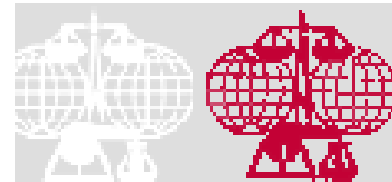


CCE, 6/7 August 2007

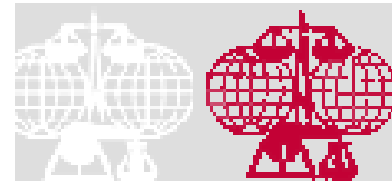


Young Ambassadors for Chemistry (YACs)



Lida Schoen

YAC



IUPAC project [2003-055-1-050](#):

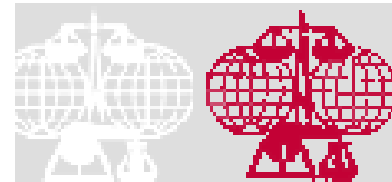
Young Ambassadors for Chemistry

Aim: to enhance the Public Understanding of Chemistry in four target countries

- **Taiwan (Taipei);**
- **Argentina (Buenos Aires);**
- **Russia (Krasnoyarsk);**
- **South Africa (Grahamstown).**

involving **IUPAC** CCE members and **Science Across the World** co-ordinators (task group).

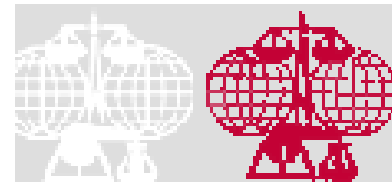
in four countries



- **IUPAC** provides all costs for **two** trainers
- **Science Across the World** (GlaxoSmithKline) provides materials and pays ‘salaries’ for two trainers
- Local costs (sponsors) for local organisation: ownership



YAC logo

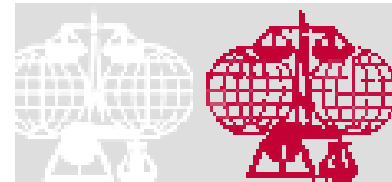


Design

Nicolás Fossati

T.S.Eliot School, Buenos
Aires, Argentina

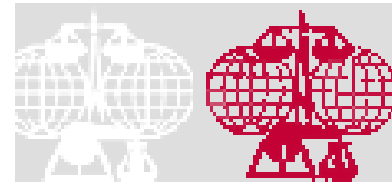
YAC INSET course + event



Train the trainers model

- chemistry (science) and **language** teachers;
- 4 days training (Science Across the World and course materials, website);
- last day: students' hands on activity in public venue: students as YACs (local teachers responsible);
- media coverage: students as **Young Ambassadors for Chemistry**.

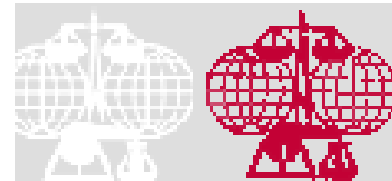
Linguist: communication skills



- Teaching and learning chemistry: **communication** about chemistry
- Context: language
 - genetics, food
 - cosmetics

Language teachers can be our best ambassadors!

Resources



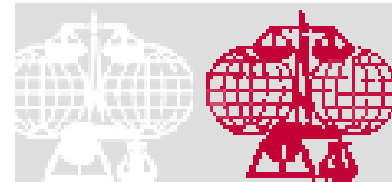
Use of existing **Science Across the World** materials:

- **Talking about Genetics around the World**
- **Chemistry in our lives**

and **course materials** (Train the trainers)

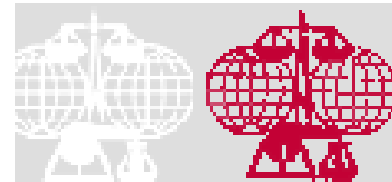
translated in **Chinese, Spanish, Russian** and **Korean**, available for teachers (Science Across the World site)

