Development of Molecularly Imprinted Nano-array Sensors for Clinical Applications
Sabbatical Report for Fall 2016
submitted to
The Office of the Provost

Joseph Wu, Ph.D.
Associate Professor
Department of Chemistry
University of Wisconsin – Platteville
with South Central University for Nationalities, Wuhan, China

OBJECTIVES
This sabbatical leave was to spend a semester at South Central University for Nationalities (SCUN) in Wuhan, China to achieve the following goals:
1) Extension of my professional knowledge in analytical chemistry through collaborative research;
2) broadening the geographical and cultural experience for future international collaboration or grant seeking;
3) opening channels for future exchange students between UW-Platteville and South Central University for Nationalities (SCUN).

PROJECT OUTCOMES
With focused attention in research and professional development given from this sabbatical opportunity, I have accomplished tasks of preparing publications, building personal relationships with SCUN faculty members, promoting University of Wisconsin-Platteville and experiencing life in China in one semester.

1. Collaborative Research: Working with Professor Chunya Li, I learned a great deal of molecularly imprinted polymer technology and its clinical applications. I admired and appreciated the outstanding facility he has provided in the School of Chemistry and Material Science in SCUN. It is really a working environment ideal for nanotechnology and material science research. Dr. Li and I have many research interests in common, particularly in electrochemistry, sensor development, and nanomaterial applications. I worked with his graduate research assistants and two undergraduate students. Through this collaboration, we
have published three reviewed papers. But most important of all, I have acquired the new skills in sensor making, which will be beneficial for my research and class projects.


2. Broadening the geographical and cultural experience

This is my first time in visiting Wuhan and second time in visiting China. My last visit to China was in 1994 when I was just a teenager. Over the past twenty-two years, I saw a dramatic change in China, especially in infrastructure and customer services, which prepare China to welcome more international visitors. During my short visit, I learned how to use a smart phone and APPS to navigate Wuhan and cope with the way of life in China. I have attended two of the regional conferences in chemistry and did some networking with local researchers. There are at least 20 universities located in Wuhan and I must have acquainted at least one chemistry professor from each university during the conference. Most of them expressed their interest to visit UW-Platteville as a visiting scholar in the future.

My experience in China tells me that life in China is very different from life in USA. My first observation when I walked on the street of Wuhan. Chinese restaurants are abundant and the choices of different cruising are amazing. However, 99% of the restaurant menu are in mandarin and most of the servers do not speak English at all. This may be hard for international visitors. There are some other challenges for visitors: transportation, shopping, and even asking for a direction due to the language barrier. Traveling in China is so convenient that a person does not need to own a car in China as their public transportation network, such as buses, subway or high-speed railway, is very well established. Besides, most of things were sold in local community stores within a walking distance. I recommend any students or faculty member, who would like to visit China, to take advantage of Chinese courses and their annual summer tour offered by the Confucius Institution on our campus. Confucius Institute also provides scholarships for our UW-Platteville students to study in China.

3. Opening channels for future exchange students

In SCUN, I have many opportunities to speak with the students about UW-Platteville. I have presented my research to both their graduate and undergraduate students and I have introduced them with pictures of our campus, city of Platteville and Wisconsin. Most of audients envied the
environment we are living in with clean air and less traffic. Some are considering to pursue a Ph.D. degree in U.S. I have also talked about our English Language Program and the partnership between SCUN and UW-Platteville, promoting a way for them to experience life in U.S. I encouraged their students to apply for the exchange program to UW-Platteville.

4. Other accomplishments

Sabbatical really provided me an undivided attention to finish a few past projects and think about the class I am teaching. Before going to this sabbatical leave, I collaborated with a chemistry professor. During the sabbatical, we prepared three manuscripts together and two of them were published and listed below. We have re-submitted the third manuscript and hope it will be accepted soon. After coming back from this sabbatical, I have prepared and submitted a proposal for obtaining $50,000 funding from WiSys. The funding decision will be made in May, 2017. I also provided a presentation in the sabbatical series on campus. I am grateful to have many students, faculty, colleagues, and Dean Gribb to attend my presentation. Besides presentation, I attended the Global Lunch on campus to briefly share my experience in China. Currently I am developing a new experiment related to my collaborative project for CHEM 2150 course and two UW-Platteville undergraduate research students are involved in this project.


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I am also thankful to Professor and Department Chair of Analytical Chemistry, Dr. Chunya Li, for being a good mentor and amazing host for my visit there. I remembered he spent his valuable time to find a short-term accommodation for my family. I thank Dean Dr. Aiqing Zhang, formal Dean Dr. Kejian Deng, deputy of secretary, Hang Deng, and many faculty members for their hospitality and friendships to make my visit so memorable. Finally, I would like to thank my family to accept this privilege and accompany me to expand my knowledge, experience different cultural and make an international connection with SCUN.