

# University of Sydney

## Organic Chemistry Thursday Seminar Problems Semester 2, 2008

Thursdays, 10 am – Lecture Theatre 4

### Timetable

Date	Chairperson	Topic
31 <sup>st</sup> July	Mat Todd	Seminar: Richard Grainger
7 <sup>th</sup> August	Jimmy Lee	Who is?/Problems
14 <sup>th</sup> August	Fargol Taba	Lit/Problems
21 <sup>st</sup> August	Ahamed Muneer	Guest Problems
28 <sup>th</sup> August	Kaitlin Beare	Guest Problems
4 <sup>th</sup> September	Thiru Thirukkumaran	Lit/Problems
11 <sup>th</sup> September	Candy Chun	Who is?/Problems
18 <sup>th</sup> September	Mat Todd	Hons Seminars
25 <sup>th</sup> September	Mat Todd	Hons Seminars
2 <sup>nd</sup> October	-	Recess
9 <sup>th</sup> October	Max Crossley	Seminar: Ben Davis
16 <sup>th</sup> October	Richard Payne	Seminar: Ben Davis
23 <sup>rd</sup> October	Mat Todd	Jeopardy VI

### Graduate Student Teams

Team A	Team B
Grace Simpkins	James Cochrane
Hendra Gunosewoyo	Kaitlin Beare
Helen Salouros	Lance Brooker
Candy Chun	Thiru Thirukkumaran

Team C	Team D
Phil Young	Sam Banister
Fargol Taba	Jimmy Lee
Ahamed Muneer	Taliesha Paine
Imam Moussa	Li Li
George Huyang	Stephen Butler

Your group should select an individual to present a **20 min** talk on the subject listed below. Introduce the area of chemistry/reaction/person/technique to the audience carefully. Remember that to many of them, this will be the first time they have been introduced to the topic or person. You may need to describe in detail a number of simple examples in terms of mechanism, bonding and terminology. Try to put the work into a broader context and explain the significance. Questions will follow the presentation. If using overheads or projection, make sure the font size and structures are clearly visible from the back of the lecture theatre. Remember that this is a group exercise and all members of the group should contribute to the preparation of the presentation.

**Presentations on topics of current interest or historical importance.**

A key reference(s) from the recent literature is provided but this is just a starting point for your research into the topic. Refer to other relevant literature and be critical and selective – you do not necessarily have to present every detail of the paper in question to get the message across.

**Who is....?**

Your aim is to introduce the audience to our forthcoming organic chemistry research seminar speaker. Search the literature for publications and reviews about their research and present an overview of the areas of chemistry they are involved in. No need to detail their history, this will be supplied by the chair on the day of their seminar.

**7<sup>th</sup> August – Group B**

Who is Professor Chi-Huey Wong? (Scripps)

**14<sup>th</sup> August – Group C**

The Total Synthesis of (-)-Cyanthiwigin F by Means of Double Catalytic Enantioselective Alkylation  
*Nature* **2008**, 453, 1228-1231.

**4<sup>th</sup> September – Group D**

Practical Synthesis of Prostratin, DPP, and their Analogs, Adjuvant Leads Against Latent HIV  
*Science* **2008**, 320, 649-652.

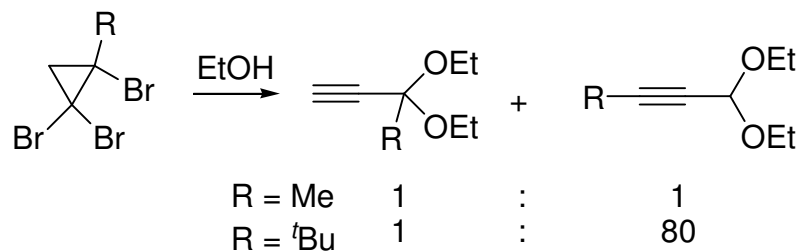
**11<sup>th</sup> September – Group A**

Who is Professor Ben Davis? (Oxford)

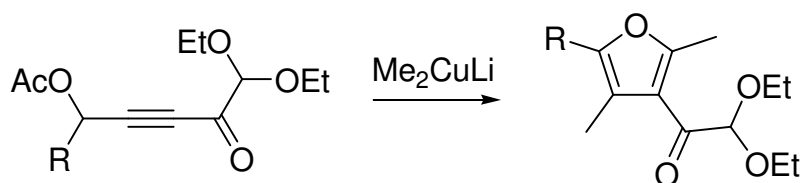
## Problems.

