

## Genetic Code Expansion Workshop Schedule

July 31st to August 5th, 2017

Oregon State University

Corvallis, OR

### Contact phone numbers:

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### Location on OSU Campus

Workshop lectures and laboratory sessions will be held in the Ag and Life Sciences Building (ALS) 2750 SW Campus Way <http://oregonstate.edu/campusmap/>

ALS rooms 2018 (lectures, coffee), 0023 (teaching laboratory), 2009A (lunches), 2124 (Synthetic Biology Core facility), Main Office 2011

### 7/30 Sunday

Arrive to Corvallis. Check into dorm per instructions in your confirmation email for UHDS. Explore campus.

### 7/31 Monday

|               |           |  |
|---------------|-----------|--|
| 10:00 am-noon | ALS 2018  | Check in   |
|               |           | <b>Lecture: Ryan Mehl, GCE workshop goals</b>  |
| 12:00-1:00 pm | ALS 2009A | Lunch provided   |
| 1:00-5:00 pm  | ALS 0023  | Lab: Transform cells with plasmids.  |
| 5:30-7:00 pm  | LPSC 402  | Dinner as a group— each participant provides a 3-5 minute description of their background in GCE and what they want to use it for. |
| 7:30-9:00 pm  | ALS 2018  | <b>Lecture: Ryan Mehl, GCE: When things don't work, "the good, the bad, the ugly"</b>  |

### 8/1 Tuesday

|             |          |  |
|-------------|----------|--|
| 8:00 am     | AL 2018  | Light breakfast provided   |
| 8:30 am     | ALS 0023 | Lab: Prepare starters and prepare reagents for your unnatural protein expression.        |
| 10:30-12:00 | ALS 2018 | <b>Lecture: Ryan Mehl, Generation, selection and characterization of GCE components.</b> |
| 12:00-1:00  | ALS 2009 | Lunch provided   |
| 1:00-3:00   | ALS 2018 | <b>Lecture: Rick Cooley, Categories of ncAA and their applications</b>                   |
| 3:00-5:30   | ALS 0023 | Lab: Express unnatural protein with autoinduction media                                  |
| 5:30-7:30   |          | Dinner on your own   |
| 7:30-9      | ALS 2018 | <b>Lecture: John Lueck, "Viral delivery methods for GCE and GCE with Oocytes"</b>        |

### 8/2 Wednesday

|                |              |  |
|----------------|--------------|--|
| 8:00 am        | ALS 2018     | Light breakfast provided   |
| 8:30-10:00     | ALS 0023     | Lab: Check expressions for growth/OD. Temperature shifts if necessary. Mammalian culture Demo                                  |
| 10:30-12:00    | ALS 2018     | <b>Lecture: John Perona, tRNA synthetase catalytic function and mechanisms</b>   |
| 12:00-1:00     | ALS 2009     | Lunch provided   |
| 1:00-4:00      | ALS 2018     | Lab: Mammalian lab Demo<br>Lab: Permissivity screens   |
| 4:15-5:30      | ALS 0023     | <b>Lecture: John Perona, Characterizing ncAA tRNA/synthetases</b>  |
| 5:30-6:00-9:00 | ALS entrance | Meet bus outside building 2750 SW Campus Way.<br>Dinner as a group at Gathering Together Farm – we will provide transportation |

### 8/3 Thursday

|             |          |   |
|-------------|----------|---|
| 8:00 am     | ALS 2018 | Light breakfast provided  |
| 8:30-10:30  | ALS 0023 | Lab: Assess permissivity screen 24 hours and evaluate gels of crude and purified proteins |
| 10:30-12:00 | ALS 2018 | <b>Lecture: John Lueck, “Orthogonality and Eukaryotes expanded codes”</b>                 |
| 12:00-1:00  | ALS 2009 | Lunch provided  |
| 1:00-4:00   | ALS 2018 | Lab: Purify protein, SDS-PAGE on crude protein extracts, Evaluate mammalian GCE demo      |
| 4:30-6:00   | ALS 0023 | <b>Lecture: Ryan Mehl, Bioorthogonal ligations -overview.</b>                             |
| 6:00-7:30   |          | Dinner on your own  |
| 7:30-9:00   | ALS 2018 | <b>Lecture: If needed</b>   |

### 8/4 Friday

|             |          |   |
|-------------|----------|---|
| 8:00 am     | ALS 2018 | Light breakfast provided  |
| 8:30-10:30  | ALS 0023 | Lab: Evaluate permissivity screen 48 hours, pure gels.  |
| 10:30-12:00 | ALS 2018 | <b>Lecture: Rick Cooley, “GCE experimental considerations for membrane proteins and biorthogonal ligations”</b> |
| 12:00-1:00  | ALS 2009 | Lunch provided  |
| 1:00-4:00   | ALS 2018 | Lab: Characterize unnatural protein-gels on pure protein,   |
| 4:15-5:30   | ALS 0023 | <b>Lecture: Joe Porter, “GCE for post-translational modifications”</b>  |
| 6:00-9:00   |          | Dinner on your own  |

### 8/5 Saturday

|             |          |   |
|-------------|----------|---|
| 8:00 am     | ALS 2018 | Light breakfast provided                                    |
| 8:30-10:30  | ALS 0023 | Complete lab recording and obtain plasmids for taking home. |
| 10:30-12:00 | ALS 2018 | <b>Lecture: Rick Cooley, “Painful Cloning Made Easy”</b>    |
| 12:00-1:00  | ALS 2009 | Lunch provided  |