CONTENTS

Contents:

Preface 3

The 42nd FEBS Congress 4
The Congress organizers are aiming for ‘a real scientific celebration for everyone attending’. Here, find out more about the plans, the speakers and the satellite events.

FEBS Press 10
Our four journals share updates on new initiatives and appointments, and highlight recent and upcoming journal content. Try the crossword too!

Skills Forum 16
For the generation of ‘digital natives’ there’s a look at retro literature searching; and for lecturers, a ‘clicker’ approach for effective student learning

FEBS Education 19
A summary of a Latvian workshop, and a glance at teaching/learning activities lined up for 2017

FEBS Community 20
Constituent Society meetings with FEBS National Lectures, FEBS Council elections, and an introduction to new FEBS Executive Committee members

FEBS Advanced Courses 2017 25

Scientific Events Calendar 26

Cover: Jerusalem provides the backdrop to this year’s FEBS Congress. Registration and abstract submission are open, and there’s lots to read about the event on pages 4–8.

About FEBS News: FEBS News is published two or three times a year. An e-newsletter containing a link to FEBS News is sent to subscribers and to FEBS Constituent Societies whenever a new issue is out. This issue as well as all former issues of FEBS News are available online at www.febs.org. To subscribe, simply sign up to the e-newsletter in the News section of the FEBS website. Questions and suggestions about FEBS News should be sent to the FEBS News Editor, Carolyn Elliss (elliss@febs.org).

FEBS website postings: FEBS offers free advertising of academic positions (PhD students, postdocs, etc.) in the Career Opportunities section of the website, and scientific events can be listed in our Conference Calendar. Selected postings may also be included in FEBS News, according to space available. In addition, Constituent Societies of FEBS are able to post news on the FEBS website; see the Our Members section.

Federation of European Biochemical Societies (FEBS):
www.febs.org
A charitable organization advancing research in the molecular life sciences across Europe and beyond
A Company Limited by Guarantee (Number 08239097);
A Registered Charity (Number 1149638);
Registered in England and Wales;
Registered office: 98 Regent Street,
Cambridge, CB2 1DP, UK.
Dear colleagues,

My duties as the Secretary General of FEBS started on 1st January 2017. Let me first thank my predecessor Israel Pecht for his outstanding service to all of us. I am sure that I can do it in the name of all those associated with FEBS and the wider molecular life sciences community. Of note during the nine years of his post, two new journals were nurtured into successful publications (namely Molecular Oncology and FEBS Open Bio), FEBS Press was launched, FEBS events expanded to include ‘FEBS3+’ regional meetings and education workshops, and FEBS celebrated its 50th anniversary.

In addition, I would like to thank here Alan Fersht, who stepped down as FEBS Treasurer this year after nearly five years in the post, and Andreas Hartig, who finished his three-year term as Chair of the FEBS Fellowships Committee. Alan dealt with the difficult issue of an expected drop in FEBS’ journal income (for supporting FEBS programmes such as Fellowships, Advanced Courses and other scientific meetings) as a result of moves within scientific publishing towards open access, and central to this was his strategy of building up FEBS’ reserves. Andreas Hartig updated management of the FEBS Fellowships programme, particularly with his introduction of an online system for Long-Term Fellowships applications. I also thank Frédéric Dardel for chairing the FEBS Executive Committee and Council meetings in 2016.

Sadly, Mathias Sprinzl (Chair, Working Group on Integration) and Jacques-Henry Weil (Chair, Science and Society Committee) passed away during the year, and obituaries appeared in recent issues of FEBS News.

Following these changes and FEBS Council elections in Munich in September 2016, FEBS has started 2017 with new distinguished scientists in key positions of the FEBS Executive Committee, who will be giving freely of their time to serve the bioscience community. They are introduced on pages 22–24 of this issue.

Last year was a turbulent one all over the world, and unfortunately this also touched FEBS. The 41st FEBS Congress, excellently prepared by our Turkish colleagues, had to be cancelled. I was so sorry for them as I know how much effort they put into arranging a top scientific programme in the beautiful location of Kuşadası/Ephesus.

This was very unfortunate but we have to go forward. This year, the 42nd FEBS Congress is being organized in Jerusalem in September. I recently visited the venue, and I can assure you that the place is beautiful and the scientific programme is excellent. The event is featured in this issue on pages 4–8. For 2018, the FEBS Congress is being planned in my own home town of Prague, and I encourage you to save the dates now for this also (7–12 July 2018).

Another disquiet in 2016 was the decision of Britons to leave the European Union. Fortunately in this regard, FEBS is not an EU organization; its Constituent Societies come from throughout Europe as a geographical region, as well as neighbouring countries, and its events and journals have a global reach. The central administration of FEBS and some journal offices remain in Cambridge, while the work of its committees and other journals are scattered across other countries in the FEBS area.

On a more positive note, last year saw the launch of FEBS Press for The FEBS Journal, FEBS Letters and FEBS Open Bio – a new platform conceived by the FEBS Publications Committee and developed with the publisher Wiley to better integrate the journals and other FEBS services. We are delighted that our fourth journal, Molecular Oncology, joined its sister journals on the platform at the start of 2017, and simultaneously it has become fully Open Access. The continued developments of our journals to serve the molecular life science community are illustrated by the updates on pages 10–15.

Dear colleagues, let us work together to advance the molecular and cellular life sciences and to support and inspire each other as scientists. Spread the word about FEBS activities and get involved!

Václav Pačes, FEBS Secretary General
What led you to become the Chair of this year’s FEBS Congress?

As a faculty member at Tel Aviv University, education of the younger generation of scientists is a central objective of my career. For that reason, I have organized nine scientific meetings so far, seven of which were international with an emphasis on student participation. The most recent conference, a FEBS3+ event linking Poland, Ukraine and Israel, was in my opinion a great success. Together with the former FEBS Secretary General Prof. Israel Pecht, I proposed to continue this successful collaboration with FEBS by organizing the FEBS 2017 Congress in Israel, which was accepted by the FEBS Council.

What are the main aims of the scientific programme and how was it developed?

Our main objective is to bring world-class scientists to present their work at the Congress. To this end, Profs Michal Sharon and Amnon Horovitz of the Congress Scientific Committee conducted a survey among the Israeli scientific community in order to identify leading scientists in Europe and elsewhere who could serve as session chairs. The chairs were tasked with choosing enthusiastic speakers who are engaged in pioneering research. The final outcome is a comprehensive programme that includes about 120 speakers who are leaders in their fields.

What do you feel the FEBS Congress offers over smaller focused meetings?

Most of their time, scientists focus on subjects related to their specific field of research and they tend to attend small focused meetings. The FEBS Congress is a unique opportunity for both veteran researchers and the younger generation to gain exposure to a wide range of subjects and to interact with scientists from different areas. It is a special opportunity to obtain a multidisciplinary view of current molecular life sciences, expand one’s knowledge, gain new insights, consider different research directions and initiate new collaborations.

How is this year’s Congress supporting early-career scientists?

Beyond the benefits of the speaker programme and
opportunities to present work as oral presentations and posters (see below), special elements at this year’s Congress aimed specifically at early-career scientists include new evening sessions on practical issues like how to choose a research project and how to choose a laboratory for postdoctoral studies, and a FEBS session on writing and publishing research articles.

Scientists under the age of 35 are entitled to a low registration fee. In addition, early-career researchers presenting work at the event may be eligible to apply for a FEBS Congress bursary. Finally, FEBS arranges a Young Scientists’ Forum (YSF) just before the Congress for postdocs and PhD students and covers most costs for the YSF participants for the Congress as well (see page 9 for more YSF information).

What’s in it for more senior scientists?
Since our focus is the younger generation, we expect that this will be a unique opportunity for senior scientists to contact potential postdocs for their labs, and it will allow them to transfer some of their experience and knowledge to the young scientists. As an international conference with top-level researchers from all over the world, senior scientists will also be able to present their research and discuss their projects with other established researchers who attend the Congress. We expect the conference to be a real scientific celebration for everyone attending.

