



Five Colleges, Incorporated is a nonprofit educational consortium established in 1965 to promote the broad educational and cultural objectives of its member institutions, which include four private, liberal arts colleges and the Amherst campus of the state university. The consortium is an outgrowth of a highly successful collaboration in the 1950s among Amherst College, Mount Holyoke College, Smith College, and the University of Massachusetts Amherst, which resulted in the founding of a fifth institution, Hampshire College, in 1970.

Five Colleges promotes and administers long-term forms of cooperation that benefit faculty, students, and staff. These include:

Shared use of educational and cultural resources and facilities, including a joint automated library system, open cross registration, and open theater auditions; joint departments and programs; and inter-campus transportation.

Their proximity to one another in the Connecticut River Valley of western Massachusetts favors *Five College* collaboration, as does their commitment to the liberal arts and to undergraduate education. *Five Colleges, Incorporated* is a longstanding member of the Association for Consortial Leadership (ACL), a national organization of consortia.

**Talks at other Five College campuses
April 6 & 7
"Strategies and Tactics for Chemical Synthesis
Inspired by Natural Products"**

Monday, April 6th
Ford Hall, Room 240
Smith College, 4:30 p.m.

Tuesday, April 7th
Cleveland Hall L1
Mt. Holyoke College, 4:30 p.m.

Five College
Chemistry Lecture Series

The Department of Chemistry, University of Massachusetts Amherst
presents

PROFESSOR RICHMOND SARPONG

Department of Chemistry, University of California–Berkeley

**Break-it-to-Make-it Strategies for Complex
Molecule Synthesis**

Tuesday, April 7, 2020
11:30 a.m.

Lederle Graduate Research Tower 1634
Refreshments at 11:00 a.m.

Richmond Sarpong



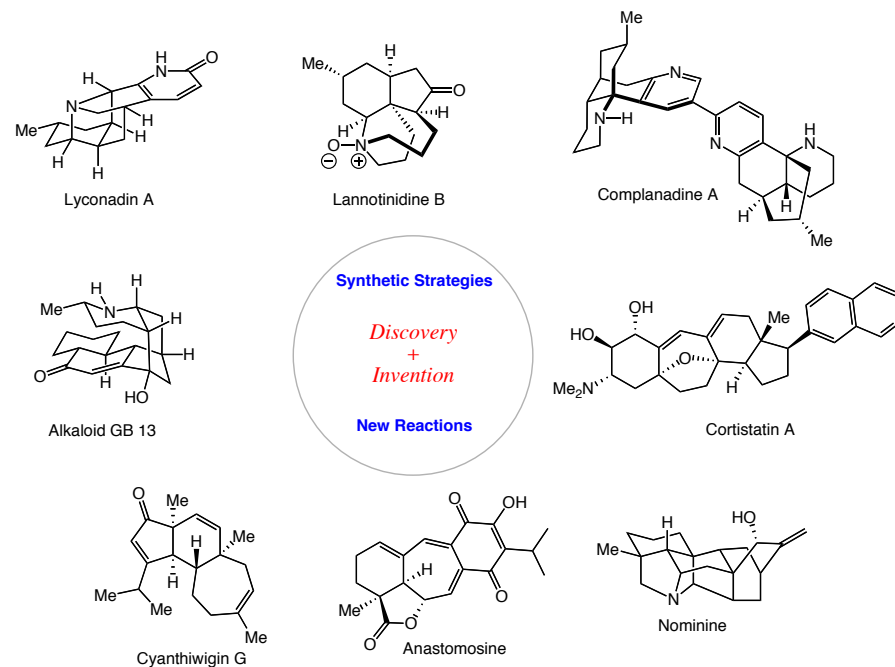
Richmond Sarpong is a Professor of Chemistry at the University of California Berkeley where he and his group specialize in synthetic organic chemistry. Richmond became interested in chemistry after seeing, firsthand, the effectiveness of the drug ivermectin in combating river blindness during his childhood in Ghana, West Africa. Richmond described his influences and inspirations in a TEDxBerkeley talk in 2015 (Face of Disease in Sub-Saharan

Africa – <https://www.youtube.com/watch?v=nIsY87-zkXA>). Richmond completed his undergraduate studies at Macalester College in St. Paul, MN and his graduate work was carried out with Prof. Martin Semmelhack at Princeton. He conducted postdoctoral studies at Caltech with Prof. Brian Stoltz.

At Berkeley, Richmond's laboratory focuses on the synthesis of bioactive complex organic molecules, with a particular focus on secondary metabolites that come from marine or terrestrial flora and fauna. These natural products continue to serve as the inspiration for new medicines. It is Richmond's hope that through the work in his laboratory, he and his coworkers will uncover methods and strategies for synthesis that may contribute to more efficient ways to prepare bioactive compounds that may inspire new medicines.

Of all his professional accomplishments, Richmond is most proud of the students in his research group (<http://www.cchem.berkeley.edu/rsgrp/>) and those with whom he has worked in the past that have gone on to their own independent careers. He enjoys teaching and was the recipient of the 2009 UC Berkeley Department of Chemistry teaching award and the 2016 Noyce Prize for Excellence in Undergraduate Teaching in the Physical Sciences at Berkeley. Richmond's research group has published over 110 papers and he has received numerous awards in recognition of his research including an Alfred P. Sloan Foundation Fellowship, Japan Society for the Promotion of Science Fellowship, Camille Dreyfus Teacher-Scholar Award, ACS Cope Scholar Award, NSF Career Award, the 2015 Royal Society of Chemistry Synthetic Organic Chemistry Award, a 2017 Guggenheim Fellowship, the ISHC Katritzky Award, and the Society of Synthetic Organic Chemistry Japan Mukaiyama Award for 2019.

ABSTRACT: Natural products continue to inspire and serve as the basis of new medicines. They also provide intricate problems that expose limitations in the strategies and methods employed in chemical synthesis. Several strategies and methods that have been developed in our laboratory and applied to the syntheses of architecturally complex diterpenoid alkaloids, indole alkaloids, and several *Lycopodium* alkaloids, will be discussed. In addition, new ways to employ C–C bond cleavage in synthesis will be presented (i.e., break-it-to-make-it strategies).



- [1] Marth, C.J.; Gallego, G.M.; Lee, J.C.; Lebold, T.P.; Kulyk, S.; Kou, K.G.M.; Qin, J.; Lilien, R.; Sarpong, R.; *Nature* 2015, 528, 493.
[2] Mercado-Marin, E.V.; Garcia-Reynaga, P.; Romminger, S.; Pimenta, E.F.; Romney, D.K.; Lodewyk, M.W.; Williams, D.E.; Andersen, R.J.; Miller, S.J.; Tantillo, D.J.; Berlinck, R.G.S.; Sarpong, R.; *Nature* 2014, 509, 318.
[3] Roque, J. B.; Kuroda, Y.; Göttemann, L. T.; Sarpong, R. *Science*, 2018, 361, 171.
[4] Roque, J. B.; Kuroda, Y.; Göttemann, L. T.; Sarpong, R. *Nature*, 2018, 564, 244.