Dates and locations



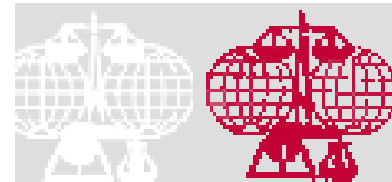
Country	Town	Dates
Taiwan	Taipei	2004 , 22–26 November
Argentina	Buenos Aires	2005 , 9-15 May
Russia	Krasnoyarsk	2005 , 14-18 November
<i>Korea*</i>	<i>Gwangju</i>	2006 , <i>20-24 February</i>
South Africa	Grahamstown	2007 , 19-23 March

Venues and organizers (1)



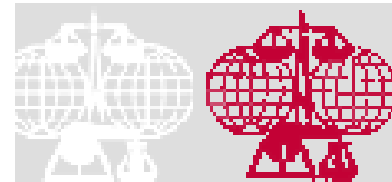
Country	Venue	Organizer	Affiliation	Local organizer
Taiwan	National Taiwan Normal University (NTNU), Graduate Institute of Science Education, Taipei	Prof Mei-Hung Chiu (IUPAC)	National Taiwan Normal University (NTNU)	Prof Mei-Hung Chiu, Dr Shu-Nu Chang (IUPAC)
Argentina	ESSARP (the English Speaking Scholastic Association of the River Plate), Buenos Aires	Prof Norma Nudelman (IUPAC), Mónica Tosi (SAW)	Universidad de Buenos Aires, T.S. Eliot School	Prof Norma Nudelman, Mónica Tosi

Venues and organizers (2)



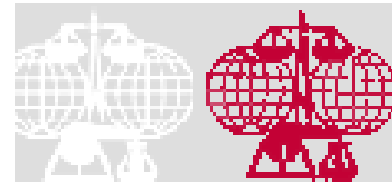
Country	Venue	Organizer	Affiliation	Local organizer
Russia	Pedagogical University of Krasnoyarsk, Krasnoyarsk	Natalia Gapanovitch, Prof Natalia P. Tarasova	D. Mendeleev University of Chemical Technology of Russia, branch division in Krasnoyarsk and Municipal Educational Centre of additional education No 1', Krasnoyarsk, D. Mendeleev University of Chemical Technology, Moscow	Natalia Gapanovitch, Prof Marina Lesovskaya (Pedagogical University of Krasnoyarsk)

Venues and organizers (3)



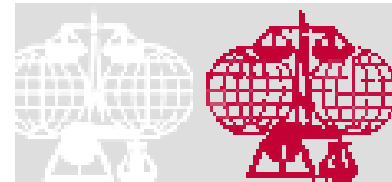
Country	Venue	Organizer	Affiliation	Local organizer
Korea	<i>Chonnam National University, Gwangju</i>	<i>Prof Choon H. Do (IUPAC)</i>	<i>Sunchon National University, Sunchon Chonnam</i>	<i>Prof Choon H. Do</i>
South Africa	Rhodes University, Grahamstown	Dr Erica Steenberg (IUPAC)	University of the Witwatersrand, Johannesburg	Dr Erica Steenberg, Ken Ngcoza (Rhodes University)

Participants



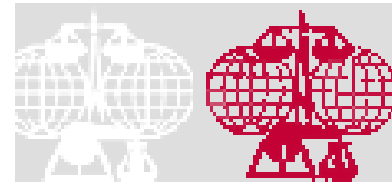
Country	Number of teacher participants	Background	Contact hours course
Taiwan	25	Science and English (few) teachers, science museum staff (few)	32
Argentina	13	English and Science (few) teachers	10
Russia	43	Science and English teachers	32
<i>Korea</i>	<i>25</i>	<i>Science and English (few) teachers</i>	32
South Africa	24	Science and English teachers	20

Local support and visibility



Country	Official support	Visibility
Taiwan	yes	stands, announcements outside, posters, YAC bags, banners
Argentina	little	none
Russia	yes	little
<i>Korea</i>	yes	<i>announcements outside, posters</i>
South Africa	yes + SASOL Science Festival (Scifest)	announcements outside, posters

Language and translations



ГЕНЕТИКА И ОБЩЕСТВО

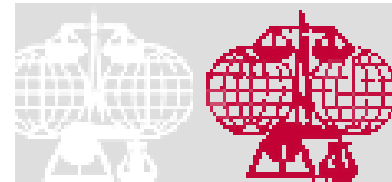
Что вы узнаете?