Why submit an abstract to the Congress?
Scientific meetings constitute a valuable way for scientists to communicate science, enabling them to carry out interactive discussions and obtain direct critical views on their research. We hope that almost everyone will have the opportunity to present work in one way or another during the Congress. As well as the option for poster presentation, researchers submitting abstracts can ask for their work to be considered for oral presentation – as short talks integrated in the Symposia sessions or as ‘speed talks’. Also this year, researchers will have the option to upload their posters onto the Congress website if they wish, for viewing by other delegates for a longer period around the time of the event. Abstracts accepted by the Congress Organizing Committee will be presented on the Congress website and app for the event and collated into an online supplement of The FEBS Journal. The Call for Abstracts page of the Congress website has more details.

What extra events are planned beyond the core scientific programme?
The plenary lectures and symposia form the backbone of the event, but several extra offerings provide further interest. In addition to the career-oriented sessions mentioned above, a new idea this year is early-bird sessions focusing on novel techniques in experimental fields. Furthermore, wider discussion will come from sessions organized by FEBS committees on education, ‘science and society’ and gender issues, and there will be a commercial exhibition for companies to showcase products and services. Scientists involved in molecular life sciences education may also be interested in a satellite IUBMB–FEBS education conference taking place just before the Congress, in Rehovot (see page 9).

What special flavour do you feel Israel lends to this year’s event?
At the scientific level, our aim is to bring the best science to the Congress and to focus on the younger generation. But in addition to exciting science, participants in the Congress will be able to find much else of interest. Israel is a small country with a wide range of unique historical, geological and cultural attractions. In Jerusalem, participants will be exposed to thousands of years of history displayed in numerous museums and archaeological sites in and around the city. Further afield, to the east is the famous Dead Sea with unique physical characteristics and world-renowned healing properties, while to the west is Tel Aviv-Jaffa with city beaches, a beautiful board walk, the historical sites and colourful markets of old Jaffa, and the bustle and endless cultural activities of modern Tel Aviv.

In your own career, are there any conferences you recall as being particularly formative?
The first conference that I attended as a PhD student was actually the FEBS Congress that took place in Jerusalem in 1992. It was an exciting experience and I still remember some of the presentations and scientific discussions!

Key upcoming Congress deadlines
FEBS Young Scientists’ Forum: March 24, 2017
FEBS Bursaries: May 4, 2017
Abstract Submission: May 8, 2017
www.febscongress.org
Plenary Speakers, Symposia Speakers, FEBS Special Session Speakers, Early-Bird Speakers – there’s a lot to choose from at #FEBS2017. Here, we showcase the work of just a few of the leading researchers giving talks at the event, presented in order of appearance in the programme. Enjoy also their words of advice and a little insight into what makes them tick in answers to our quickfire questions.

Visit the Congress website for the long list of invited speakers, more background on the plenary speakers, short introductions to the topics of the symposia and the programme overview.

### Jonathan Weissman

Jonathan Weissman (University of California, San Francisco, USA) studies how cells ensure that proteins fold into their correct shape, as well as the role of protein misfolding in disease and normal physiology. He is also widely recognized for building innovative tools for broadly exploring organizational principles of biological systems. These include ribosome profiling, which globally monitors protein translation, and CRIPSRi/a for controlling the expression of human genes and rewiring the epigenome.


**Congress Plenary Lecture (Opening / FEBS Bücher Lecture):** ‘Controlling the volume of gene expression with CRISPRi and CRISPRa’

**Eureka moment** – The first plates showing that we could convert yeast to the [PSI+] state by ‘infecting’ them with misfolded Sup35 protein, thus providing a formal demonstration of the protein-only prion hypothesis (in 2003)

**Biggest research surprise** – Discovery, working with Onn Brandman and Adam Frost in 2014, of CAT tails: a novel mode of translation that is independent of mRNA or the small ribosomal subunit

**Favourite technique** – Currently Perturb-seq but I am fickle...

**One thing that would help the biosciences** – Better support for young scientists

**What you wish you’d known** – Don’t ignore Wisconsin. Wait, I’m not answering for Hillary...

### Tobias Erb

Tobias Erb (Max Planck Institute for Terrestrial Microbiology, Marburg, Germany) is working at the interface of microbial physiology, biochemistry and synthetic biology. His lab studies and exploits the biochemistry of microorganisms with the aim of paving the way to new biotechnological and sustainable solutions for human needs. Current research in his lab is focused on understanding and engineering novel enzymes and synthetic metabolic pathways for the fixation of carbon dioxide.


**Congress Lecture:** ‘CETCH me if you can: Bringing inorganic carbon into life with synthetic CO2 fixation’

**Research philosophy** – Leave your comfort zone and think outside the box

**Two top tips for group leaders** – You are nothing without your team. Appreciate the diversity of your team members and accept that they will be smarter than you – they are the next generation of scientists!

**Best advice you were given** – If you knew the outcome of your experiment, is it still an experiment?

**Advice you’d give** – Keep on looking for methods to answer your question; don’t only look for questions you could answer with your set of methods

**What you are looking forward to at the FEBS Congress** – I am excited to learn how, in a community effort, we can move biochemistry from a descriptive to a truly synthetic discipline that allows us to build new molecules, designer enzymes, synthetic metabolism and ultimately life 2.0
Anne Simonsen (University of Oslo, Norway) aims to understand the molecular mechanisms involved in selective autophagy. Her current research focuses on the role of lipids and lipid-binding proteins in autophagosome biogenesis and cargo capture during autophagic degradation of protein aggregate or mitochondria. Her lab has developed disease-related in vivo models to study such processes.


**Congress Lecture:** ‘Regulation of autophagy by lipid-binding proteins’

**Research philosophy** – Challenge dogmas

**How your best thoughts arrive** – As Leonard Cohen said: If I knew where inspiration comes from I would go there more often

**One big unanswered question in your field** – Does epigenetic inheritance affect the process of evolution?

**Alternative fantasy career** – Painter, writer, NBA player (yeah right)

**Biggest current challenge** – To keep reinventing myself

Ottoline Leyser (Sainsbury Laboratory, Cambridge University, UK) has been awarded the 2017 FEBS | EMBO Women in Science Award in recognition of her work on the evolutionary, developmental and biochemical mechanisms that enable plants to respond and adapt to environmental changes. She has made important contributions to understanding how a network of interacting long-range hormonal signals control shoot branching plasticity.


**Congress Plenary Lecture (2017 FEBS | EMBO Women in Science Award Lecture):**

‘Dual mode strigolactone signalling and the bud activation switch’
Michael Hall (Biozentrum, Basel, Switzerland) is a pioneer in the fields of TOR signalling and cell growth control, having discovered TOR in the early 1990s. His current research is focused on elucidating the role of mammalian TOR (mTOR) in whole body growth and metabolism, and in mechanisms of evasive resistance to targeted cancer therapies.


**Congress Lecture:** ‘mTOR signaling in growth and metabolism’

**Research philosophy** – Don’t back away from challenges or the unknown

**What motivates you** – Curiosity

**Who inspires/inspired you** – As a student, François Jacob and Jacques Monod

**Two top tips for group leaders** – Be patient and allow lab members to pursue their own ideas

**Surprising fact about you** – I grew up in South America

**What you are looking forward to at the FEBS Congress** – Interesting science in an interesting place

Robert Lefkowitz (Duke University, NC, USA) has made major contributions over four decades to our understanding of the superfamly of G-protein-coupled receptors, the commonest targets for therapeutic drugs. Research by his group is currently focused on structural and biophysical analysis of receptor–β-arrestin interactions.


