

Aggarwal Group Newsletter

Dear All

Welcome to the first of what I hope will be a long series of Newsletters relating information about the current group and news from former group members as well. I hope that news about the current group will of interest to many of you, I know that a significant number of you will know the people personally from your own recent times within the group.

Current Group Activities



The new Chemistry building at Bristol

The biggest change in the group is, of course, our location, which occurred over two years ago. So, no more freezing labs in the winter, sweltering heat in the summer, smelly and unkempt laboratories with bits of plaster falling off the ceiling, as we are now located in a very modern, air-conditioned building comprising laboratories with state-of-the-art fume cupboards.



Lively banter in the labs!

It is quite amazing! The labs no longer smell as if they are chemistry labs as the ones in Sheffield did! But of course we miss the cheap beer in the 197 and the

special atmosphere that was prevalent at Sheffield.



"Clean and tidy" write-up areas

We've a very large number of nationalities within the group at the present time and it certainly feels like a heterogeneous mixture of cultures. In addition to the large contingent of UK folk we also have people from Ireland, France, Germany, Spain, Italy, Sweden, Mexico, Indonesia, USA, Japan, China and South Korea.

Last year was a good year for awards. Congratulations go to **Sarah Fulford** for winning the RSC industrial tour poster competition in November, on her Baylis Hillman work, which was judged by members of Pfizer, Eli Lilly and Quest. She competed with 30 other representatives from around the UK and received the only prize that was on offer, so many congratulations! **Chris Sheldon** and **Jeff Richardson** each came away with prizes at the Pfizer Organic Chemistry Symposium Competition in December. Many congratulations to them. **Chris Sheldon** also received the prize for best poster at the Bristol Poster competition sponsored by Pfizer.

It was also a good year for publications (see end), so congratulations to the whole team for their achievements.



News from the group.

2002 was a busy year for weddings. **Stephen Roseblade** and **Emma Alonso** were married in March and in June **Javier de Vicente** married Silvia. Three new babies were born to current group members in 2002! Congratulations go to **Fang**, on the arrival of Eric, in April. A baby girl, Narea, was born to **Stephen Roseblade** and **Emma Alonso**. In December a baby girl, Yewon, was born to **Imhyuck Bae** and Eugene.

Christmas 2002 was a romantic time for some of our group members: **Ritmaleni** was married in Indonesia over the Christmas holidays **Becky Steele** announced her engagement to Lorenzo, Alessia's cousin, and **Robin Fulton** got engaged to Martyn Cole. We look forward to the pictures due course. In January **Viji Moorthie** got engaged to Peter Stock.

With Becky's engagement to Lorenzo, that brings to a total of four the couples who have met each other during their time within our group (Becky and Lorenzo met through Alessia). Long may this activity continue!

Positions that current PhD and Post Doc members are moving to in 2002.

The following group members completed their PhDs (congratulations) and moved on:

Alessia Nicotra, September 2002, joined XXX.

Marco Ferrara, February 2002, joined Merck in Rome;

Stephen Roseblade, Dec 2002 started a post doc with Professor Lasaletta in Seville;

Javier de Vicente, January 2003, started a post doc with Scott Rychnovsky in Univeristy of California at Irvine;

Paul Davies, February 2003, started a post doc with Alois Furstner at the Max-Planck Institute in Mulheim, Germany.

The following post docs also departed our group in 2002:

Adrian Daly, December, who has joined Pfizer in Cork, Ireland.

Ingo Emme, July 2002, joined Ciba in Germany;

George Hynd, February, who joined Argenta in sunny Harlow.

Willy Picoul, April, who went back to France to a post doc with Marco Ciufolini in Lyon,

Frank Sandrinelli, June, who joined Tocris Cookson in Bristol,

Personal News from Former Members and Varinder.

Well, I was hoping for a little more from former group members. I guess you're all waiting to see what the first Newsletter looks like before you send in details of activities or events in your own personal lives that you wish to share with others.

