



## WEEKLY "E" NEWS- from the RACI NSW 24th October 2008

Dear NSW RACI readers

Below are this week's announcements from the RACI NSW Branch, a summary is given and then scroll down for the full text.

**The Monthly NSW Newsletter** Many of you will have discovered that the November Issue of the *Chemistry in Australia* has been realised early. Consequently the NSW Newsletter for November was excluded from the mail out. The Monthly newsletter for November will be emailed in the coming days. A great number of members who don't have emails will be sent a hard copy of the newsletter. If you wish to have a hard copy sent as well of the electronic copy please notify Edwina ([racinsw@chem.unsw.edu.au](mailto:racinsw@chem.unsw.edu.au))

**Co-ordinators Office Hours over the next fortnight** As the year draws to a close the NSW branch coordinator needs to spend a little more time on her thesis. Over the past month she has racked up quite a bit of over time for the RACI, and consequently has accrued much flex time. Therefore the office will be open limited hours over the next fortnight. Pre arranged meetings will still be attended by the coordinator, and emails will be checked regularly. **Urgent Enquiries** can be sent to the Branch Secretary Joseph Bevitt [j.bevitt@usyd.edu.au](mailto:j.bevitt@usyd.edu.au). I appreciate your understanding in the matter.

**Innovation Challenge -Conferring Corrosion Resistance to the Inside of Small Tubes** a multi-billion dollar automotive parts manufacturer, invites proposals for technology for conferring corrosion resistance to the inside of Small tubes. More information email [john@anotec.com.au](mailto:john@anotec.com.au)

**Job Board** This Listed Resource Company incorporates a "unique" vertical integration of goods to the marketplace and seeks high calibre individuals for its expanding Malaysian business. It is providing high demand commodities to exciting new technology sectors that benefit consumers and the planet alike. If you want to advance your career and be part of a planetary solution to the Earth's problems then please read on.....(Page three of newsletter).....

**Elizabeth Wunsch Postgraduate Research Scholarship in Pharmacy** A postgraduate scholarship, funded by a bequest from Elizabeth Wunsch for the purpose of pharmaceutical research into **Inhalation Drug Delivery and Advanced Particle Engineering** is available for suitable candidates who are eligible to enroll in a Doctor of Philosophy through the Faculty of Pharmacy, University of Sydney. (See page 4)

**An Invitation** The Royal Australian Chemical Institute (NSW Branch) in conjunction with The Dairy Industry Association (NSW Branch) and The Australian Institute of Food Science and Technology (NSW Branch) proudly presents: **RACI/AIFST/DIAA CHRISTMAS PARTY 2008** Friday 28<sup>th</sup> November – Darling Harbour (pages 5 and 6)

**Barry Inglis Medal 2008 Presentation & Symposium** Tuesday 28th October 2008 2.00 p.m. – 4.00 p.m. Lehany Theatre See page 7...

**Attending the 16<sup>th</sup> R&D Topics Student Conference?** Do you have a student who has work to present? The conference committee are still keen to receive abstracts for oral and poster presentations. In addition to this, the RACI NSW Branch Invites RACI Student Members From NSW Universities To Apply For A Travel Bursary to present a paper at the 16<sup>th</sup> Annual RACI analytical and environmental divisions R&D Topics conference to be held from the 6<sup>th</sup> to 9<sup>th</sup> of December at Macquarie University (Located in Sydney).

**HAVE YOUR SAY ON THE PROPOSED CONSTITUTION AND BY-LAW CHANGES** If you are unable to attend the AGM but wish to vote either for or against the amendments please send a proxy vote to the Honorary General Secretary, RACI National Office, 21 Vale Street North Melbourne, VIC 3051, by close of business on Friday, 28 November. **The 'Appointment of Proxy – General' form is Schedule A2 of the By-laws and is available on the RACI website, [www.raci.org.au](http://www.raci.org.au) <<http://www.raci.org.au>> under downloads.**

**ChemED08 Fremantle** It is with great pleasure that we invite you to join us at ChemEd08. This Chemical Education conference is organised by the Chemical Education Division of the Royal Australian Chemical Institute and will be held at Notre Dame University in Fremantle, Western Australia, from 29 November to 3 December 2008. *The NSW Office has received word that despite the official closing date for oral abstracts was Oct 1, the committee would be pleased to receive more abstracts for oral presentations. If you would like to submit an abstract for this conference please see the ChemEd 08 website <http://www.raci-chemed08.org/>*