**Congress Plenary Lecture (Closing / FEBS Datta Lecture):** ‘Seven-transmembrane receptors’

**Lab motto** – When disease takes a holiday we take a holiday

**Eureka moment** – In 1986 when we cloned the beta-2 adrenergic receptor and observed its sequence homology and analogous seven membrane-spanning domain architecture with rhodopsin, the visual signalling protein. We suspected immediately that all G-protein-coupled receptors would be members of this family

**What everyone in your field is talking about** – Biased signalling

**Best advice you were given** – Early in my career a senior scientist who knew I was very frustrated by how slowly my research was going asked me the following question: ‘What’s the difference between an average scientist and an outstanding one?’ He claimed that the answer was that for the average scientist only 1% of their experiments work. But for the world-class scientist it could be as high as 2%. I have often repeated this to my own trainees. Although I have become convinced that the 2% figure is too high

**Alternative fantasy career** – Produce manager in a grocery store (I am a vegan)

www.febscongress.org
The 17th FEBS Young Scientists’ Forum

“It is our great pleasure to invite you to the 17th FEBS Young Scientists’ Forum (YSF), which will take place in conjunction with the 42nd FEBS Congress in Jerusalem.

The YSF will be held at the Ramat Rachel Resort, Jerusalem, from September 7th to 10th, 2017. The resort is located in south Jerusalem overlooking a surrounding area with stunning beauty. Young scientists dedicated to excellence in science will organize the YSF 2017. It will provide a platform for PhD students and postdocs from the FEBS Constituent Societies to get together to present their work either as short oral presentations (selected from abstracts), or as posters, in a friendly international atmosphere. The YSF will also include keynote lectures by leading researchers and a roundtable event on skills required to build a strong basis for a successful scientific career. Together with its exciting scientific program, the YSF will include a variety of social events and will be a valuable opportunity for networking. Find out more in the YSF section of the Congress website.

About 100 outstanding young scientists will be selected to take part in the YSF. FEBS provides financial support to the selected participants via a YSF grant that covers FEBS Congress registration, accommodation for both the YSF and Congress, and most travel expenses. Details on how to apply, including eligibility criteria, can be found on the YSF Applications page.

The 17th YSF Organizing Committee is very happy to invite young scientists from across the FEBS area to join us for this great opportunity to meet colleagues, create collaborations and make lasting friendships.”

17th YSF Organizing Committee: Maayan Pour (Chair), Geula Hanin, Elya Dekel, Roy Kalfon, Maayan Korman, Gamze Tuna

Chair, FEBS Working Group on the Careers of Young Scientists: Prof. Claudina Rodrigues-Pousada

YSF application deadline: March 24th, 2017

New Horizons in Biochemistry & Molecular Biology Education

This education conference, organized jointly by the International Union of Biochemistry and Molecular Biology (IUBMB) and FEBS, will be held in Rehovot, Israel just before the 42nd FEBS Congress. It aims to provide a think-tank setting for ideas to improve the current approach to teaching biochemistry and molecular biology, and to generate a series of recommendations to be shared with the educational community.

The programme of the conference consists of plenary lectures, mini-symposia, workshops, and poster sessions, covering significant topics on biochemistry and molecular biology education, from the level of primary and secondary school, going through BSc, MSc, PhD and postdoctoral levels.

For more information, see the event website: www.weizmann.ac.il/conferences/NHBMB2017/
FEBS has a long history of supporting scientists in the early stages of their careers, through schemes such as its pre- and postdoctoral Fellowships, the FEBS Young Scientists’ Forum, FEBS Congress Bursaries and FEBS Advanced Courses Youth Travel Fund grants. To complement these activities, three FEBS Press journals – The FEBS Journal, FEBS Letters and FEBS Open Bio – also award poster prizes at scientific meetings. Prizewinners receive a cash award and a certificate from the journal. Details of their posters or talks are also featured in a special section of each journal’s website.

FEBS Open Bio awarded two prizes in 2016, to Mourad Bekhouche (University of Liège and University Claude Bernard Lyon) and Inmaculada Pérez-Dorado (Imperial College London). In 2016, FEBS Letters introduced the FEBS Letters Poster Prizes, which were awarded at six international meetings. Encouragingly, a fruitful exchange during poster selection at the 2016 Hunter Meeting led to publication in FEBS Letters of the data presented on the award-winning poster. The journal is planning to increase the number of poster prizes in 2017. The FEBS Journal awarded 39 prizes at 22 international meetings in 2016, and will expand the scope of the prizes next year to include short talks as well. Indeed, the journal has already agreed to award 26 poster or short talk prizes at 13 international meetings to be held in 2017. All four FEBS Press journals (including Molecular Oncology) will be awarding poster prizes at the 2017 FEBS Congress to be held in Jerusalem. Prizes from FEBS Letters and The FEBS Journal are usually awarded by members of the journals’ diverse editorial boards, so do keep an eye out for our editors at your next meeting!

What makes a poster ‘prizeworthy’? A piece entitled ‘What makes a good conference poster?’ in FEBS News July 2016 offers excellent tips, including picking a project that is nearing completion to maximise feedback on the dataset, and developing an inspiring layout for your poster. Even if your research is in its early stages, don’t underestimate the importance of a clear and inviting talk that summarises your preliminary findings. As FEBS Publications Committee member Prof. Aristidis Moustakas says in the FEBS News piece, ‘Being humble is important but so is showing some vigour and enthusiasm, and usually more senior scientists welcome invitations to an entertaining summary of a good poster’. Thinking carefully about the data that you want to present, then getting creative with your layout and practising your poster talk will maximise your chances to win a FEBS poster prize.

We’re delighted to be able to recognize the hard work and key contributions of early-career scientists via these poster and short talk prizes, and look forward to seeing the prize-winning research published.

FEBS Press journal teams

(left) Veronika Ilkow (King’s College London, London) proudly displays the FEBS Letters Poster Prize, which she received for her poster entitled ‘Engineering and molecular dynamics simulations of calcium binding sites in the low-affinity IgE receptor CD23’; (right) Amira Zine El Abidine (Institut Pasteur de Tunis, Université Tunis El Manar, Tunis and International Centre for Genetic Engineering and Biotechnology, Trieste, Italy) receives The FEBS Journal poster prize from Editor Lawrence Banks for her poster entitled ‘Biochemical and biological differences of HPV16 E7 naturally occurring variants and changes in their oncogenic potential’.
The new year is well underway and we in The FEBS Journal’s editorial office are enjoying seeing the new crop of manuscripts come through our submission site. We’re engaging with manuscripts now more than ever before, especially as they near acceptance. We work closely with authors to ensure that their data are presented in a clear and engaging manner, and that the title and abstract will appeal to a broad audience. This is especially important given that a vast majority of readers now find our content via search engines (PubMed, Google, Bing, and the like). We want to ensure that the papers published in The FEBS Journal reach the audience that they deserve. We were also pleased to be included in the top quartile of Biochemistry and Molecular Biology journals as determined by Thompson Reuters. We look forward to building on this success and bringing exciting primary research and timely, authoritative review articles to our readers in 2017.

Special Issues and Minireview Series
Indeed, we’re very excited about the Special Issues and Minireview Series that we have planned for this year. The first issue of 2017 contained a Minireview Series on Matrix Pathobiology, coordinated by Editorial Advisory Board member Nikos Karamanos. The three pieces in the series discussed key extracellular matrix proteins and their roles in cancer, inflammation and autophagy. We’re delighted that the two Special Issues that we published in 2016, on Cell Death Control and CRISPR/Cas9 Gene Editing, were so positively received by the community (see Box). Later this year, we will publish Special Issues on Proteases (coordinated by Matthew Bogyo) and Inflammation and Cancer (coordinated by Alberto Mantovani). We also have a healthy pipeline of State-of-the-Art Reviews, Structural Snapshots and Viewpoints to keep readers educated and informed throughout the year.