Работа с этой темой поможет вам оценить проблему генетических изменений и понять, почему это так актуально на сегодняшний день. Также, вы узнаете о научных и этических взглядах и о национальных и международных перспективах в данной области.

Что вы будете делать?

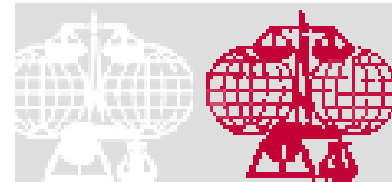
В данной статье пять частей и Глоссарий.

YAC events



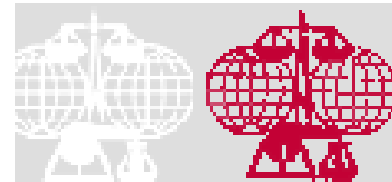
Country	YAC venue	Number of students involved	Estimated number of passers-by
Taiwan	In front of shopping centre in Taipei 101, the tallest building (508 m) in the world	72	not counted
Argentina	Japanese garden	30	50
Russia	Lecture hall in the Pedagogical University of Krasnoyarsk	108 children, teachers, parents, University students and colleagues from the Centre of Additional Education N° 1 and the Pedagogical University	
Korea	<i>in front of bus station</i>	60	3600
South Africa	square in front of the cathedral, right in the town centre	80	hundreds

YAC events: visibility and media coverage (1)



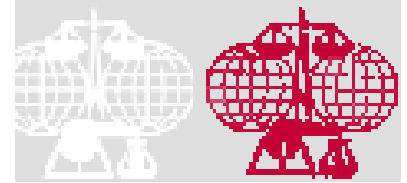
Country	YAC branding	Publicity
Taiwan	Banners YAC bags Materials book Posters Certificates YAC balloons Stickers	United Daily News, Taiwan's newspaper with the largest number of subscriptions
Argentina	Certificates	
Russia	Certificates Materials book YAC balloons (Taiwan) Stickers (Taiwan)	Krasnoyarsk News

YAC events: visibility and media coverage (2)



Country	YAC branding	Publicity
<i>Korea</i>	<i>Banners</i> <i>Materials book (ISBN 89-5708-112-7)</i> <i>Certificates</i> <i>Stickers</i>	<i>Local television (www.ikbc.net)</i>
South Africa	Materials book Certificates Posters Stickers (Taiwan)	Press release SASOL Science Festival

Media coverage



93.11.27
(聯合報)

台北市中山女中學生王芷苓(左起)、李黛薇與劉芸函利用在超市買來的糖果,建構DNA 3D模型。

記者唐郡威/攝影



加點創意 化學可以很貼近

【記者孫蓉華/台北報導】化學也可以很生活,70多名建中、中山女中、成功高中學生,昨天在國際純粹與應用化學組織的外籍老師指導下,把髮膠、浴鹽、洗髮精等重新組合運用,選以糖果建構DNA模型,藉由製作的過程體會化學與生活的貼近。

由台灣師範大學科學教育研究所、英國文化協會與中國化學會合辦的「YAC's年輕化學親善大使研習營」,昨天以學生的實際操作為活動畫下句點。

台師大科學教育研究所教授邱美虹說,研習營的重點是讓化學生活化,讓師生都不畏懼化學課;且這個活動不只是化學的呈現,老師及

學生還要會英語,要以英語表達教學概念、說明自己的創作。

70多名學生各自發揮創意,從昨天早上起就與浴鹽、洗髮精等物品「奮鬥」,要做出有創意又有故事的产品,學生分成九組展示成果,還要自我宣傳。

最後得到第一名的是把香瓜與南瓜變身「合體」成西瓜,組員有中山女中曾韻慈、成功湯智為與建中陳正哲等人。

邱美虹說,科學教學已打破國界,師生都可以上環球科學網站了解最新的科學教育教材,讓科學教學更活潑生動。

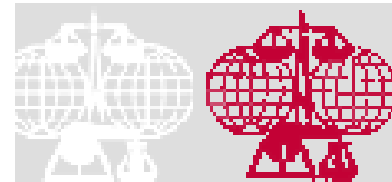
環球科學網址是 www.scienceacross.org。



Korea: television

Taiwan: United Daily News

Branding YACs



Branding YACs...