**Website of the Week:** This week we look at **The Goldenbook of Chemistry Experiments** <http://www.chem.unsw.edu.au/RACI/files/goldenchem.pdf> Special thanks goes to John Zavras

**Free Thermo Spectroscopic Solutions Seminar:** Where: Parramatta Rydges When: 19<sup>th</sup> Nov  
Learn about FT-IR, Raman, and Near IR See page 6 for more details

**Upcoming RACI Conferences and Symposiums** As evidenced by the lengthy E News' of late there is an awful lot going on at the moment. This article summarises all the upcoming conferences and symposia

**Missed an edition of our weekly E-News?** We now have an archive of old editions! Please see

<http://www.chem.unsw.edu.au/RACI/News.html>

**Its here!!! The New 2008/2009 Entertainment Book has arrived:** This book has been an important fundraiser for our branch the last few years. Purchase your brand new 2008/2009 Entertainment™ Book *now*

**Important Dates in Chemistry's History Oct 24-30**

**Please scroll down for further details.....**

## The Monthly NSW Newsletter



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## Innovation Challenge



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**Chief Chemist** - Leader of Technical Excellence is to lead the start-up of new laboratory for a new plant. The challenge is to set up all required equipment, testing, training and SOPs specific to in-process checks as well a safety and external compliance. Seeking at least 8 years of Chief / Lab manager experience in the chemical industry (preferable)with plant commissioning experience. A minimum of degree or greater in Chemistry/Chemical Engineering or Science is required.

To launch your career, please email John Zavras your details to [john@anotec.com.au](mailto:john@anotec.com.au) quoting job no. CCF101. Candidates must be willing to work in Kuantan, Malaysia. Only shortlisted candidates will be notified.

# Elizabeth Wunsch Postgraduate Research Scholarship in Pharmacy



A postgraduate scholarship, funded by a bequest from Elizabeth Wunsch for the purpose of pharmaceutical research into **Inhalation Drug Delivery and Advanced Particle Engineering** is available for suitable candidates who are eligible to enroll in a Doctor of Philosophy through the Faculty of Pharmacy, University of Sydney.

The Faculty of Pharmacy is undertaking specialized research in Advanced Drug Delivery to the Lung. The Advanced Drug Delivery Group (ADDG) boasts a range of specialized facilities supporting research in aerosol and material sciences. The ADD group is seeking to appoint an outstanding postgraduate researcher in formulating effective treatments for asthma, chronic obstructive airway disease and cystic fibrosis, and directly apply this knowledge to novel treatments both in vitro and in vivo. The successful applicant will be working independently and collaboratively, mostly focusing on the engineering and modeling of a novel delivery vehicle for high and low dose therapeutic medicaments. We are looking for self-motivated, organized team players. It is intended that the successful applicants will work with established highly skilled, multidisciplinary teams of the ADD group and will also contribute to innovative research programs.

## 1) Eligibility:

- be an Australian citizen, a New Zealand citizen or an Australian permanent resident;
- have completed a Bachelor Degree (or expect to complete at the end of Semester 2, 2008) with First Class Honours or equivalent results or have completed a degree and also have an outstanding record of professional and/or research achievements since graduation;
- have applied for PhD study in the Faculty of Pharmacy for Semester 1, 2009 on a full time basis;
- not have completed a degree at the same, or higher, level as the proposed candidature;
- have not previously held an APA, APA (Industry) or a Commonwealth Government-funded postgraduate research scholarship (excluding an Endeavour International Postgraduate Research Scholarship), unless it was terminated within six months of the scholarship's payments commencing.

## 2) Tenure and Conditions:

- Successful applicants must apply annually for externally funded scholarships, such as Australian Postgraduate Award (APA)/University of Sydney Postgraduate Award (UPA) and National Health and Medical Research Council (NHMRC) Scholarships where eligible.
- The scholarship may be held for three years for Research Doctorate studies. A Research Doctorate candidate may apply for a maximum extension of up to six months subject to satisfactory progress, provided the grounds are related to study and are beyond the control of the student.
- Award is renewed annually on the Dean's recommendation and is conditional on satisfactory progress.

