



**BERKELEY LAB**

Joint BioEnergy Institute (Feedstocks Division)

# Chien-Yuan (Kevin) Lin

*Plant Molecular Genetics & Biotechnology*

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## *Education*

<b>Ph.D.,</b>	<b>Forestry and Environmental Resources (Minor in Biotechnology)</b> North Carolina State University (NCSU)	<b>2010 – 2015</b>
<b>M.Sc.,</b>	<b>Microbiology and Biochemistry</b> National Taiwan University (NTU), Taiwan	<b>2007 – 2009</b>
<b>B.S.,</b>	<b>Life Science</b> National Taiwan University (NTU), Taiwan	<b>2003 – 2007</b>

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## *Research Experience*

2020/6 – Present	<b>Biological Engineering Project Scientist</b> <i>Lawrence Berkeley National Laboratory (LBNL), Berkeley, CA, USA.</i> <i>Joint Bioenergy Institute (JBEI), Emeryville, CA, USA.</i>
2020/4 – 2020/6	<b>Biologist Postdoctoral Fellow</b> <i>LBNL, Berkeley, CA, USA.</i> <i>JBEI, Emeryville, CA, USA.</i>
2018/4 – 2020/4	<b>Biologist Postdoctoral Scholar</b> <i>LBNL, Berkeley, CA, USA.</i> <i>JBEI, Emeryville, CA, USA.</i>
2015/6 – 2018/3	<b>Plant Cell Wall / Molecular Postdoctoral Researcher</b> <i>National Renewable Energy Laboratory (NREL), Golden, CO, USA</i>
2011/1 – 2015/5	<b>Doctoral Research Assistant</b> <i>North Carolina State University (NCSU), Raleigh, NC, USA.</i>
2008 – 2009	<b>Master's teaching Assistant</b> <i>National Taiwan University (NTU), Taipei, Taiwan.</i>
2006/6 – 2006/7	<b>Summer Research Intern @ Forest Biotechnology Group,</b> <i>NCSU, Raleigh, NC, USA.</i>
2004 – 2006	<b>College Research Assistant</b> <i>NTU, Taipei, Taiwan.</i>

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## *Affiliation*

- 2011 – Present American Society of Plant Biologists (ASPB)  
2018 – Present Department of Plant and Microbial Biology (UC Berkeley)
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## *Mentor Experience/Award*

- 2020 **Exceptional Mentor Award**  
*Biotech Partners*, Berkeley, USA.
- 2020 **Instructor, California Institute for Quantitative Biosciences (QB3)**  
*University of California at Berkeley*, Berkeley, USA.
- 2019/6 – 2019/8 **Jillian Curran** (Current college student @ [California Polytechnic State University](#))
- 2018/8 – 2020/3 **Jasmine Ortega** (Current Data Analyst)
- 2017/7 – 2017/9 **Manal Yunes** (Current Data Analyst @ [Capitalize Analytics](#))  
\* Elected to present at Advanced Technological Education (ATE) Conference, Washington, DC.
- 2015/10 – 2016/5 **Neha Ajuja** (Current Postdoctoral Researcher @ [UT Southwestern Medical Center](#))
- 2011/6 **Ying-Chen Lin** (Current graduate student @ [Michigan State University](#))
- 2007/6 – 2007/8 **Yi-Ting Wang** (Graduated from National Chiao Tung University, Taiwan)
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## *Seminars/Outreach*