Discoveries in Context
Have you ever wished that you could grab a drink with award-winning scientists and pick their brains about the twists and turns that led to their big scientific breakthroughs? If you need inspiration while you’re waiting for your chance to meet Ada Yonath or Aziz Sancar, take a look at our Discovery in Context Reviews, where leading scientists provide their personal and historical perspectives on major scientific advances. In 2016, we published an excellent piece from Francisco Mojica and Francisco Rodriguez-Valera on the discovery of CRISPR in archaea and bacteria. This year, we have published articles from Sir John Gurdon on the very first nuclear transplantation experiments and John Hardy on the discovery of Alzheimer’s Disease-causing mutations in the APP gene, with contributions from Michael Hall, Keith Burridge, and many other eminent scientists planned.

Words of Advice
In 2016, we launched a new article format called ‘Words of Advice’. The inaugural piece, written by Editorial Associate Rita Gemayel, provided thoughtful tips for writing a compelling manuscript. We’re delighted that it has been widely downloaded and shared. If you haven’t yet read it, do check it out – perhaps even veterans of the peer-review process might glean a useful trick or two. This year, we’ll be touching on other issues facing early-career researchers. In the second piece in the series, Rita sought advice from three scientists in different stages of their academic careers, a founder and CEO of a start-up company, and a science policy fellow, to give readers an inside track into what skills and attributes are necessary for success in these different positions. Although each career

Top 10 downloaded papers of 2016 in The FEBS Journal

<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potential pitfalls of CRISPR/Cas9-mediated genome editing</td>
<td>Peng R, Lin G and Li J (2016)</td>
</tr>
<tr>
<td>Design, execution, and analysis of pooled in vitro CRISPR/Cas9 screens</td>
<td>Miles LA, Garippa RJ and Poirier JT (2016)</td>
</tr>
<tr>
<td>The discovery of CRISPR in archaea and bacteria</td>
<td>Mojica FJM and Rodriguez-Valera F (2016)</td>
</tr>
<tr>
<td>Targeting regulatory T cells in tumors</td>
<td>Liu C, Workman CJ and Vignali DAA (2016)</td>
</tr>
<tr>
<td>Cell death induced by endoplasmic reticulum stress</td>
<td>Iurlaro R and Muñoz-Pinedo C (2016)</td>
</tr>
<tr>
<td>Stacking up CRISPR against RNAi for therapeutic gene inhibition</td>
<td>Haussecker D (2016)</td>
</tr>
<tr>
<td>Role of chaperone-mediated autophagy in metabolism</td>
<td>Tasset I and Cuervo AM (2016)</td>
</tr>
</tbody>
</table>
requires a slightly different skill set, there is quite a bit of overlap between these disparate professions – chiefly, the importance of a strong, supportive mentor and passion for your chosen career. Please get in touch at febsj@camfebs.co.uk if there’s an issue that you’d like to see covered in these pieces!

**Focusing on primary research**

Seeing such excellent editorial and review content in our pages is extremely gratifying. However, we would be remiss not to mention the outstanding primary research manuscripts that form the backbone of the journal. Perusing our 2016 Editor’s Choice papers reveals many gems, including work from Braden and Neufeld on a role for a Ulk3 orthologue in Atg1-independent autophagy and Guddat and colleagues on the structure of the Mycobacterium tuberculosis ketol-acid reductoisomerase (KARI) enzyme, among other excellent content.

**FEBS Letters**

*FEBS Letters* has just celebrated its first year with its new publisher, Wiley, and we can now take a step back and look at how the journal evolved over the past 12 months. For those who believe that looks are everything, we launched a new website, modernized our logo and spruced up our cover. Riding the wave of renewal, we implemented a new editorial submission system, we refreshed our Author Guidelines and added helpful information regarding our Editorial Board Members and the Editorial Staff.

**New article types**

We have also been working hard to develop new content for the journal. Apart from the traditional Research Letters, Reviews and Hypotheses, *FEBS Letters* now publishes Communications, Commentaries and In a Nutshell articles. Communications are short, peer-reviewed articles that expand or comment on previously published papers. They contain new experimental data that provide a novel perspective to previously published results, possibly indicating caveats and discrepancies, or offering alternative interpretations. Commentaries, on the other hand, are invited contributions that discuss and put into context recently published research. Nutshells are concise review articles that present either the historical background or the state of the art of a field of general interest to a broad and unspecialized audience. We have more article types brewing in our pot, and we encourage you to keep a look out for them. You may find them inspiring!

**FEBS Letters and the Nobel**

A highlight of 2016 was most certainly the assignment of the Nobel Prize in Physiology or Medicine to Prof. Yoshinori Ohsumi, for his outstanding work on Autophagy, part of which was published in *FEBS Letters*. In his honour we put together a Virtual Issue collecting some of his exceptional articles published in *FEBS Letters*, and to Ohsumi and Autophagy we have dedicated our first In a Nutshell article, authored by his close collaborator and former *FEBS Letters* Academic Editor, Prof. Noboru Mizushima.

**Promoting your science**

Throughout the year, we have been promoting some of the most interesting articles published in *FEBS Letters* in several ways. We select one or two articles from each issue to be published up front, at the top of the table of contents, as Editor’s Choice. We also write highlights featuring noteworthy papers, which are showcased on our homepage. We further promote articles reporting significant findings on Twitter, and we make press releases for those that are most likely to attract general interest. By giving the published article as far a reach as possible, we hope to showcase our best papers as well as render our authors a helpful service. We feel
that our Editor’s Choice articles are at the forefront of scientific discovery and of wide interest. As a fun way to encourage our readers to browse through them we created a Crossword puzzle (also to be found on our homepage in the News section), in which the clues are in some way linked to our 2016 Editor’s Choice collection. Why not try it out over your lunch break?

The 2016 FEBS Letters Crossword

ACROSS
7. Deficiency of giant platelets
10. Can be small or giant
11. The cellular post office: packing, unpacking and parcel decorating is usual business all year round
12. Brain cells on fire upon opioid encounter
13. Teleost for crossing the road
16. Popular synthetic narcotics
17. Regulates summertime decorating is usual business all packing, unpacking and parcel
18. Sounds like an ancient Greek God and tethers the ER to mitochondria
19. Can now be sequenced
23. Traffic warden on some regions of Africa
24. Egg production route
25. You’ve got to mind it in the shuttle bus
26. Electrifying transport in light-indulging bacteria (abbrev.)

DOWN
1. Family self-controlled through phosphorylation to its CYP26B1 partner
2. Pathway blocked by WDR26
3. German grandpa not needed for cristae junction building
4. Fungus good for both experimenting and baking bread
5. The cellular bitcoin to be taken by hand and delivered
6. A subtype thereof needs to be experiment and baking
8. Family of cunning foxes with a taste for mRNAs
9. At the heart of chlorophyll
10. Can be small or giant
13. Teleost for crossing the road
14. Cool journal for all things biochemical (initials)
15. Protein ringing out in the Memphis sky
16. Popular synthetic narcotics
18. Sounds like an ancient Greek God and tethers the ER to mitochondria
19. Can now be sequenced
20. Membranes that love real
21. Deadly virus devastating
22. Ticket for the nuclear shuttle bus
25. You’ve got to mind it in the London tube
26. Electrifying transport in light-indulging bacteria (abbrev.)

A selection of the FEBS Letters 2016 Editor’s Choice articles, to assist crossword solving (for the full list, click here)

- Barrera M et al (2016) OPA1 functionally interacts with MIC60 but is dispensable for cristae junction formation, *FEBS Lett* 590, 3309–3322
Call for content
For 2017 we have plans to further nurture the quality as well as the diversity of scientific articles in FEBS Letters. To this end, we are announcing a call for content for strong articles that focus on Metabolism and Immunity, to be considered for publication within a Special Issue that will be released later this year. Do not miss this unique opportunity to see your research published back-to-back with Reviews authored by some of the most prominent scientists in the field!