## 3) Benefits:

- Full-time award holders receive a stipend of \$20,007 p.a. (2008 rate) which is currently exempt from taxation.
- Reimbursement of up to \$840 (2008 rate) for Doctoral candidates will be made for eligible claims for direct costs of producing a thesis in accordance with the University's thesis allowance policy. The allowance must be claimed within one year of submission of the thesis and no more than two years after termination of the scholarship.

**Further information** can be obtained from Dr Daniela Traini, Faculty of Pharmacy (A15), The University of Sydney NSW 2006. Tel: (02) 93512356; E-mail: [danielat@pharm.usyd.edu.au](mailto:danielat@pharm.usyd.edu.au).

**Applications** should be sent to Dr Helen Martynyuk, Research Services Officer at the above address and should include a curriculum vitae, a copy of an academic transcript, and the names and contact details of at least two referees

**Closing Date: November 1, 2008**

# An Invitation

The Royal Australian Chemical Institute (NSW Branch)  
in conjunction with

The Dairy Industry Association (NSW Branch)  
and

The Australian Institute of Food Science and Technology  
(NSW Branch)

*proudly presents:*



## **RACI/AIFST/DIAA CHRISTMAS PARTY 2008** Friday 28<sup>th</sup> November – Darling Harbour

The RACI NSW Branch has joined this year, for the first time, the NSW Branches of AIFST and DIAA the celebration of the year past and so strengthening the relationship between the three organisations.

Members and Guests will board the beautifully restored **South Steyne** floating restaurant moored at Darling Harbour from 7pm for welcome drinks and finger food, before sitting down to a sumptuous 2 course dinner. Gary Kennedy will be our MC, raffling the many hampers donated annually by organisations from the Food and allied industries and providing musical entertainment as our DJ until the evening closes at 11.30pm.

The RSVP date is 14<sup>th</sup> November and it is advisable to book early as this venue has limited capacity. Being a combined event for several industry organisations this year capacity is expected to be met. Please book by calling or emailing Dr. Attila Tottszer on 02 9888 9077 or <[attila.tottszer@advancedanalytical.com.au](mailto:attila.tottszer@advancedanalytical.com.au)>. **HURRY!** Places are filling quickly for the 2008 Christmas party, an event enjoyed by members and their guests for many years now. **Seats are limited, BOOK NOW.**

**Ticket Prices:** RACI Member rate - \$86.00;  
rate applicable for bookings made for 10 or more.

Non-Member - \$112.00

*(Prices include G.S.T and drinks package which excludes spirits).*

**We thank all sponsors!** Please take a moment to study the next page. Thank-you.





# ACKNOWLEDGING OUR CONFIRMED SPONSORS

We wish to express our sincere appreciation to:

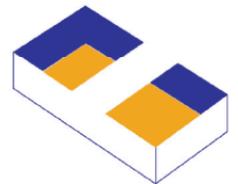
**GOLD SPONSOR:**



**SILVER SPONSORS:**



**BRONZE SPONSORS:**



**TECHSTAF**





## **Barry Inglis Medal 2008 Presentation & Symposium**

**Tuesday 28<sup>th</sup> October 2008**

**2.00 p.m. – 4.00 p.m.**

**Lehany Theatre**

**National Measurement Institute, Bradfield Road, West Lindfield**

The Barry Inglis Medal is an annual award presented by Australia's National Measurement Institute (NMI) to commemorate World Metrology Day. Awarded for the first time in 2008, it acknowledges and celebrates outstanding achievement in measurement research and/or excellence in practical measurements by an individual (or group) in the fields of academia, research or industry in Australia.

The award is named in honour of Dr Barry Inglis, inaugural Chief Executive and Chief Metrologist of the National Measurement Institute, which was established in 2004.

Associate Professor John E Sader of Melbourne University is the inaugural recipient of the Barry Inglis Medal. Professor Sader's work in the invention of a non-invasive technique to calibrate the stiffness of Atomic Force Microscope (AFM) cantilevers has led to significant improvement in one of the chief tools of nano science, thereby enabling the AFM to become a quantitative tool for measuring forces on the nano scale.

On Tuesday 28<sup>th</sup> October 2008, Dr John Sader will be presented with the Barry Inglis Medal at a presentation ceremony hosted by NMI. As part of the presentation ceremony, Dr Sader will be presenting a talk on his work. The talk will provide an overview of work aimed at developing the quantitative force measurement capabilities of the AFM in fluid environments.