YAC bags



YAC events banner

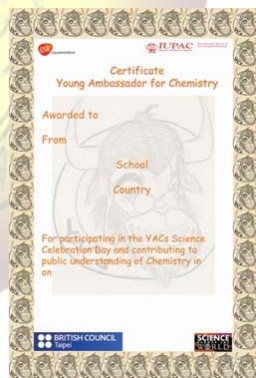


YAC stickers



Book and balloons

YAC Certificates



2006년 청소년 화학 친선대사 직무연수

▶ 일시: 2006. 2. 20(월) 9:00 ~ ▶ 장소: 전남대학교 사범대학 3호관 3층 회의실





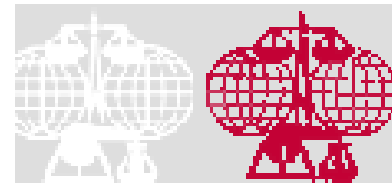


Taiwan

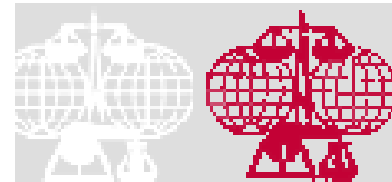


South Africa

Officials, sponsors



Spin-off

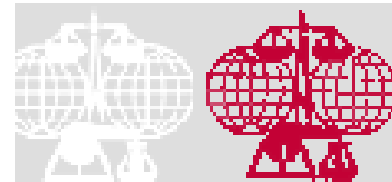


During the project smaller YAC courses/events were organized in

- Bulgaria (2006: Plovdiv, Sofia);
- Egypt (2006: Alexandria);
- Jordan (2006: Tafila);
- Korea (2006: with Korean teachers during 19ICCE)
- Taiwan (2006: Yilan);
- Lithuania (2006: Vilnius);

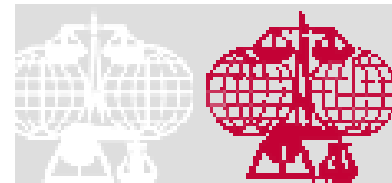
with support of many different sponsors.

Yilan

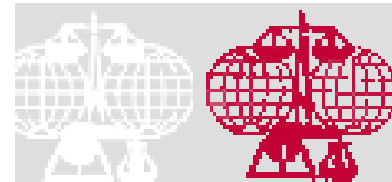


YACs!

Keith Kelly

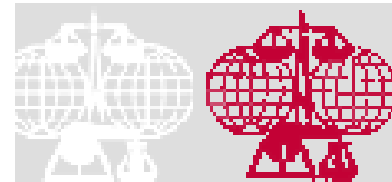


Sponsors (1)



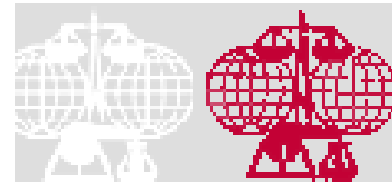
- SAW / GlaxoSmithKline;
- National Taiwan Normal University;
- National Science Council, Taiwan, director Dr Fou-Lai Lin;
- British Council, Taipei, director Gordon Slaven, Richard Law, Hsin-Yuan Lai, Iris Hung;
- Chinese Chemical Society, located in Taipei, president Prof Kan-Nan Chen;
- GlaxoSmithKline Taiwan, Human Resource & Corporate Affairs Director Deborah Hsu, Rosa Chang;
- ESSARP, the English Speaking Scholastic Association of the River Plate, director Dr Cristina Banfi;
- Fundacion Espacios Verdes (Japanese Gardens), managing director Horacio Kagami;
- Municipal Educational 'Centre of additional education No 1', Krasnoyarsk;
- Local Education Authority in Krasnoyarsk, Russia;
- British Council Moscow;

Sponsors (2)