For those readers who are most interested in specific areas of research, we make topical collections of articles recently published in our journal. These collections are called Virtual Issues and can be found here. Virtual Issues are open and can be updated. We would be delighted to add your paper reporting significant findings to our collections. Our most recent Virtual Issue is on DNA Damage and Repair. Do submit your work to FEBS Letters if this is your field of interest.

Cover contest!
In 2018, it will be the 50th anniversary of FEBS Letters. We have exciting plans for its celebration, which we will inform you about in due time. To start with, we thought that a nice way of adorning FEBS Letters for the celebration would be to have exceptional issue covers throughout the year. We have therefore initiated a cover contest open to all – authors and readers alike. We encourage you to send a cover proposal of scientific scope by email to the FEBS Letters Editorial Office. The contest will be held open until December 1st 2017. So go ahead and unleash your imagination, think creatively, and send us your best scientific artwork!

Daniela Ruffell
Editorial Manager, FEBS Letters

2017 is looking to be an exciting year for FEBS Open Bio. We saw a surge in submissions in the second half of 2016 and so are expecting to publish many of these articles in 2017. With the move to a new publisher, Wiley, last year, our articles are now formally published in monthly issues, offering a chance for one paper from each issue to feature an image on the cover. However, papers are still citable (using the DOI) from the moment the accepted article is posted a few days after acceptance. We also lavish attention on article titles and abstracts, to ensure they are in good shape for discovery by search engines. All FEBS Open Bio articles are open access, allowing the reposting of the final version of record in other repositories such as PubMed Central, which ensures the widest possible audience.

We are planning a new journal section, on Education in the Molecular Life Sciences, in partnership with the FEBS Education Committee. Angel Herráez and Luciane Mello have been appointed as Section Editor and Editor of this new section, respectively, which will open for submissions on 1 April 2017. Look out for more details on the journal’s website www.febsopenbio.org.

We welcome Angel and Lu to the FEBS Open Bio team, as well as Kerry Dresser, who has joined the editorial office this year as Editorial Assistant.

Mary Purton, Executive Editor, FEBS Open Bio

FEBS Open Bio: Education Editors

Chemistry graduate Angel Herráez received his PhD in Biochemistry in 1990 at University of Alcalá where he now holds a tenured position. After experimental research, including a postdoc in the MRC Clinical Research Centre (UK), he focused on (bio)molecular structure visualization and the development of interactive resources for both instructors and students. Angel is author of two editions of a successful book on Molecular Biology and Genetic Engineering. He has served for 10 years on the Editorial Board of Biochemistry and Molecular Biology Education, coordinated the Education Group of the Spanish Society of Biochemistry and Molecular Biology, and is a member of the FEBS Education Committee.

With an MSc from the University of Campinas, Brazil and a PhD from the University of Leeds, UK, Lu Mello moved to the University of Liverpool in 2005. She has published over 40 research articles in biochemistry and bioinformatics but in 2012 decided to direct her career towards teaching and learning. She has won several grants for teaching innovation, and has three awards for her teaching activity, including the prestigious Sir Alistair Pilkington Award for Teaching Excellence (2015/16). Her educational research interest focuses on student–staff partnership, student engagement, and employability.
and apply the same rigorous standards of peer review and acceptance criteria as before. To ensure that the editorial board continues to cover as many research areas in the field as possible, we have appointed four new members to the Editorial Board: Christopher Lord (The Institute of Cancer Research, London), Daniel Peeper (The Netherlands Cancer Institute, Amsterdam), Stefano Piccolo (University of Padua School of Medicine, Padua) and Joan Seoane (Vall d’Hebron Institute of Oncology, Barcelona). Their expertise, together with that of the rest of the Editorial Board, will help shape the future development of the journal.

We look forward to receiving your manuscripts.

José Moreira  
Managing Editor, Molecular Oncology

Top downloaded FEBS Open Bio papers of 2016


Top cited Molecular Oncology papers of 2016


As 2016 came to an end, so did a decade long, fruitful collaboration with our previous publisher, Elsevier. During this time, the journal was created and shaped into what it is today – a high-quality journal and a household name among cancer researchers. From January 2017, *Molecular Oncology* joined the other FEBS journals on the FEBS Press platform and its publisher Wiley. This change was not simply an exchange of publisher but it rather brings with it a more fundamental change to the journal: from January 2017, all articles in *Molecular Oncology* are published under the Creative Commons Attribution License (CC BY), allowing readers to access the journal irrespective of speciality, host institution or location. In other words, *Molecular Oncology* has become fully Open Access in 2017, a development that we are very excited about.

The journal will continue to highlight new discoveries, approaches, as well as technical developments, in basic, clinical and discovery-driven translational cancer research. As has been the case before, the journal will give priority to work that significantly advances our understanding of disease processes leading to human tumour development and establishes novel concepts of clear clinical significance in diagnosis, prognosis and prevention strategies. For more information on journal policy, click here. The transition to the FEBS Press platform also meant that the journal has had a makeover, with a new cover design, and a new website.

Needless to say, the journal will remain the high-quality publication researchers have come to value, FEBS News February 2017
Riding the wave of new scientific papers: vintage search methods also have value

Johannes Buchner

We live in great times. In principle, we have the entire scientific literature at our fingertips. PubMed is an efficient and very well-managed database that responds in seconds to our bibliographical requests and spills out all articles mentioning our search term. Thus we can stay in control of the ever-increasing wave of scientific publications. Isn’t that just perfect? Well, of course it is fantastic – but there are also problematic issues. Therefore, I argue that especially graduate students and postdocs should consider integrating a vintage element into their literature searches.

Let’s look back at how things were in primordial times, before PubMed and the internet were present. How did you find out about literature then? Well, the procedure was complicated and required a substantial amount of effort. You had to go to your institutional library and look through big books of biological abstracts that summarized the citation details and abstracts of articles published in the past week, indexing some keywords. Furthermore, there were services that published the table of contents of all journals in a given field in weekly paperbacks. This was the hardware available a few decades ago. It meant that you had to spend hours in the library going through these books, finding articles of interest, making copies of them from the printed journals or sending out postcards asking for reprints – a significant investment of time and effort. And still you could not be sure not to miss a relevant publication by chance. This is a scenario that is certainly hard to imagine if you are a graduate student or postdoc nowadays. So everybody would agree that things have changed for the better.

Today, we can spend much less time on these issues and we can be sure to obtain a complete bibliographical account on a specific search term. But exactly this is the problem. The current system favours gathering information on specific terms and narrow topics because if you don’t follow this strategy, you will be flooded with thousands of hits. We have learned to live with this and it works very well. For example, in my lab, if we come across a new protein in the course of our studies, my students come back swiftly with a thorough and deep analysis of the literature on precisely this protein. We can immediately build on this and without delay incorporate the findings into our research program. However, I want to argue that we lost something important on the way: the comprehensive screening of new publications.

The good old times?

This was an intrinsic component of the pre-internet paper-based system where you had to read the title of each article to identify the relevant ones. I vividly remember that during my graduate studies I found many articles that provided important information for my project or new directions, which I would never have come across nowadays when just searching for keywords. This open approach to searching the literature does not seem to be popular anymore – on the one hand, because it is no longer needed to obtain specific information and, on the other hand, because the expansion in the production of scientific literature has been so enormous in the past decades that is seems a futile endeavour to try to stay on top in general. The latter is certainly true. Probably a million papers are added each year in the molecular life sciences. However, focusing on search terms only creates an information bubble and detaches you from scientific progress in your broader field. I think the ‘PubMed-only’ generation faces the problem of drifting away from developments in the broader area of the molecular life sciences. This goes along with the limiting tendency of many scientists to prioritise scientific meetings on focused topics over conferences covering general areas.
SKILLS FORUM

The best of both worlds?
The question is whether there is an option in between the old school and new school of screening new publications. My suggestion is to integrate elements of the two worlds: the ‘manual’ screening of tables of content and the focused keyword search. If you are a young scientist, reading tables of contents probably seems anachronistic as most of the articles encountered are far away from what you are working on. But this is exactly the point of doing it. If you regularly scan the contents of a number of biochemical and general interest journals (say a dozen) you will get a sense for the current state of research, of new developments and advances as well as disputes. This implies of course that you don’t stop at reading titles of papers but also some abstracts and at least one ‘general interest’ paper per week, as a rule of thumb. This will allow you to think outside the box, look at your own project from a different perspective and, in the best of cases, get new ideas for your own research. Think about it! At first glance, you may consider this is a waste of time compared to reading one of the many papers on the very protein you work with.

