Sabbatical Report 2015-2016

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Background

This report summarizes the activities and accomplishments during my sabbatical leave (Spring 2016). The purpose of the sabbatical leave was to completely revise and update the textbook (Industrial Biotechnology: A Training Manual - ISBN-7593-0514-5) that was originally published by Moorpark College in 2001. The content of the book has never been revised since its original publication in 2001. There have been many advancements in Industrial Biotechnology since the publication of this book. Therefore, it was my intention to completely revise and update this excellent text book so that students of Industrial Biotechnology have a concise, yet comprehensive resource to go to for practical knowledge of this important field. The intent was to bring the content of the book up to date with current state of the art in this industry and to introduce new technologies that have become part of this field since the original publication of the book in 2001.

Summary of accomplishments and activities

During my sabbatical I conducted the following activities

- Organized the book into a completely new structure with sections to parallel the courses being offered at Moorpark College. This included an introductory section called “Core Concepts”, four sections corresponding to four of the courses offered by Moorpark (Environmental Monitoring & Process Support, Quality control & Validation, Cell Culture & Microbial Fermentation, Recovery & Purification) and a final section called “Analytical Methods” which was to include analytical methods used in all other courses.
- The book was organized in six sections with a total of 49 chapters.
- Identified a group of industry experts willing to help with revising/writing chapters for the book that were outside my areas of expertise.
- Conducted face to face meetings with these industry experts to provide them with guidance on the writing of their topics.
- Researched topics for the “Cell culture and microbial fermentation” section (which was to be written by me) as well as many other topics that I could not find industry experts for.
- Wrote (or substantially revised from the previous textbook) all the chapters of the “Cell Culture and Microbial Fermentation” section and those other

chapters that I could not find external authors for. In all, I wrote 24 of the 49 chapters in the book. I am currently in the process of writing 2 more chapters that had originally been assigned to other authors. This will bring my authorship to 26 of the 49 chapters.

- Followed up with other contributors via phone calls, emails, and face to face meetings to keep the project on track for completion. This was a difficult process – since most of these contributors have full time jobs in the industry and have to write the chapters in their spare time (with no compensation).
- By the end of the sabbatical period I was able to complete 47 of the 49 chapters of the book. Of these 49 chapters:
    - 26 are authored by me (24 of which have been completed)
    - 15 were authored by other industry experts
    - 8 chapters were essentially the same as the original textbook with editorial changes made by me.
- Appendix I shows the table of contents of the new book including the authors for various chapters.
- Although I intended to have the book published by the end of the sabbatical period, the publication itself could not be completed due to several extenuating circumstances:
    - The Moorpark Biotechnology Program was selected as a finalist for the Bellwether Award. This necessitated me to spend substantial time preparing for a presentation and then travelling to Florida to make the presentation.
    - I planned, organized and conducted the annual meeting of our Biotechnology Advisory Committee.
    - I attended the annual CSUPERB (California State University Program for Education and Research in Biotechnology) conference in January
    - I attended a meeting organized by the DSN for Biotechnology in Miramar College to discuss best practices in Biotechnology education.
    - Some of the industry experts who had committed to write chapters for the book did not follow through on their commitment – despite my best efforts to follow up with them. This necessitated me to write more chapters myself (including doing the research for those chapters.)
- Work that still remains to be done (which I intend to complete this summer on my own time) is as follows:
    - I will do the bulk of editorial work to make sure that all disparate chapters are well linked and are presented in a coherent manner.
    - I will obtain consent from original publishers of work cited
    - I will correspond with publisher to get the book in its final form

Appendix I

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*As originally written with editorial changes only