Richard Grainger writes: *Liz (Fernee, now Grainger) and I were married on 13th April, 2002 in the village of Gresford, close to where we both grew up in North Wales. A number of ex-group members were there - Gair, Susannah, Emma, Sarah and Julia.*

On 28th January, at 5.44pm, we had a baby daughter, weighing in at 7lb 8oz! We have called her Megan. She was born in Lewisham hospital, close to where we now live, Lee in South East London.

Mother and daughter are doing well, father is in his usual daze and is trying to get used to working with no sleep. (I know the feeling, Richard!)

Ruediger Hainz writes:



Rebecca was born on 7th October 2002 and she is doing very well. I am still here at Ciba in process development and it is still an interesting job.

Beatrice Pelotier sends greetings: *Happy New Year and Best Wishes for 2003. I finished my post-doc at GSK at the end of December and I am now looking for a job in Lyon.*

Graham Evans writes: *Now been at Celltech (in its many guises) for over 8 years, which is pretty good for a biotech company!*

Gary Tarver married Debbie on 7 July 2001, in East Kilbride Scotland.

Julia Worrall married Bruce Adam on 5 May 2001 in Lanarkshire, Scotland. (Lovely photo, Julia, thank you for sending it.)

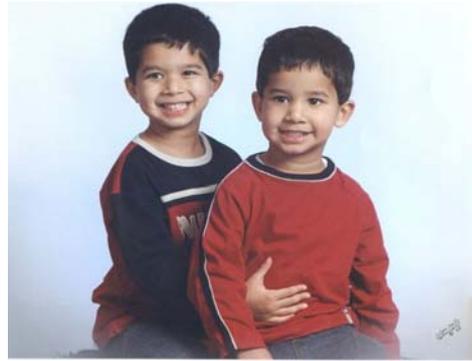


Matt Sage writes:

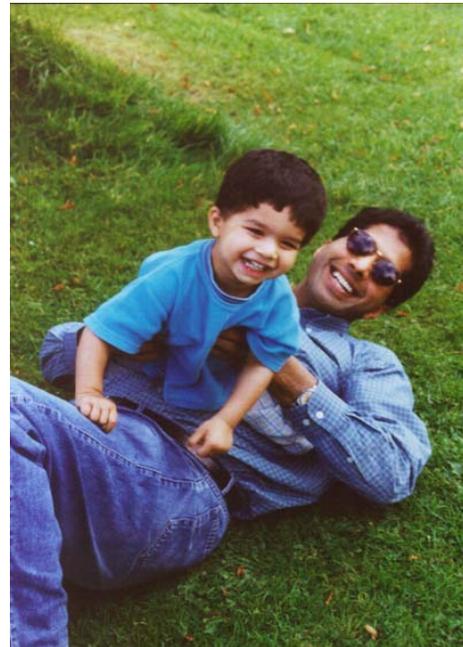
Here is a recap of last year: In April I changed positions in my company, I moved out of Quality Assurance and into Implementation group. Since then I have been travelling around the US visiting MDL customers and helping them with the implementation of MDL software. It's a great job and I'm really enjoying it. In April my wife Malia started a sales job for a local Roman shade company that's based in San Francisco. With us both working we decided to buy a house and our dreams were realised in June 2002. We now own a 1931 English Tudor style house, which has panoramic views of the San Francisco Bay.

Fortunately we have been able to have the odd holiday, and we both enjoyed the 2 weeks we spent in England over the Christmas period. I hope all are doing well and look forward to seeing how everyone is doing.

I thought I would include some of our own news and attach a photo here of our two lively boys.



Lukha is now four years and four months old and Romi is two and a half. As you can see from the photo they are actually of rather similar size and build, despite the age difference. As you can also tell from the photo, they get on very well with each other and, indeed, love each other to bits.



They are great fun.