Of course, you should not ignore the literature close to your project but invest some extra time to get a feeling of the bigger picture.

You could also argue that there are a number of new possibilities to keep track of new publications such as blogs, aggregation sites on certain topics, or digests of the literature by peers, and there is Twitter, Facebook and so on. These second-hand options are all useful but, to my mind, none of them can replace your own efforts. At an early-career stage, you may be still searching for ‘your’ topic and personal approach to science and therefore need to develop a broader perspective. The ‘vintage’ contents-scanning approach is a very useful component in this endeavour.

Johannes Buchner
Chemistry Dept, Technical University of Munich, Germany
J.B. is the FEBS Chair 2017

More tips on tracking the scientific literature
Pain, E. (2016) How to keep up with the scientific literature, Science Careers, DOI: 10.1126/science.caredit.a1600159

Clicking your way to flipping your class

Quentin Vicens

‘Flipping the classroom’ has become a popular endeavour among faculty and instructors – it’s a refreshing and most welcome way to change the way we teach. In the process of flipping a class, especially for the first time, ‘clicker’-based peer instruction represents a powerful solution to engaging students in order to promote learning.

Why does flipping a class make sense? In a nutshell: students don’t need an instructor to access content and ‘go through the book chapters’, especially when the internet is available 24/7 – but they do need an instructor to help them digest, process, criticize, and know how to apply that information. From a ‘sage on the stage’ in the traditional lecture, the instructor turns into a ‘guide on the side’, whose job is not merely to deliver complicated matter but to promote learning and ensure mastery of key concepts.

Easier said than done, naturally. And for one thing, preparing slides and talking for an entire lecture without any interruption was convenient for the lecturer. How could you start flipping your approach to lecturing? Prof. Eric Mazur from Harvard University has an answer for you: ‘peer instruction’.

We have all experienced blank stares as a response to a typical ‘do you have any questions?’ at the end of our lectures. We have also sometimes been puzzled by the failure rate in some of our classes, even though we explained complicated matter in the clearest way possible. As it turns out, students often have many questions, but they don’t dare to ask them in front of the class. They may also not be aware that they actually don’t understand a concept. And since they expect similar questions on their exam to the ones they have seen in class, why should they dig any deeper?
Clicker-based peer instruction: the benefits
As Eric Mazur demonstrates (watch one of his YouTube lectures), a way out of that scenario is to ask students a multiple-choice question on a key concept you expect them to have learned, for example at the start of a class. Tell your students to think about their answer in silence, before they cast their vote using a clicker – a hand-held device about the size of a simple calculator or small remote. The results from the vote can be immediately displayed on the projection screen for everyone to see. This form of instant and anonymous feedback benefits everyone. The instructor knows on the spot whether it makes sense to continue lecturing with a more advanced topic, or to resort to another strategy for promoting learning of the underlying concept. The students are empowered from seeing how they are doing in comparison to the rest of their class.

But that is not even the best part yet. The sweet spot is when you get 50±20% of the votes for the correct answer (the vote count does not matter if you asked an open question). In that case, it makes sense to not show the results of the first vote until students have voted a second time, after discussing with a neighbour who did not pick the same answer. Here, the discussion with a peer is in fact what is essential to promote learning: students are more likely to understand why they are wrong when hearing the explanation from a classmate who just learned the same concept recently, rather than ‘from the professor in front of the class’ who learned it a long time ago. After that second vote, the score generally goes up, indicating that peers have effectively instructed each other.

Repeat that strategy every 15–20 minutes of your lecture, for all the major concepts, and you will have at least ensured that a majority of students have learned what you expected them to learn. You will also have lectured at their speed and not yours, slowing down when needed, or sometimes moving faster (for example when 80% of the students voted for the right answer during the first vote). What happens to the content you would need to ‘sacrifice’ from the time-budget of your lecture in order to ask those clicker questions? A common option is to reformat it to assign it as reading, but you may eventually find out that some is dispensable anyway. At this point, as Eric Mazur noted already over 20 years ago, you have ‘inverted’ or ‘flipped’ your class.

Other approaches exist to flip a class. But peer instruction is a relatively plain and effective way to get started. Why not try it at the end of your next lecture? Just take for example one of your best questions from a past exam. You would not even need clickers right away (see below for the link to a manufacturer’s website), as you could use colour cards, just like they did in a class in India.

Managing students
Students always react positively when exposed to peer instruction for the first time. To carry that same spirit on in the long run, there are many rules and tricks, such as writing engaging clicker questions or managing class discussions around the various possible choices (see below for some practical resources). To limit student resistance, for example from their perception that when you are not lecturing you are not teaching, remind them regularly that learning has to happen in their brain and not in yours. And by definition, that will require some effort (more so than taking notes and perhaps skipping problem solving on homework assignments...). That effort may rapidly be offset by the student awareness that ‘clickers are helping them’, leading to the impression that, with (clicker-based) peer instruction, learning happens almost automatically. Prepare yourself to be surprised!

Quentin Vicens
Université de Strasbourg, CNRS, Architecture et Réactivité de l’ARN, Strasbourg, France; qvicens@unistra.fr
Q.V. is also a Distinguished Educator with Turning Technologies.

References

Further information
Clicker resources at the Carl Wieman Science Education Initiative: http://www.cnwsei.ubc.ca/resources/clickers.htm
Building students’ knowledge one click at a time: http://ojs.statsbiblioteket.dk/index.php/lom/article/view/7285/6602
Turning Technologies: https://www.turningtechnologies.com/
FEBS Education

FEBS Riga Workshop on Biochemistry and Molecular Biology Education

Hosted by the Latvian Society of Biochemistry and Molecular Biology
24–25 November 2016
Academic Center of Natural Sciences, University of Latvia

This workshop, coordinated by Kaspars Tars, President of the Latvian Society, arose from the FEBS Working Group on Integration visit to Riga in 2014. A FEBS Education Committee team of Frank Michelangeli, Ferhan Sagin, Keith Elliott and Gül Güner Akdoğan ran sessions on teaching practice and on skills for early-career scientists, according to topics selected by the Latvian Society. The around 45 participants included faculty members and young scientists from Latvia, Lithuania, Belarus and Turkey.

On the first day, following introductions from K. Tars and G. Güner, sessions covered ‘Key Knowledge and Skills for Molecular Life Scientists’ (F. Michelangeli), ‘Active Learning Methods’ (with examples of problem-based learning presented by K. Elliott and by G. Güner, and a vivid demonstration of team-based learning by F. Sagin), ‘Assessment and Feedback’ (F. Sagin) and ‘Criterion-vs Norm-Referenced Assessment’ (K. Elliott). Small-group discussions on each of the topics ensued. A session on ‘The Use of Educational Technologies’ (F. Michelangeli) enthused the participants.

The second day began with a session on ‘Research in Undergraduate Education’, where F. Michelangeli shared his experience in engaging students in research in a bachelor’s degree programme, and G. Güner presented a medical curriculum with an emphasis on research. The afternoon session turned to focus on developing the skills of young scientists, with talks on ‘How to Write a Manuscript’ (F. Michelangeli), ‘How to Write a CV’ (K. Elliott), ‘Funds and Programmes’ (K. Elliott), and ‘How to Make the Best of your PhD’ (F. Sagin).

