

1/1/2018 New PhD student (Zhao Wang) joined the group. Welcome!

1/1/2018 Congratulation Nick, Ale, Seoyoung, and Hema for Successful PhD dissertation defenses!

1/1/2018 New Project Launched with BMS on Cell-line Instability Improvement

1/1/2018 New NSF/IUCRC AMBIC Project on Inhibitory Identification (Joint with Johns Hopkins)

1/1/2018 New NIIMBL Project Awarded on Freeze-Drying with PSI

9/1/2017 New NSF Project in Glycosylation Awarded

9/1/2017 New PhD student (Ryan Graham) joined the group. Welcome!

9/1/2017 FDA mAb Production Project Awarded, JNC mAb Project also awarded

1/1/2017 Awarded NSF/IUCRC AMBIC Projects Awarded (Reference Model and Genome Scale Modeling)

12/10/2016, NIIMBL (National Innovation Institute for Biopharmaceutical Manufacturing) was funded. Dr. Yoon was co-PI of this funding. The federal portion is \$70MM. 7 State governments and private sectors are matching about \$180MM. UMass and MIT as MA representing institutes will work closely on this initiative. For more detail, refer to UML News:
<https://www.uml.edu/News/stories/2017/Biopharmaceutical-institute.aspx>

9/1/2016 New PhD student (Bingyu Kuang) joined the group. Welcome!

8/20/2016, Awarded NSF/IUCRC AMBIC (Advanced Mammalian Biomanufacturing Innovation Consortium)

6/15/2016, UMass S&T fund on Biomanufacturing Innovation Institute with UMass Medical and Prof Carl Lawton

<https://www.uml.edu/News/stories/2016/President-S-and-T-Fund-winners.aspx>

6/1/2016, Professor Yoon joined FDA/CDER as a fellow over the summer. Nicholas Trunfio, Hemlata Bathia, and MarkHenry Kamga also took the internship position at FDA.

5/10/2016, Undergraduate researcher, Thomas Reimonn was admitted to UMass Medical School on MD/PhD program. Congratulation!!!

5/18/2015, 5th Biopharmaceutical Summit was successfully hosted. More than 140 biopharmaceutical professions attended and addressed on Next Generation Biomanufacturing. In addition, 3 days of advanced trainings, "PAT and QbD principles in Biopharmaceuticals" and "Continuous Bioprocessing" were organized. 30 people attended the training which consisted of 8 modules.

3/20/2016, Review paper published in Trend in Biotechnology. N-glycosylation Design and Control of Therapeutic Monoclonal Antibodies (10.1016/j.tibtech.2016.02.013), first authored by Sha Sha. Congratulation!

2/15/2016, Dr. Nathaniel Kingsbury joined the group as research scientist. Welcome! He will be working on the NIST AMTech Roadmap project and POC project on influenza vaccine manufacturing.

2/1/2016, Dr. Prokash Paul joined the group as Post-doctoral fellow. Welcome! He will be working on the FDA project, population PKPD modeling of long acting injectable drugs.

10/1/2015, Dr. Bumjoon Cha joined the group as Post-doctoral fellow. Welcome! He will be working on the Merck and FDA projects.

9/1/2015 Awarded Continuous Direct Compaction, Modeling and Simulation from Merck. Project "Modeling and Assessment for Simulation, Risk Management and Design Space Development of CDC Process" from Merck will be implemented for next three years.

9/1/2015 Awarded Population PK/PD Modeling of Long Acting Injectables from NIH/FDA. NIH/FDA project "Data-fusion based platform development of population PKPD modeling and statistical analysis for bioequivalence assessment of long-acting injectable products" from the Food and Drug Administration will be implemented for next three years.

6/1/2015 Awarded Advanced Biomanufacturing Science and Technology Consortium from NIST. NIST/AMTech project "Biomanufacturing Science and Technology Consortium to Advance U.S. Manufacturing of Biopharmaceuticals" from the NIST will be implemented for next three years.

6/1/2015, Professor Yoon joined FDA/CDER as a fellow over the summer. Sha Sha and MarkHenry Kamga also took the internship position at FDA, Hemlata accepted the internship over the summer at Pfizer. Zhuangrong Huang and Seoyoung Park took coop positions at BMS and AstraZeneca respectively.