Well, that's all for 2002. If you enjoyed reading this and wish to share some of your events from 2003 or any previous years, please write in and I will include it in next year's newsletter. As you can see, photos add considerably to the pleasure and interest in the newsletter, so please include these where possible.

We have lost touch with some former members of the group and would be grateful if you could forward this newsletter on to them or pass on their email address to us.

Hesham Abdel Rahman
Monica Catusus
Laura Ceccherini
Christina Garcia-Paredes
Sophie Goumain
Stephanie Goumri-Magnet
Marilena Kalomiri
Beverley Mattison
Eddie Moya
Stephan Schade
Rob White

List of publications 2002/3

'Palladium catalysed cyclisation-carbonylation of enynes to give cyclic $\gamma\delta$ -unsaturated acids.' V. K. Aggarwal, M. Butters, P.W. Davies, *Chem. Commun.* **2003**, submitted.

'Sulfur Ylide Mediated Synthesis of Highly Functionalised and Trisubstituted Epoxides with High Enantioselectivity. Application to the Synthesis of CDP 840.' V. K. Aggarwal, I. Bae, H.-Y. Lee, D. T. Williams, *Angew. Chem. Int. Ed.*, **2003**, 42, submitted.

'A new protocol for the *in situ* generation of aromatic, heteroaromatic and unsaturated diazocompounds and its application in catalytic and asymmetric epoxidation of carbonyl compounds. Extensive studies to map out scope and limitations.' V. K. Aggarwal, E. Alonso, I. Bae, G. Hynd, K. M. Lydon, M. J. Palmer, M. Patel, M. Porcelloni, J. Richardson, R. Stenson, J. R. Studley, J.L. Vasse, C. L. Winn, *J. Am. Chem. Soc.*, **2003**, submitted.

Oxidations of Ketene Dithioacetals: Formation of *Trans* Bis-sulfoxides without Contamination from *Meso* Isomers.' V. K. Aggarwal, R. M. Steele, Ritmaleni, J. K. Barrell, I. Grayson, *J. Org. Chem.* **2003**, 68, submitted.

'A Novel One-pot Method for the Preparation of Pyrazoles by 1,3-Dipolar Cycloadditions of Diazo Compounds Generated *In Situ*' V. K. Aggarwal, J. de Vicente, *J. Org. Chem.* **2003**, 68, submitted.

'Generation of Phosphoranones Derived from Phosphites by Iron Porphyrin Mediated Carbene Transfer. A New Class of Phosphorus Ylides Leading to High *E* Selectivity with Semi-Stabilizing Groups in Wittig Olefinations' V. K. Aggarwal, J. R. Fulton, C. G. Sheldon, J. de Vicente, , *J. Am. Chem. Soc.*, **2003**, submitted.

'New insights in the mechanism of amine catalysed epoxidation: dual role of protonated ammonium salts as both phase transfer catalysts and activators of Oxone[®] for alkene epoxidation', V. K. Aggarwal, C. Lopin, and F. Sandrinelli, *J. Am. Chem. Soc.*, **2003**, in press.

'The use of enantiomerically pure ketene dithioacetal bis-sulfoxides in highly diastereoselective intramolecular nitron cycloadditions. Application in the total synthesis of \square -amino acids, (-)-cispentacin and the first asymmetric synthesis of 4-amino-pyrrolidine-3-carboxylic acid.' V. K. Aggarwal, S. Roseblade, R. Alexander, *Org. Biomol. Chem.*, **2003**, 1, 684 - 691

'Correlation between pK_a and Reactivity of Quinuclidine-based Catalysts in the Baylis-Hillman Reaction – Discovery of Quinuclidine as Optimum Catalyst Leading to Substantial

Enhancement of Scope', V. K. Aggarwal, I. Emme, S. Y. Fulford, *J. Org. Chem.* **2003**, *68*, 692-700.

