WCLM: Young Observer Project Proposals

**Team 5**
Current and Emerging Sensing Tools for the Detection of Illicit Drugs at Crime Scenes

**Team 4**
Glossary of Terms for Phototherapy

**Team 3**
Symposium: Introduction to Intellectual Property for Younger Chemists

**Team 2**
Maximizing and Modernizing IUPAC Outreach

**Team 1**
1. Periodic Table of Chemists Around The World
2. A World Without Chemistry is a World Without...
Team 5
Current and Emerging Sensing Tools for the Detection of Illicit Drugs at Crime Scenes

(contact: Raychelle Burks, rburks@stedwards.edu)
Forensic experts are often unaware of the crime scene tools currently available and research conducted by their international colleagues.
Current and emerging sensing tools for the detection of illicit drugs at crime scenes

DR. NUNZIANDA FRASCIONE
DR. RAYCHELLE BURKS
KEVIN SHANKS, MS, D-ABFT
DR. BRYNN HIBBERT
Objective:
To raise awareness, foster the adoption of new tools, and promote global research collaborations, we will provide a comprehensive resource guide on the current and emerging portable sensing tools used at crime scenes for the identification and/or classification of drugs of abuse.

Stakeholders:
Forensic practitioners and researchers, regulatory agencies, and industrial partners
Dissemination:

Publication of the resource guide in a relevant journal such as *Journal of Forensic Science, Forensic Science International, The Analyst, Analytical Chemistry, and Analytical and Bioanalytical Chemistry*.

Facilitation of webinars/online focus group discussing the guide and potential next steps with stakeholders.

Guide presentation at a future IUPAC.
Team 4
Glossary of Terms for Phototherapy

(contact: Francesca Giuntini, F.Giuntini@ljmu.ac.uk)
A glossary of terms for phototherapy (THESAURUS)

- Use of light to treat medical conditions
- Photomedicine
- Relies on endogenous and exogenous chromophores
- Photodynamic therapy with no oxygen
- Use of light to treat mild depression

Terminology current lacks homogeneity
There is more in the package....

- **PDT** (photodynamic therapy)
- **PACT** (photoantimicrobial chemotherapy BUT ALSO photoactivated chemotherapy)
- **PTR** (photodynamic tissue repair, aka PTB, TPB, LATR)
- **CALI** (choromophore-assisted light inactivation aka not immediately therapeutic)
- **PCI** (photochemical internalisation)
- Photopharmacology

Fields of relevance: drug delivery, cosmetic, diagnostic, medicinal chemistry
WHAT: recommend a shared non-equivocal terminology to describe phenomena related to field

HOW: a list of terms will be compiled; significance discussed and established (where ambiguous); glossary draft produced and validated (1-2 iterations?); glossary published.

DELIVERABLES: recommendation for terminology (PAC). “Letter to editors” of relevant journals to maximize dissemination

WHO: Fergus Poynton, Wiktor Szymanski, Francesca Giuntini

Divisions: Chemistry for Health, Organic and Biomolecular, Inorganic, Polymers
Team 3
Symposium: Introduction to Intellectual Property for Younger Chemists

(contact: Jens Breffke, breffke@gmail.com)
IUPAC Project Proposal

**Symposium: Introduction to Intellectual Property for Younger Chemists**

*IUPAC 47th World Chemistry Congress 2019, Paris, France*

Organized by the International Younger Chemist Network (IYCN)

*Task Group Chair: Dr. Jens Breffke*
Proposal


- Speakers will introduce the concept of patent, license, trademark and other legal terms to young scientists.
- Comparing different legal boundaries of significant international legal patent zones (e.g. USA, Japan, China) with focus on comparing to the hosting country (European patent law).
- Scientists who hold successful patents will present their personal experience of the pathway to a patent and beyond

Part B) Publication on this topic in Chemistry International
Proposal

Potential Divisions & Committees:
- COCI (Committee on Chemistry and Industry)
- CCE (Committee on Chemistry Education)