**Free entry**, but for catering purposes, RSVP to [michelle.davis@measurement.gov.au](mailto:michelle.davis@measurement.gov.au) or 02 8467 3606 by Friday 24<sup>th</sup> October 2008.

### **Program**

2.00 p.m. Welcome and introduction Dr Laurie Besley, CEO & Chief Metrologist, NMI

2.05 p.m. Presentation of award Dr Barry Inglis

2.10 p.m. Symposium Associate Professor John E Sader

3.00 p.m. Questions & discussion

3.30 p.m. Afternoon tea

### **Abstract**

Since its invention in 1986, the Atomic Force Microscope (AFM) has emerged rapidly as a powerful tool for the imaging of surfaces and for the quantitative measurements of forces on the nanometre and atomic scale. Due to its relevance to biological and colloidal systems, there is growing interest in the application of dynamic AFM to the quantitative determination of forces in fluid systems. While operation in fluids presents no conceptual difficulty, additional complexity arises since the dynamic properties of the force-sensing microcantilevers in the AFM are strongly dependent on the surrounding fluid.

An overview of the work performed by Associate Professor Sader's group in developing the quantitative force measurement capabilities of the AFM in fluid environments will be presented. This will include development of the Frequency Modulation AFM technique in fluid systems, theoretical models for the dynamics of microcantilevers immersed in fluids, fundamental studies into the mechanics of AFM microcantilevers, and development of the 'Sader method' dynamic technique for the calibration of AFM microcantilevers.

# HAVE YOUR SAY ON THE PROPOSED CONSTITUTION AND BY-LAW CHANGES



If you are unable to attend the AGM but wish to vote either for or against the amendments please send a proxy vote to the Honorary General Secretary, RACI National Office, 21 Vale Street North Melbourne, VIC 3051, by close of business on Friday, 28 November.

**The 'Appointment of Proxy – General' form is Schedule A2 of the By-laws and is available on the RACI website, [www.raci.org.au](http://www.raci.org.au) <<http://www.raci.org.au/>> under downloads.**

## Attending the 16<sup>th</sup> R&D Topics Student Conference?

**Do you have a student who has work to present? The conference committee are still keen to receive abstracts for oral and poster presentations.** The RACI NSW Branch Invites RACI Student Members From NSW Universities To Apply For A Travel Bursary to present a paper at the 16<sup>th</sup> Annual RACI analytical and environmental divisions R&D Topics conference to be held from the 6<sup>th</sup> to 9<sup>th</sup> of December at Macquarie University (Located in Sydney).

R&D Topics brings together postgraduate students from Australia and New Zealand in a relaxed environment to present research specialising in analytical and/or environmental chemistry. Applications should include an abstract of the paper to be presented (up to one A4 page) and a letter of support written by the academic supervisor outlining how attendance at the conference would benefit the student's chemistry career. Send applications to:

**RACI NSW office:**

**The School of Chemistry**

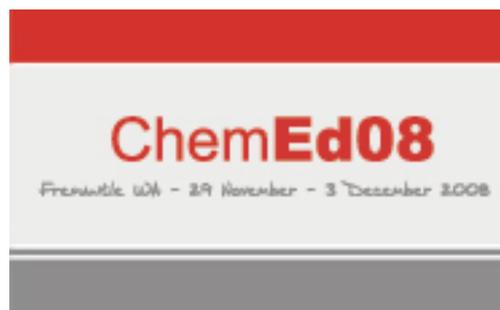
**UNSW**

**Sydney, 2052**

Or [racinsw@chem.unsw.edu.au](mailto:racinsw@chem.unsw.edu.au) Applications need to be in by Friday 7<sup>th</sup> November 2008 ( Students particularly from regional areas of NSW are encouraged to apply: eg Wollongong, Wagga, Albury, Newcastle, Lismore, Dubbo, Armidale)

## ChemED08 Fremantle

It is with great pleasure that we invite you to join us at ChemEd08. This Chemical Education conference is organised by the Chemical Education Division of the Royal Australian Chemical Institute and will be held at Notre Dame University in Fremantle, Western Australia, from 29 November to 3 December 2008.