6/18/2015, 4th Biopharmaceutical Summit was successfully hosted. More than 120 biopharmaceutical professions attended and addressed on Raw material characterization and control. In addition, 2 days of advanced training, "PAT and QbD principles in Biopharmaceuticals was organized. 20

people attended the training which consisted of 8 modules.

4/15/2015, Huolong Liu joined the group as Post-doctoral fellow. Welcome!

3/1/2015, Shuan Galbraith joined the group as Post-doctoral fellow. Welcome!

1/1/2015, Awarded Raw Material Characterization from Lonza. The project will evaluate variability of raw material and develop corresponding in-process technology.

9/1/2014 Awarded Continuous Solid Drug Manufacturing, Modeling and Simulation from NIH/FDA. Dr. Seongkyu Yoon (PI) was awarded "Process Modeling and Assessment Tools for Simulation, Risk Management and Design Space Development of Integrated Pharmaceutical Manufacturing Processes" from the Food and Drug Administration.

9/1/2014 Awarded NSF/MRI project from NSF. Drs. Seongkyu Yoon, Gui-Xin He, Michael Graves, Jessica E. Garb and Richard Hochberg were awarded "MRI: Acquisition of a Next Generation Sequencing System for Genomics Research and Training at the University of Massachusetts Lowell" from the Division of Biological Infrastructure in BIO at NSF.

9/1/2014 New PhD student (Mark-Henry Kamga) joined the group. Welcome!

7/1/2014 Professor Yoon joined FDA/CDER as a fellow over the summer. Sha Sha also took the internship position at FDA, Hemlata accepted the internship over the summer at Pfizer. Ketki Behere took coop position at Lonza.

5/20/2014, 3rd Biopharmaceutical Summit was successfully hosted. More than 150 biopharmaceutical professions attended and addressed on PAT & QbD in Biopharmaceutical. In addition, 2 days of advanced training, "PAT and QbD principles in Biopharmaceuticals was organized. 20

people attended the training which consisted of 8 modules.

9/1/2013 New PhD students (Sha Sha, Zhuangrong Huang, Seoyoung Park, Nicholas Trunfio) joined the group. Welcome!

7/1/2013, Nicholas Trunfio was selected as NSF G-12 scholar. He will be supported by the NSF fellowship program for 2 years. Congratulation!

6/12/2013, Hosted PSM workshop, "Train Future Technology Leader in Korea". Gwisuk Gim, visiting summer student joined the group. She will be working on Trace-element monitoring project with Pfizer.

5/15/2013, 2nd Biopharmaceutical Summit was successfully hosted. More than 150 biopharmaceutical professions attended and addressed on Next Generation Biopharmaceutical Process - Continuous. In addition, 2 days of advanced training for Continuous Bioprocessing was organized. 30

people attended the training which consisted of 8 modules.

1/1/2013, Hemlata Hemlata joined the group as PhD student. Welcome!

11/29/2012, Awarded media optimization project from Millipore. This project will develop innovative way of media optimization which will significantly improve the productivity and product quality consistency.

11/27/2012, Andrew Bawn successfully defended his master degree. Dr. Chris Martin (Millipore), Dr. Carl Lawton, and Dr. Yoon were committee members.

11/8/2012, Dr. Yoon provided a webinar on "Improved Estimation of Viable Cell Density Using Dielectric Spectroscopy". The webinar was hosted by Applekon and Aber Instrument. The talk was about investigation project with Aber Instrument. About 150 people attended. The feedback was very positive. (Please contact us for slide copy)

11/1/2012, Awarded trace element study project from Vertex Pharmaceutical. The project will evaluate variability of trace metals and develop corresponding in-process technology.

10/4/2012, Dr. Yoon visited Lonza Biologics (Portsmouth, NH) and presented on "Multivariate Application in Biopharmaceutical Industry"

9/28/2012, Dr. Yoon visited MBL for research collaboration discussed.

9/27/2012, Awarded trace element study project from Pfizer. The project will investigate variability of trace metals and develop corresponding in-process

9/24/2012, Dr. Yoon attended PAT Roundtable at Lilly (Indianapolis).