The participants ranked the Workshop as excellent and remarks included: “Brilliant! Got useful ideas at both study programmes and course level” and “Valuable and inspiring information”.

Our thanks go to the Latvian Society of Biochemistry and Molecular Biology for their warm hospitality and interest in biochemistry and molecular biology education.

Gül Güner Akdoğan
Chair, FEBS Education Committee

Upcoming FEBS Education Events 2017

2nd FEBS ‘Ambassadors on Education’ Meeting; Paris, France; April 7–8, 2017
An ‘Education Ambassador’ from each FEBS Constituent Society is warmly invited to share progress and ideas on molecular life sciences educational issues across Europe. Societies who have not already done so, should contact gul.guner@deu.edu.tr to designate their Ambassador.

FEBS Education Workshop; Kaunas, Lithuania; June 26–27, 2017
The workshop will take place at Vytautas Magnus University, hosted by the Lithuanian Biochemical Society. For more details, please contact the coordinator, Prof. Vida Mildaziene: v.mildaziene@bs.vdu.lt

IUBMB–FEBS conference: New Horizons in Biochemistry and Molecular Biology Education
Rehovot, Israel; September 5–8, 2017; www.weizmann.ac.il/conferences/NHMB2017/
This conference is devoted to advancing biochemistry and molecular biology education at all grade levels, and takes place just before the 42nd FEBS Congress in Jerusalem. The event is also featured on page 9 of this issue of FEBS News.

Education sessions at the 42nd FEBS Congress; Jerusalem, Israel; September 10–14, 2017
FEBS Special Session on Education – Practicals in Molecular Life Sciences Education
FEBS Special Session on Research and Career Skills – How to Write and Publish a Scientific Article
For more details, click here. Posters on ‘education’ are also welcome at the FEBS Congress: see the Abstract Topics page.
FEBS Constituent Society meetings: FEBS National Lectures

The Russian Biochemical Society, which has several thousand members, has a history closely bound to the names of Alexander Oparin, Alexander Palladin, Vladimir Engelhardt, Alexander Braunstein, Andrey Belozersky and Sergey Severin. Scientific schools established by these scientists are well recognized internationally and their students and followers work in Russia and labs around the world. The Society hosted the FEBS Congress in 2013.

The 5th Congress of the Russian Biochemical Society, arranged jointly with the 5th Congress of Physiological Societies of the Community of Independent States, CIS (former Republic of Soviet Union) in Dagomys, Sochi from 4th to 9th October 2016, was an important event for Russian researchers working in the life sciences. Featuring 23 plenary lectures and around 550 presentations across 83 special symposia, it attracted over 1600 researchers from different regions of Russia as well as welcoming over 80 prominent scientists from countries of the former Soviet Union, Western and Eastern Europe, USA, Japan and China. Among the plenary lectures was a FEBS National Lecture delivered by Prof. Israel Silman (Weizmann Institute of Sciences, Rehovot, Israel) on ‘Structure–function relationships in the synaptic enzyme acetylcholinesterase: a target of nerve agents, pesticides, and anti-Alzheimer drugs’. The lecture was devoted to the development of new drugs to tackle neurodegeneration and the design of antidotes toward nerve agents, and was very well received by the audience.

One of the hallmarks of this meeting was its multidisciplinary nature. The wide range of topics encompassed molecular medicine, biocatalysis, quantum mechanics/molecular mechanics in biochemistry, structural biology (including an EMBL–SyncFELmed Symposium), bioengineering, computational modelling, bioimaging, omics technologies, immunology, neurobiology, plant biochemistry, ‘ribosomology’, peptide chemistry, nucleic acid biochemistry and chemistry, and agro, pharma and food biotechnology. The fusion of such different fields offered participants, and young scientists in particular, new perspectives and potentially new research directions. It is not possible to do justice to the program here, but two special items to highlight were the opening Plenary Lecture ‘How to model the action of complex biological systems and to advance molecular medicine’ from Arieh Warshel, the 2013 Nobel Laureate in Chemistry and one of the initiators of quantum biochemistry, and a session celebrating the 90th birthday of Professor Dmitry Knorre, the patriarch of Russian biochemistry of nucleic acids, with lectures on nucleic acid analogues and therapeutics. More information on the program can be found here.

The Russian Biochemical Society is very focused on supporting young scientists in various scientific activities. To encourage their participation in this meeting, the organizers set a low registration fee for them and arranged three special sessions for short oral presentations delivered by young investigators. About 600 members under 33 years joined the event, and 150 short talks were delivered.

The Russian Biochemical Society expresses its gratitude for great help in organizing the joint forum to Professor Revaz Sepiashvili, President of the CIS Union of Physiological Societies.

Alexander Gabibov (Shemyakin & Ovchinnikov Institute of Bioorganic Chemistry, Moscow, Russia)
President, Russian Biochemical Society
The XIX meeting of the Portuguese Biochemical Society was held at Guimarães, an emblematic and beautiful city considered the cradle of Portugal, from 8th to 10th December 2016.

The meeting was attended by 253 registered participants from six different countries, including Portugal, Brazil, Spain, Sweden, UK and USA. Of these, the majority were MSc and PhD students, indicating that young scientists have a major interest in biochemistry and molecular biology. A total of 215 communications were presented, including 5 plenary lectures, 58 oral communications and 152 poster presentations.

The scientific programme was organized around several symposia, covering a wide range of attractive cutting-edge topics in the area of molecular biosciences including Molecular Neurosciences and Disease, Structural Biology and Molecular Modeling, Plant Cell Biology and Biotechnology, Toxicology and Environmental Biochemistry, Computational Biochemistry, Cell Signalling and Regulation, Aging and Cell Death, Genomics and Gene Expression, New Drugs and Improved Therapies, and Open Innovation in Pharma Industry.

Prof. Giovanni Mann from King’s College London delivered a FEBS National Lecture entitled ‘Nrf2-regulated redox signaling in vascular cells in health and disease’. His inspiring talk addressed the role of the redox transcription factor nuclear factor erythroid 2-related factor 2 (Nrf2) as a master regulator of cellular antioxidant defences via the induction of phase II and antioxidant enzymes. Initially, he elaborated on the mechanisms of Nrf2 activation under physiological oxygen tension and under hypoxia, and then proceeded to discuss accumulated evidence implicating impaired Nrf2 signaling and/or Nrf2 epigenetic regulation in diabetic pathologies such as gestational diabetes. Finally, he highlighted the importance of investigating redox signaling in vascular and other cell types adapted long-term to normoxia in order to provide translational insights for cardiovascular and regenerative medicine. The lecture was followed by a lively discussion with the audience.

João Laranjinha (Faculty of Pharmacy, University of Coimbra, Portugal)
President, Portuguese Biochemical Society

Elections of FEBS Officers and Committee Members (Munich 2016)

FEBS is ultimately governed by the FEBS Council, made up of one delegate from each of the 34 Member Societies of FEBS as well as the members of the FEBS Executive Committee. The FEBS Council meets annually to elect members of the FEBS Executive Committee (FEBS Officers), as well as other FEBS Committee and Working Group members, for fixed terms as set out in the Articles of Association. The results of elections at the FEBS Council Meeting 2016 in Munich for FEBS Officers and Committee Members are set out below and on the next page. Unless indicated otherwise, appointments began 1st January 2017.

FEBS Executive Committee elections

FEBS Treasurer
Francesco Michelangeli (UK); term Sep 2016 – Dec 2017
Chair, Fellowships Committee
Alain Krol (France); first term
Chair, Science and Society Committee
Emmanouil Fragkoulis (Greece); first term
Chair, Working Group on Integration
Jerka Dumić (Croatia); first term
Chair, Working Group on Women in Science
Cecilia Arraiano (Portugal); second term
Chair, Working Group on Careers of Young Scientists
Claudina Rodrigues-Pousada (Portugal); third term (1 year)
FEBS COMMUNITY

Other new Executive Committee appointments

FEBS Secretary General
Václav Pačes (Czech Republic) – elected in 2014

Chair* of FEBS Executive Committee 2017
Johannes Buchner (Germany)

Vice Chair* of FEBS Executive Committee 2017
Nazmi Özer (Turkey)

*Chair and Vice Chair are appointments for FEBS Constituent Societies that have organized a FEBS Congress in the previous two years.