*The NSW Office has received word that despite the official closing date for oral abstracts was Oct 1, the committee would be pleased to receive more abstracts for oral presentations. If you would like to submit an abstract for this conference please see the ChemEd 08 website <http://www.raci-chemed08.org/>*

## Website of the Week



### **The Goldenbook of Chemistry Experiments**

<http://www.chem.unsw.edu.au/RACI/files/goldenchem.pdf>

Special thanks goes to John Zavas who suggested this website. This goldenbook was published in the 60's – with amazingly exact directions to carry out many experiments in your own home. It has some ingenious suggestions for the construction of home glass ware! Not surprisingly the book was subsequently pulled from the market – although it is still widely available on the net in pdf form. (the original web site suggested has taken the pdf offline –but I have attached a link to the pdf file)

Three informative seminars in one day!

## Free Spectroscopic Solutions Seminars—2008



Brisbane—November 17  
AIBN-University of Queensland

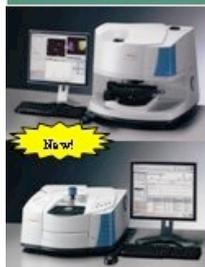


Sydney—November 19  
Rydges-Parramatta



Melbourne—November 21  
Novotel-Glen Waverley

### FT-IR



- Learn about the latest developments in FTIR microscopy & imaging
- See live demonstrations of the new Nicolet iN10 microscope and Nicolet iS10 spectrometer on real samples.
- Discover advanced new software tools to make data collection and material characterization easier than ever before
- Improve your FTIR techniques & skill

### Raman

- Learn about the fundamentals of Raman spectroscopy
- Discover how recent developments in Raman instrumentation make Raman more affordable and easier to use
- See a live "Point & Shoot" Raman demonstration
- Learn about applications of Raman in Forensics, Material ID and QC labs



### Near-IR



- Learn about the theory of NIR spectroscopy & Instrumentation
- Discover how to build a "Workflow" that seamlessly takes you from data collection to report generation
- Learn about using chemometrics for qualitative and quantitative analysis
- See live demonstrations of the Antaris II performing "real world" applications

Thermo Scientific is pleased to announce that our popular Spectroscopic Solutions Seminar Series will make a return to Brisbane, Sydney and Melbourne in November.

This years seminar series will be divided into three sessions: FT-IR, Raman & Near-IR and you may register to attend any of the sessions to suit your individual interest and available time.

Each session will showcase our widest range of new molecular spectroscopy products ever released, including:

- The Nicolet iN10 & Nicolet iN10 MX range of integrated single point and imaging FTIR microscopes
- The foolproof Nicolet iS10 FTIR spectrometer for QA/QC and analytical laboratories
- The new family of DXR Raman microscope and SmartRaman spectrometers
- OMNIC Spectra advanced material characterization software tools
- The Antaris family of FT-IR & NIR analyzers for at-line and on-line applications

#### Who should attend?

- Laboratory Managers
- Forensic Scientists
- Failure Analysis Investigators
- QA/QC and Analytical Chemists
- Material Scientists
- Researchers
- Anyone wishing to dramatically improve FT-IR, Raman or NIR measurements in their labs or on their production floors

#### Why you should attend

- This will be the most fun and informative spectroscopy seminar you have ever attended
- You will discover the latest developments and applications in FTIR, Raman and Near-IR spectroscopy
- You will be able to share your knowledge and experiences with other attendees

### More Information and Registration

To view the seminar agenda and to register on-line, please visit <http://www.accelacomm.com/jp/source/35/50080581/>. Alternatively, contact us by phone: +61 2 8844 9500 or email: [analyze.au@thermo.com](mailto:analyze.au@thermo.com)

#### Don't miss out!

Space at each seminar is limited, so register your interest to attend as soon as possible and no later than November 14.

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# Upcoming Conferences and Symposiums



**23rd RACI Organic Division Conference,  
ORGANIC 08, Hobart,**

**Tasmania 7 – 12 December 2008**

Register online at

<http://www.organic08.org/>

## **ACROSS Symposium on Advances in Separation Science**



**8-10th of December 2008.** (<http://www.across.utas.edu.au/ASASS>)

### The key dates for the conference

<b>17th of October 2008</b>	<b>Abstract Deadline for Oral and Poster Presentations</b>
<b>31st of October 2008</b>	<b>Notification of abstract acceptance and finalisation of the program</b>
<b>14th of November 2008</b>	<b>Deadline for Early Registration</b>
<b>8th of December 2008</b>	<b>Opening of the Symposium</b>

**16<sup>th</sup> RACI R&D Topics Student Conference.** This year it is being held again in NSW!  
Macquarie University Saturday, December 6 - Tuesday, December 9  
<http://www.cbms.mq.edu.au/rdttopics/index.html>