Task Group Members:
- Brandon Presley (YO 2017)
- Jacklyn O’Neil (IYCN)
- Ilya Vorotyntsev (IYCN)

Potential Task Group Members:
- Carolyn Ribes (COCI)
- Jan Apotheker (CCE)
- Mark Cesa (former IUPAC president)

“IUPAC has not been invested in the area of intellectual property but this is a global matter we should take initiative to it!”
-Mark Cesa (2016)
## Proposal

Budget Calculation:

<table>
<thead>
<tr>
<th>Anticipating 4 speakers:</th>
<th>p.person</th>
<th>total</th>
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<tbody>
<tr>
<td>Meeting registration</td>
<td>$ 350</td>
<td>$1,400</td>
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<tr>
<td>Accommodation (2 nights)</td>
<td>$ 400</td>
<td>$1,600</td>
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<tr>
<td>Travel subsidy</td>
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<td>$4,000</td>
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</tbody>
</table>

Requested funding from IUPAC for 2/4 speakers: **$3,500**
Team 2
Maximizing and Modernizing IUPAC Outreach

(contact: Marc Reid, marc.reid15@googlemail.com)
Maximizing & Modernizing IUPAC Outreach

Marc Reid
Marloes Peeters
Juan Aponte-Santini
Navneet Goyal
~3,800

~25,000

~2.7M !!!
1. Survey
   - Q&A sessions

2. Project team meeting
   - Video shoot

3. Video Launch
   - CI publication

Budget = $6,000
1. March ‘18

2. July ‘18

3. September ‘18

Budget = $6,000
Team 1

1. Periodic Table of Chemists Around The World
2. A World Without Chemistry is a World Without...

(contact: Christine Dunne, christine.dunne11@gmail.com)
Group 1: World Chemistry
Leadership Meeting

Sophie Carencio, Christine Dunne, Nnanake-Abasi Offiong, Irene Rodrigues Meizoso, Leonardo Scarabelli, Javier Vela, Ilya Vorotyntsev, Yu Yang
Project 1: Periodic Table of Chemists Around the World

Objectives:

- To increase the participation of early career chemists in the IUPAC
- Create a periodic table: organize it in “jobs” related to chemistry
people who studied chemistry and are now leaders (political...)
Each Element is going to be a Chemist from one of the 194 countries of the World.

**Portrait**

53

Flag of the country

Each person will have a paper with “Chemistry” written in his own language.

When clicking on the portrait, you go to a webpage with the story of the person and his job description.

- Be Aware of gender balance
- Have as many countries as possible
Project 1: Timeline

• We will build a webpage with this periodic table of Chemists around the world
  • At first, all elements are question marks

• Reveal about 10 portraits at launch event, then 1 portrait per week

• People can enter a lottery to win goodies

• Future Plans
  • Interactive table during the meeting
  • Invitation to network at IUPAC GA/WCC
  • New periodic table for every meeting
    • Two year rotations
Project 1: Divisions/Committees

- IUPAC100
- Committee on Chemistry Research Applied to World Needs (CHEMRAWN)
- Committee on Chemistry Education
- Committee on Chemistry and Industry
- All Divisions
- IYCN
Project 2: A World Without Chemistry is a World Without...

Objectives:

- To highlight the need for multidisciplinarity for socio-economic progress
- Create a relatable platform to show the connections between the different fields of chemistry
Cellphone
Polymer Chemistry
Electrochemistry
Nanomaterials
Surface Chemistry (coating)
Photochemistry
Analytical Chemistry (sensors)
Solid State Chemistry
Synthesis
Polymer Chemistry
Electrochemistry
Project 2: Timeline

• Connect with a specialist in each of the fields of chemistry in relation to phone development
• Film short videos of their research
• Publish on the web (Youtube/ IUPAC)
• Future
  • Every 2 years new topic to discuss
  • Can be applied to many different everyday objects
  • Potential next ”withouts”:
    • A nice meal
    • Medicine cabinet
    • Car
    • Textiles
Project 2: Divisions/Committees

- All Divisions
- Interdivisional Committee on Terminology, Nomenclature and Symbols
- IYCN
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