- Korean Chemical Society;
- National Chonnam Normal University in Gwangju, Korea, (Prof Wang Keun Lee);
- Jeollanamdo Office of Education, Gwangju, Korea
- *Winner of the BioRad prize in Grahamstown, South Africa;*
- British Council, Seoul, director Gavin Anderson;
- SASOL Science Festival (Scifest), director Brian Wilmot;
- South African Chemical Institute (Dr. Mike Booth);
- RADMASTE Centre (Prof. John Bradley);
- Rhodes University, Education Department, director Prof George Euvrard;
- Cognis Taiwan, Argentina, Russia, Korea and South Africa;
- BioRad, Life Science Education, for donating many 'Genes in a bottle kit's;
- Roche Switzerland.

Future



For the next 6 months the YAC team got new invitations from

Jordan;

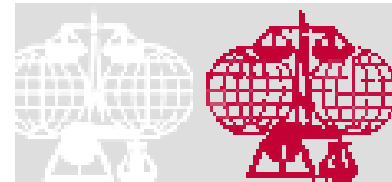
Middle East: Qatar, Oman, Saudi Arabia, Bahrain, Yemen;

Taiwan;

Pakistan.

Maybe new IUPAC project: Research based evaluation of the YAC project

Results / conclusions

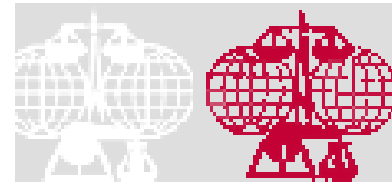


The YAC project has been a success.

- **Thousands** of students, teachers, parents and passing public (either invited or by chance) in many countries have been exposed to the 'good' side of chemistry, young students showing easy to produce instructive models and producing everyday-life products, that nearly everybody uses.
- **Local ownership** proved to be essential for a successful course/event.
- Our next job is to make YAC **sustainable** and **self supporting** in visited and new countries. We collected many data that can help and we need to collect more data.
- The main thing now is to find (new) **sponsors** to carry on.

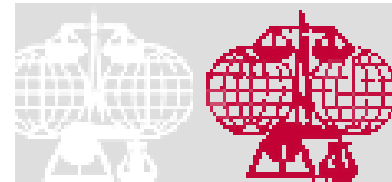


Publications about YAC



- Lida Schoen, Keith Kelly, Young Ambassadors for Chemistry in Taiwan, in *Chemistry International*, March/April 2005
(www.iupac.org/publications/ci/2005/2702/pp2_2003-055-1-050.html)
- Lida Schoen, Keith Kelly, Young Ambassadors for Chemistry in Krasnoyarsk, in *Chemistry International*, March/April 2006
(www.iupac.org/publications/ci/2006/2802/pp2_2003-055-1-050.html)
- Lida Schoen, Keith Kelly, Young Ambassadors for Chemistry in Korea, in *Chemistry International*, Sept/Oct 2006
(www.iupac.org/publications/ci/2006/2805/pp6_2003-055-1-050.html)
- Lida Schoen, Science Across the World in the Yilan province in Taiwan, feature on the *Science Across the World website* April 2007
(www.scienceacross.org/index.cfm?fuseaction=content.showcontent&node=655)
- Lida Schoen, Keith Kelly, Young Ambassadors for Chemistry in South Africa, in *Chemistry International*, July/Aug 2007
(www.iupac.org/publications/ci/2007/2904/pp1_2003-055-1-050.html)

Publications about poster competitions



- Lida Schoen, 'It's a Chemical World', The Overwhelming Success of A Poster Competition, in *Chemistry International*, Nov/Dec 2003 (www.iupac.org/publications/ci/2003/2506/1_schoen.html)
- C.H. Do, in *ChemWorld*, Vol. 47, No. 1, pp 76-77 (2007) (*in Korean*)
- C.H. Do, in *Chemical Education*, Vol. 34, No. 1, pp 6-9 (2007) (*in Korean*)
- Lida Schoen, 'Chemistry According to Kids', in *Chemistry International*, Jan/Feb 2007 (www.iupac.org/publications/ci/2007/2901/1_schoen.html)