'Unexpected side reactions of imidazolium-based ionic liquids in the base-catalysed Baylis-Hillman reaction', V. K. Aggarwal; I. Emme; A. Mereu *Chem. Commun.* **2002**, 1612-1613.

'Synthesis of epoxides from aldehydes and tosylhydrazone salts catalysed by triphenylarsine: complete trans selectivity for all combinations of coupling partners', V. K. Aggarwal; M. Patel; J. Studley *Chem. Commun.* **2002**, 1514-1515.

'A palladium catalysed cyclisation-carbonylation of bromodienes: control in carbonylation over facile beta-hydride elimination', V. K. Aggarwal; P. W. Davies; W. O. Moss *Chem. Commun.* **2002**, 972-973.

'Sulphur ylide-mediated stereoselective synthesis of a stable ferrocenyl epoxide', M. Catusus; A. Moyano; V. K. Aggarwal *Tetrahedron Lett.* **2002**, *43*, 3475-3479.

'Unravelling the mechanism of epoxide formation from sulfur ylides and aldehydes', V. K. Aggarwal; J. N. Harvey; J. Richardson *J. Am. Chem. Soc.* **2002**, *124*, 5747-5756.

'Highly enantioselective Darzens reaction of a camphor-derived sulfonium amide to give glycidic amides and their applications in synthesis', V. K. Aggarwal; G. Hynd; W. Picoul; J. L. Vasse *J. Am. Chem. Soc.* **2002**, *124*, 9964-9965.

'A new method for the preparation of silyl enol ethers from carbonyl compounds and (Trimethylsilyl) diazomethane in a regiospecific and highly stereoselective manner', V. K. Aggarwal; C. G. Sheldon; G. J. Macdonald; W. P. Martin *J. Am. Chem. Soc.* **2002**, *124*, 10300-10301.

'Epoxidation of alkenes by amine catalyst precursors: Implication of aminium ion and radical cation intermediates (vol 122, pg 8317, 2000)', M. F. A. Adamo; V. K. Aggarwal; M. A. Sage *J. Am. Chem. Soc.* **2002**, *124*, 11223-11223.

'Synthesis of new, highly hindered C-2-symmetric trans (2S,5S)- disubstituted pyrrolidines', V. K. Aggarwal; F. Sandrinelli; J. P. H. Charmant *Tetrahedron Asymm.* **2002**, *13*, 87-93.

'Highly diastereoselective aziridination of imines with trimethylsilyldiazomethane. Subsequent silyl substitution with electrophiles, ring opening, and metalation of C- silylaziridines - A cornucopia of highly selective transformations', V. K. Aggarwal; E. Alonso; M. Ferrara; S. E. Spey *J. Org. Chem.* **2002**, *67*, 2335-2344.

'Highly diastereoselective nitron cycloaddition onto a chiral ketene equivalent: Asymmetric synthesis of cispentacin', V. K. Aggarwal; S. J. Roseblade; J. K. Barrell; R. Alexander *Org. Lett.* **2002**, *4*, 1227-1229.

'The use of enantiomerically pure N-sulfinimines in asymmetric Baylis-Hillman reactions', V. K. Aggarwal; A. M. M. Castro; A. Mereu; H. Adams *Tetrahedron Lett.* **2002**, *43*, 1577-1581.

'Rate Acceleration of the Baylis-Hillman Reaction in Polar Solvents (Water and Formamide). Dominant Role of Hydrogen Bonding not Hydrophobic Effects are Implicated', V. K. Aggarwal; D. K. Dean; A. Mereu, R. Williams *J. Org. Chem.* **2002**, *67*, 510-514.

'Developments in the Simmons-Smith Mediated Epoxidation Reaction' V. K. Aggarwal; M. P. Coogan; R. A. Stenson; R. V. H. Jones; R. Fieldhouse; J. Blacker *Eur. Jn. Org. Chem.* **2002**, 319-326.