other doesn't? What can prairie voles teach us about drugs and relationships, and can portraits of people under the influence reveal subtle aspects of connection, strengthened or frayed connections illuminated by analysis of behavior and structures in our brains?

Discover the art and neuroscience of drugs and social relationships with
Andre Walcott (OHSU) and Artist Bryn Harding
at
Velo Cult Thursday (9/21) from 6-8pm!

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Chronic Pain and Mary Jane

Wednesday
January 25th
at VeloCult
6-8 pm

NWNOGGIN & VeloCult Present

An evening of Science and music

Behavioral pharmacologist
Ram Kandasamy from WSU
Vancouver presents
research on Cannabinoids &
Chronic Pain

&

Experimental music from
Bob Desaulniers (Lithics)
and Tony Remple (Musique
Plastique)

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WARNING
CHOOSING ALCOHOLIC DRINKS
NOT FOR CHILDREN UNDER 21





NWNOggin & Velo Cult
Present
Sleep, School & Surrealism
With
Emily Weiss (PSU) & Jamaali Roberts
How critical is sleep for young brains? How do racial/ethnic/socioeconomic inequities relate to how well, and how long kids sleep? Learn from Emily about research on sleep for low-income, African-American kindergarteners, and join Jamaali in art making, storytelling and meditation for a better understanding of how sleep and art can better all our lives.
Thursday, March 1, 6-8pm
Velo Cult, 1969 NE 42nd Ave

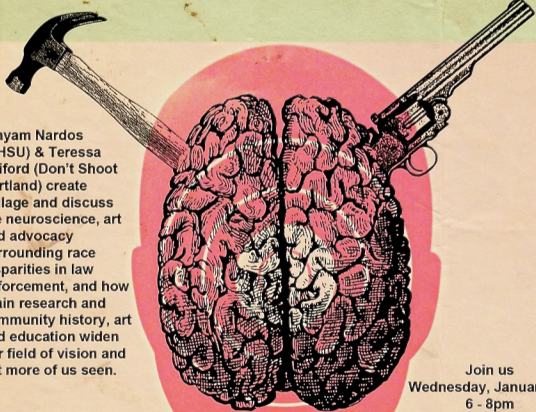


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VELO CULT & NWNNOGGIN
PRESENT
**YOU CAN'T CONTROL ART:
RACE, BIAS & BRAIN**

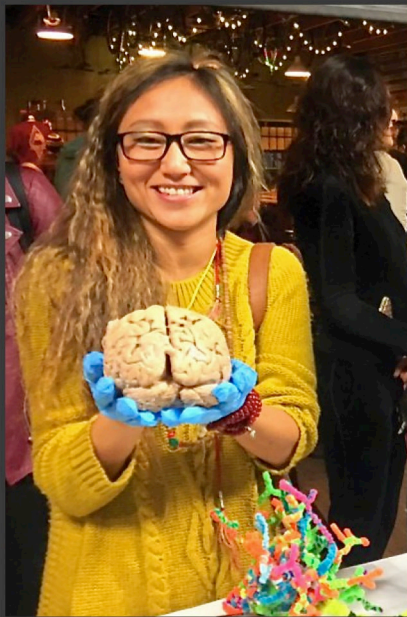


Binyam Nardos (OHSU) & Teresa Raiford (Don't Shoot Portland) create collage and discuss the neuroscience, art and advocacy surrounding race disparities in law enforcement, and how brain research and community history, art and education widen our field of vision and get more of us seen.

Join us
Wednesday, January 24,
6 - 8pm
@
Velo Cult,
1969 NE 42nd Ave,
Portland

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**NWNoggin & Velo Cult
Present**

**What do mistakes teach us?
The Secrets of Parkinson's & Dance**

Mistakes are essential to learning. Discover the role of error in acquiring skills, and advancing both science and art with Rebecca Hood of OHSU and brilliant performers from the Kùkátónón African Children's Dance Troupe!

Wednesday,
May 2, 6 - 8pm
Velo Cult,
1969 NE
42nd Ave,
Portland

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For more information go to nwnoggin.org

**NWNoggin & Velo Cult
Present**

**Spinning Wheels: What
we can learn about anorexia
nervosa from rodents on
running wheels**

Tara Chowdhury (OHSU)
&
Kayla Townsley (PSU/OHSU)

Research aims to uncover the neurobiological basis of the disease, and art helps uncover the complex emotional and physical relationship between the human figure and our perception of self.

Join us at Velo Cult Wednesday,
May 30, 6-8pm!

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HOW DOES METHAMPHETAMINE AFFECT GENES, BEHAVIOR, AND DEVELOPMENT? HOW DOES THE ADOLESCENT BRAIN RESPOND TO STIMULANTS? EMILY EASTWOOD FROM OHSU, AND TARA WILLIAMS FROM PNCA, DISCUSS THE SCIENCE - AND ART - OF DEVELOPMENT AND DRUGS...

And up your Summer

VELO CULT & PNCA PRESENTS

Psychostimulants & the developing brain

JOIN US FOR AN EVENING OF SCIENCE AND ART AT VELO-CULT ON WEDNESDAY MAY 27TH 6-8 PM

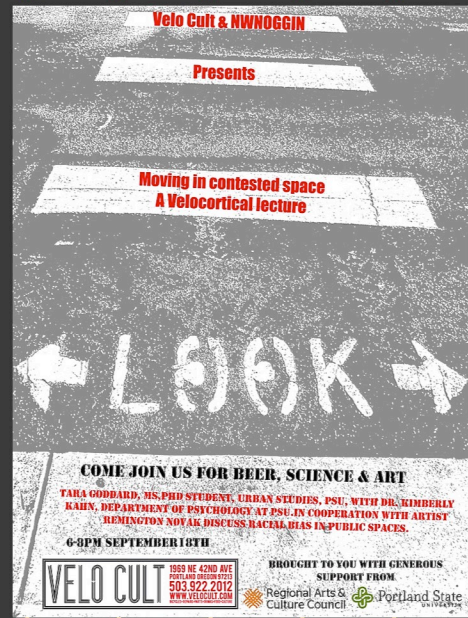
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Benefits of bicycling

- **New neurons!** (“neurogenesis”)
 - “levels of adult hippocampal neurogenesis are increased by interventions that are associated with beneficial effects on cognition and mood, such as learning, environmental enrichment, **exercise**... (Sahay et al (2011))
- **Cardiovascular fitness** (supports brain health)
 - “Physical exercise, particularly aerobic exercise, is documented as providing a low cost regimen to counter well-documented cognitive declines including memory, executive function, visuospatial skills, and processing speed in normally aging adults” (Chapman et al (2013))
- **Options** (Exercise after Parkinson’s?)
 - <http://youtu.be/aaY3gz5tJSk>
- **Community connection**



Book content, design and photos by Bill Griesar, nwnoggin.org