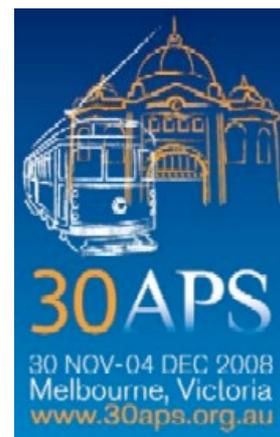
**RACI Electrochemistry Symposium: New materials and New Methods in Electrochemistry** Nov 27-28 @ UNSW

[http://www.chem.unsw.edu.au/RACI/RACIElectrochemDiv%20webpage/raci\\_electrochemistry\\_symposium.htm](http://www.chem.unsw.edu.au/RACI/RACIElectrochemDiv%20webpage/raci_electrochemistry_symposium.htm)

**NSW RACI Organic Symposium 2008** Location: School of Chemistry, University of Sydney, NSW 2006 Date: Wednesday December 3<sup>rd</sup>  
<http://www.chem.unsw.edu.au/RACI/NSWOrganic2008.pdf>

**ChemEd 08** Notre Dame University, Fremantle, Western Australia Final Registration: Closes 21 November 2008  
<http://www.raci-chemed08.org>

**30 APS - 30th Australasian Polymer Symposium** The Albert Park Sebel Hotel, Melbourne, Victoria <http://www.30aps.org.au>



## Important Dates in Chemistry's History Oct 24-30

24

**b. 1817 Hippolyte Mège Mouriés** discovered margarine, an oral formulation of the drug Copahin used against syphilis, and various patents relating to tanning and sugar extraction. He developed a health chocolate with his calcium phosphate protein

**b. 1842 Nikolai A. Menshutkin**, researcher on kinetics of nucleophilic substitution reactions of amines and quaternary ammonium ions.

**b. 1854 Hendrik W. B. Roozeboom**, researcher on application of the phase rule.

**b. 1877 Roger Clark Wells**, researcher on sodium compounds & chemical analyses of radioactive minerals; Chief Chemist of U. S. Geological Survey.

➤ Eastman Kodak Co. formed, 1901.

25

**b. 1891 Edgar C. Britton** contributed to industrial organic developments.

26

➤ Signing of Trust Agreement by 7 major oil companies creating the Petroleum Research Fund, 1944.

27

**b. 1827 Marcellin P. E. Berthelot**, a founder of thermochemistry; showed that nitrogen (N, 7) was fixed by electric discharges & bacteria; synthesized alcohol, formic acid, methane & acetylene.

**b. 1894 John E. Lennard-Jones**, researcher on surface chemistry, chemistry of carbon, liquid structure & interatomic forces.

28

**b. 1845 Zygmunt F. von Wróblewski**, first to liquefy air on large scale & with K. S. Olszewski; liquefied nitrogen (N, 7), oxygen (O,8), & carbon monoxide (CO).

**b. 1893 Christopher K. Ingold**, researcher in mechanisms of organic reactions & naming stereoisomers (Cahn-Ingold-Prelog system).

**b. 1914 Richard L. M. Synge**, discovery of partition chromatography; Nobel Prize (1952) with Archer J. P. Martin for their invention of partition chromatography.

29

**b. 1923 Carl Djerassi**, researcher in structure elucidation of natural products, synthesis of medicinals, & computer artificial intelligence to chemical problems; author of novels and plays.

30

**b. 1817 Hermann F. M. Kopp**, researcher on atomic & molecular volume, crystallography, boiling points, specific heats, & dissociation; historian of physical chemistry.

**b. 1895 Gerhard Domagk** discovered the properties of prontosil, orange-red dye containing sulfanilamide; reported that isoniazid had anti-tubercular properties, 1952, (opened age of chemotherapy); Nobel Prize (1939) for the discovery of the antibacterial effects of prontosil; refused in 1939 on instructions from Nazi government,

**b. 1895 Dickinson W. Richards, Jr.**, first clinical use of cardiac catheterization; Nobel Prize in Medicine (1956) with [André Frédéric Coumand](#) and [Werner Forssmann](#) for their discoveries concerning heart catheterization and pathological changes in the circulatory system.

**b.1906 Max Tishler** was an industrial chemist who developed antibiotics, actinomycin and streptomycin and synthesized vitamin A and riboflavin.