9/15/2012, Andrew Bawn found a position at Alkermis. Congratulation!

9/1/2012, Ketki Behere and Billy Stuart joined the research group as PhD students. Congratulation and good luck for doctoral studies.

8/22/2012, Dr. Yoon was invited to present on raw material at CHI's Bioprocessing Summit

9/27/2012, Awarded trace element study project from Pfizer. The project will investigate variability of trace metals and develop corresponding in-process

7/21/2012, MarkHenry presented at PREP2012 conference..

6/1/2012, Awarded wheat hydrolysate study project from SAFC.

5/20/2012, 5 undergraduate students started summer internships at research group

4/1/2012, Dr Yoon received travel award to CCE conference

4/1/2012, MarkHenry found a position at BiogenIdec. Congratulation!

3/9/2012, 1st BPQC consortium was held at ICC.

3/5/2012, The paper submitted to Biotechnology Progress is accepted. Congratulations Dr. Lee! (Lee, H., A. Christie, J. Liu, S. Yoon (2011) Variability analysis of soy hydrolysate and its effects on cell culture performance using NIR coupled with chemometrics approach, Biotechnology Progress)

2/1/2012, Announcement of Biopharmaceutical Summit

We have the pleasure of inviting you to participate in the Biopharmaceutical Summit which will take place on March 9, 2012 in Lowell, Massachusetts. The summit is hosted by the Biopharmaceutical Process and Quality Consortium.

Where: UMass Lowell Inn and Conference Center, Lowell Mass. To register, e-mail the BPQC or you can register on-line.

1/31/2012, House Speaker DeLeo and other state legislators visited Biomanufacturing center on 1/31/2012. Dr. Yoon give them a tour to the center and briefed on the upcoming workshop. You can see the details from the UML Photo Gallery. Here's the link to it:

<http://www.uml.edu/News/stories/2011-12/LegislatorsSeeResearch.aspx>,

<http://web.uml.edu/gallery/index.php/Events/Legislators-Visit-Campus-1-31-12>

1/5/2012, Dr Lee and Prof Yoon received travel awards to CPC VIII (Savannah GA)

//Biopharmaceutical Process and Quality Consortium (BPQC)**//** launched!

10/28/2011, Kick-off meeting of the Biopharmaceutical Consortium was held with strong support of University of Massachusetts President. The consortium will develop next generation biopharmaceutical manufacturing process while focusing research of biopharm manufacturing and development challenges. The steering committee will drive the consortium and the industry advisory board will provide inputs from industry perspectives. The consortium is reaching out potential member companies to form the consortium.

12/1/2011, MarkHenry Kamga defended his master thesis successfully. Congratulations MarkHenry on your successful defense and fruitful research outcome. His research project is "Modeling of protein monomer/aggregate purification by hydrophobic interaction chromatography: application to column design and process optimization".

12/1/2011, Chromworks donated simulation software packages for batch chromatography column and simulated moving bed to be used for protein separation and small molecule process development. Thank you, Chromworks for your support!

11/15/2011, Awarded comparability study project from Roche Diagnostics. The project will compare various technologies for metabolic analysis.

10/28/2011, Had kick off meeting of BPQC (Biopharmaceutical Process and Quality Consortium).

10/1/2011, Eppendorf donated bioreactor control systems for research and education of biopharmaceutical consortium. Thank you Eppendorf for your support!

9/1/2011, Omer Karpuz joined the research group as a PhD student. Congratulation and good luck for doctoral study.

7/1/2011, Roche diagnostics donated Cedex Bio system for research collaboration. Thank you, Roche Diagnostics for great support for our research.

6/1/2011, Awarded a research project from Aber Instruments. This project will investigate characteristics of biomass measurement during cell-culture process

5/26/2011, Proposal for Biopharmaceutical Process and Quality Consortium (PI: Seongkyu Yoon) was selected for University of Massachusetts, Science and Technology Initiatives Fund Award. For detail, refer to UMass President Office Website

5/20/2011, Research poster by Dr. Haewoo Lee was selected as the best poster at 2nd Annual Clinical & Translational Science Research Retreat(UMass Medical School)

5/23/2011, Dr. Yoon presented at TURI annual conference on Ozone based SIP