- 2021/1 **Invited Panelist** — Virtual seminar (Working in National Labs)  
*NREL*, Golden, CO, USA.
- 2020/7 **Panelist** — Virtual Summer Internship Program  
*Biotech Partners*, Berkeley, CA, USA.
- 2020/2 **Speaker** — Networking lunch with biotech students and career advisory  
*Biotech Partners*, Berkeley, CA, USA.
- 2019 **Mentor** — Educating underserved youth and improve access to science careers  
*Biotech Partners*, Berkeley, CA, USA.
- 2018/11 **Volunteer** — JBEI booth @ Bay Area Science Festival (BASF) for Discovery Day  
*AT&T Park*, San Francisco, CA, USA.
- 2017 **Invited Introducer** — From Fuel Cell Vehicles to Chemicals Infrastructure  
*RMSSE Annual Conference*, Englewood, CO, USA.
- 2016 **Invited volunteer** — ASPB booth @ National association of biology teachers (NABT)  
*NABT Professional Development Conference*, Denver, CO, USA.
- 2016 **Invited Introducer** — New Concept in Energy Renewal and Solar Applications  
*RMSSE Annual Conference*, Englewood, CO, USA.
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## ***Presentations***

- 2020/7 Plant-based Renewable Bioproducts  
*Berkeley Lab Research Slam (LBNL)*, Berkeley, CA, USA. **(Oral)**
- 2020/1 Towards Sustainable Bioeconomy through Lignin Manipulation in Feedstocks  
*Biosciences Area Operations (UC Berkeley)*, Berkeley, CA, USA. **(Oral)**
- 2019 Lignin manipulation  
*JBEI Annual meeting, JBEI*, Emeryville, CA, USA. **(Oral)**
- 2018 Lignin manipulation in feedstocks toward lignin valorization and bioproducts  
*JBEI Annual DOE Review, JBEI*, Emeryville, CA, USA. **(Oral)**
- 2018 Develop molecular design principles to facilitate biomass and cell wall disassembly  
*C3Bio Annual Meeting 2018, Purdue University*, West Lafayette, IN, USA. **(Oral)**
- 2017 Tailoring biomass to boost biofuel production using herbaceous and woody plants  
*C3Bio Center Meeting 2017, NREL*, Golden, CO, USA. **(Poster)**
- 2016 Improving transgenic switchgrass protocol for a rapid and simplified process  
*C3Bio Center Meeting 2016, NREL*, Golden, CO, USA. **(Poster)**
- 2015 Plans for the tailoring biomass in the herbaceous plant  
*C3Bio Center Meeting 2015, NREL*, Golden, CO, USA. **(Poster)**
- 2013 Dynamic Metabolic-Flux (PDMF) Model: Data acquisition  
*Forest Biotechnology Industrial Research Consortium, NCSU*, Raleigh, NC, USA. **(Oral)**
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## ***Honors and Awards***

- 2021 **Co-editor for book series of “Methods in Molecular Biology”**
- 2020 **Poster Award @ EGSB Annual meeting**  
*Biosciences Area Operations (UC Berkeley)*, Berkeley, CA, USA.
- 2019 **Travel Award @ Plant Synthetic Biology 2019 Conference**  
*American Society of Plant Biologists (ASPB)*, San Jose, CA, USA.
- 2019 **Invited Speaker @ JBEI Annual Meeting**  
*JBEI*, Emeryville, CA, USA.
- 2018 **Community Building Award @ Feedstocks Annual Meeting**  
*JBEI*, Emeryville, CA, USA.
- 2018 **Invited Speaker @ C3Bio Annual Meeting**  
*Purdue University*, West Lafayette, IN, USA.
- 2017 **Employees of the Month**  
*National Renewable Energy Laboratory (NREL)*, Golden, CO, USA.
- 2013 **Speaker @ Forest Biotechnology Industrial Research Consortium (FORBIRC)**  
*NCSU*, Raleigh, NC, USA.
- 2010–14 **Graduate Student Support Plan (GSSP)**  
*NCSU*, Raleigh, NC, USA.
- 2006 **Summer research internship**  
*NCSU*, Raleigh, NC, USA.
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## Research Grants