Questions will follow the presentations. The first four questions are assigned to a particular group and will not be assigned by random draw:

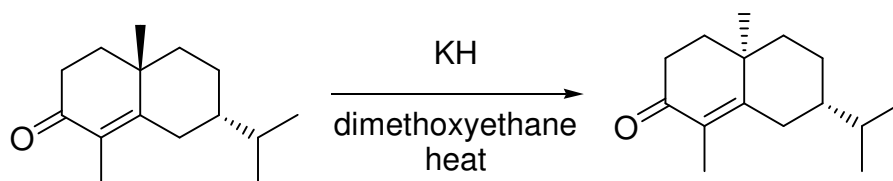
1) (**Group A**). Account for the following.



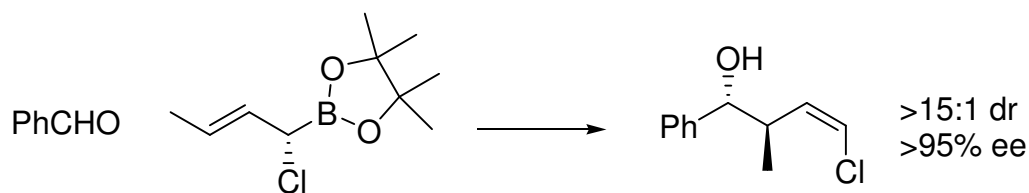
2) (**Group B**). Give a mechanism for the following reaction.



3) (**Group C**). Account for the following epimerisation.

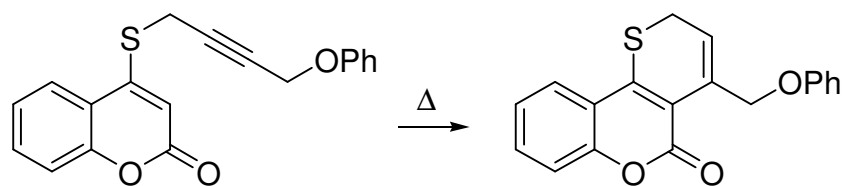


4) (**Group D**). Explain the outcome of the following reaction.

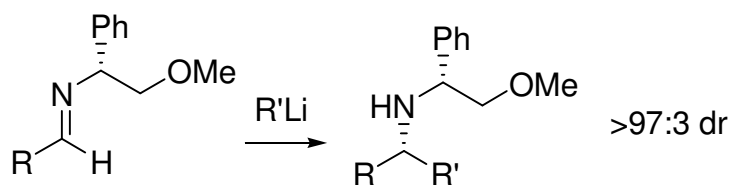


*The following problems will be assigned by random draw on the day:*

- 5) Give a mechanism for the following reaction.



- 6) Explain the following stereoselectivity.



### Guest Problems

Your group is to develop one or two problems for another group to answer. You need to hand out your problems at least *one week* before the date set for your problems to be answered. Your problem set should be neatly typed with Chemdraw structures and must fit on one A4 sheet (double-sided if necessary). You should print ~40 copies and hand them out at the Thursday session prior to your problem session. *Choose your problems carefully – they need to be something that is achievable (within ~30 mins) and can be explained at the blackboard.* Please *do not* use your own direct research as the basis for your problems.

**Teams B and D – Hand out problem sheet on Aug 14<sup>th</sup>; teams A and C answer on Aug 21<sup>st</sup>.**

**Teams A and C – Hand out problem sheet on Aug 21<sup>st</sup>; teams B and D answer on Aug 28<sup>th</sup>.**

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