- **Understanding lignin manipulation towards high-yield bioproduct production**  
*Laboratory Directed Research and Development (LDRD)*, Lawrence Berkeley National Laboratory (LBNL)  
USD 225,000 (**Proposed, 2021**).
- **Production of a biodegradable plastic precursor in *Miscanthus***  
*Laboratory Directed Research and Development (LDRD)*, Lawrence Berkeley National Laboratory (LBNL)  
USD 225,000 (**Proposed, 2021**).
- **Production of a biodegradable plastic precursor in sorghum**  
*Laboratory Directed Research and Development (LDRD)*, Lawrence Berkeley National Laboratory (LBNL)  
USD 240,000 (**Proposed, 2020**).
- **Revisit the methylation during wood formation in *Populus trichocarpa***  
*Laboratory Directed Research and Development (LDRD)*, Lawrence Berkeley National Laboratory (LBNL)  
USD 225,000 (**Proposed, 2020**).
- **Field testing of engineered bioenergy trees**  
*Laboratory Directed Research and Development (LDRD)*, Lawrence Berkeley National Laboratory (LBNL)  
USD 200,000 (**Proposed, 2019**).

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## Conference Proceedings

- 2020      Towards Sustainable Bioeconomy through Lignin Manipulation in Feedstocks  
*Biosciences Area Operations (UC Berkeley)*, Berkeley, USA.
- 2019      Lignin manipulation through metabolic engineering of shikimic acid pathway  
*ASPB Plant Synthetic Biology*, San Jose, CA, USA.
- 2019      Lignin manipulation through metabolic engineering of shikimic acid pathway  
*"Plant Metabolic Engineering" Gordon Research Seminar/Conference (GRS/GRC)*, Barga, Italy.
- 2018      Lignin manipulation in sorghum to reduce biomass recalcitrance and accumulate bioproducts  
*"Lignin" Gordon Research Conference (GRC)*, Easton, MA, USA.
- 2017      Tailoring biomass to boost biofuel production using herbaceous and woody plants  
*NREL BEST poster, NREL*, CO, USA.
- 2017      Tailoring biomass to boost biofuel production using herbaceous and woody plants  
*American Society of Plant Biologists Conference*, Honolulu, HI, USA.
- 2015      Building a plant protoplast platform to study the effect of biocatalyst deposition during plant cell wall regeneration  
*C3Bio annual meeting*    *Purdue University*, IN, USA.
- 2014      Complete proteomic-based enzyme reaction and inhibition kinetics reveal how monolognol biosynthetic enzyme families affect metabolic flux and lignin in *Populus trichocarpa*  
*American Society of Plant Biologists Conference*, Providence, RI, USA.

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## ***News Releases***

- ASPB Education and Outreach: NABT 2016, Denver (**ASPB News**, Vol. 14, No.1, 2017).
- Lignin breakthroughs serve as GPS for plant research (**NC State News**, March 11, 2014)

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## ***Technical Reports***

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| 2016        | <b>NREL Laboratory Directed Research and Development Program (LDRD)</b> – 4th quarter reports – Method development for detecting extracellular proteins in apoplastic fluid versus ionically bound cell wall proteins. |
| 2015 – 2016 | <b>C3Bio “Annual” Project Review</b> – Streamline the delivery of catalysts designed to interact with biomass. Award Number DE-SC0000997.  |

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## ***Certificates***

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| 2019 | <b>Scientific Leadership &amp; Management</b> , <i>Gladstone Institutes</i> , San Francisco, CA |
| 2018 | <b>Python for Data Science</b> , <i>NREL</i> , Golden, CO                                       |
| 2017 | <b>Python for Scientists and Engineers</b> , <i>NREL</i> , Golden, CO                           |

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## ***Academic Service***

Served as reviewer for:

- **Annals of Agricultural Science** (2020 [1])
- **Biotechnology for Biofuels** (2017 [2]; 2018 [1]; 2019 [1], 2020 [1])
- **Gene** (2021 [1])
- **Planta** (2014 [1], 2019 [1])
- **Plant Methods** (2018 [1])
- **Scientific Reports** (2016 [1])