New Members of other FEBS Committees

Advanced Courses Committee
Ivan Ivanov (Bulgaria)

Education Committee
Jason Perret (Belgium)

Fellowships Committee
László Nyitray (Hungary)
Tim Skern (Austria)
Oliver Vugrek (Croatia)

Finance Committee
Winnie Eskild (Norway)

Publications Committee
Erik Boye (Norway)

Science and Society Committee
Mark Roberts (UK)
Isabel Varela-Nieto (Spain)

Next FEBS Council Meeting

The next FEBS Council meeting will take place from 14th to 15th September 2017 in Jerusalem, following the 42nd FEBS Congress. FEBS Constituent Societies with full Member status have recently been invited to nominate candidates for election for committee positions with terms beginning 1st January 2018.

Introducing new FEBS Officers 2017

Prof. Václav Pačes
FEBS Secretary General

Václav Pačes obtained his PhD at the Czechoslovak Academy of Sciences (CSAS) in 1968 on the mechanism of action of 5-azacytidine. His early postdoctoral work spanned bacteriophage assembly and the plant hormones cytokinins, with stints at the University of Chicago, USA and McMaster University, Canada as well as further work at the CSAS. However, in the late 1970s his attention moved to the newly emerging DNA sequencing methods. An early achievement of his lab at the new Institute of Molecular Genetics, CSAS was the full genome sequence of the Bacillus bacteriophage PZA, and his research subsequently moved into developing areas of genome analysis and bioinformatics. He was Director of the Institute of Molecular Genetics (now of the Czech Academy of Sciences) from 1999 to 2005.

Václav Pačes has served on the editorial board of Gene, The FEBS Journal and Research in Microbiology. He has been an EMBO member since 1997, and among his awards are the Academy medal De Scientia et Humanitate Optime Meritis, the Medal of the Academy of Sciences of Slovakia and the Mendel medal (Academy of Sciences). He has been Chairman of the Learned Society of the Czech Republic (2008–2010), President of the Czech Academy of Sciences (2005–2009), and Chairman of the Czech Society for Biochemistry and Molecular Biology (1990–). In the 1990s he served on the FEBS Publications Committee and was a regular speaker/instructor at a recurring FEBS laboratory course on DNA sequencing. He was also involved in the organization in Prague of the IUB Congress 1988 and the FEBS Congress 2009.

Aims at FEBS

“The FEBS Secretary General should coordinate the activities of the varied committees and working groups of FEBS. This is my major aim, and consolidating the administrative office in Cambridge is an important step to fulfil this. However, the world is changing and the world of science is changing with it. FEBS has to reflect developments of new fields of biosciences and to adjust its programmes to it. It is facing changes in publication policies of its scientific journals. To foresee the new developments and to act in time is another duty of the Secretary General. Fortunately, in pursuing these aims I can collaborate with excellent colleagues elected to the FEBS Executive Committee.”
Prof. Francesco Michelangeli
FEBS Treasurer

Francesco (Frank) Michelangeli was recently appointed as Sumner Professor of Biochemistry at the University of Chester, UK. Before this he spent 25 years at the University of Birmingham as a Senior Lecturer and Head of Biochemistry programmes within the School of Biosciences. He gained his PhD from the University of Southampton, under the supervision of Professor A.G. Lee, and was subsequently awarded a NATO fellowship for research into $\text{Ca}^{2+}$ homeostasis mechanisms at the University of Padua, Italy, under the guidance of Prof. T. Pozzan. His main research interests are in membrane biochemistry, cellular signalling and $\text{Ca}^{2+}$ transport proteins. To date, he has published over 100 papers in these fields and has been on the editorial boards of several journals including *Biochemical Journal*, *Bioscience Reports* and *Biochemical Society Transactions*. Frank Michelangeli was the Honorary Membership Secretary and a Trustee of the Biochemical Society (UK) until 2013, where he was actively involved in promoting the Society and improving engagement with its members. He was also elected to serve on the Education Committees of both FEBS and the Biochemical Society.

Frank Michelangeli teaches many aspects of biochemistry and biomedical sciences to undergraduates in Biochemistry, Biological Sciences, Medicine, Dentistry, Nursing and Biomaterial Sciences – from metabolism to signal transduction to pharmacology. His particular teaching interests are in the development of specific laboratory/scientific skills and he has devised numerous undergraduate practical classes.

**Aims at FEBS**

“As a Trustee and Treasurer of FEBS, I aim to make sure that FEBS remains a financially sound organization that is able to fulfil all its charitable objectives of enhancing and promoting molecular biosciences across the FEBS area of Europe and neighbouring regions. As the FEBS Treasurer I will be balancing efforts to increase the organization’s asset base so that FEBS can remain viable in perpetuity with supporting all its key activities, and especially those that will benefit early-career scientists.”

---

Prof. Alain Krol
Chair, FEBS Fellowships Committee

Alain Krol is a CNRS Director of Research emeritus at the Dept of Architecture and Reactivity of RNA in the Institute of Molecular and Cellular Biology in Strasbourg, France. He is also a Professeur Conventionné at the University of Strasbourg. After obtaining his PhD and the Doctorate-ès-Sciences in the laboratory of Prof. J-P. Ebel at the University of Strasbourg – working on ribosomal RNA and snRNA structures – he pursued his scientific interests by investigating snRNA transcription at the University of Wisconsin-Madison, USA. Upon returning to Strasbourg in 1985, he started a group working on transcription and structure of ncRNAs. The group discovered, a scoop at the time, that some of these (U6snRNA and the selenocysteine tRNA), although transcribed by RNA polymerase III, possess promoters of the RNA polymerase II type. His research has subsequently focused on deciphering the mechanism of selenocysteine incorporation into selenoproteins in response to a redefined UGA codon. Alain Krol has been the Secretary General of the French Society for Biochemistry and Molecular Biology (SFBBM) since 2010.

**Aims at FEBS**

“I am very honoured to be elected Chair of the FEBS Fellowships Committee. The FEBS Fellowships programme has a long history and encompasses the popular Long-Term Fellowships (up to 3 years of support) and Short-Term Fellowships as well as additional schemes. The management of applications, in particular the introduction of an online system, was improved by my predecessors, whom I would like to thank on this occasion. My goal is to maintain the excellence of the selected applicants and to increase as far as possible the number of available Long-Term Fellowships. Marginal adjustments may be implemented in the selection procedure.”
Prof. Emmanouil Fragkoulis  
Chair, FEBS Science and Society Committee

Emmanouil Fragkoulis received his PhD in Natural Sciences from the University of Marburg, Germany and worked as a postdoc at the Deutsche Krebs Forshung Center in Heidelberg and Max Planck Institute for Cell Biology in Ladenburg. Since 1992 he has been Professor of Biochemistry in the Dept of Biochemistry and Molecular Biology of the University of Athens, Greece, where he has also held positions as Chairman of the Dept of the Faculty of Biology, member of the Senate of the University of Athens, and Dean of the School of Science. His research activities have focused on purification and characterization of Dopa decarboxylase, cloning of its gene, and its use as biomarker in several types of cancer.

Emmanouil Fragkoulis has also worked as Secretary General for Research and Technology of the Greek Government (1996–1999), which included participation in several European ministerial conferences, and has served as General Secretary and President of the Hellenic Biochemical and Biophysical Society, as well as a Vice Chair and Chair of the FEBS Executive Committee (2009–2010). He is a full member of the European Academy of Sciences and Arts.

Aims at FEBS
“The area of Science and Society should be activated in two directions highly important for the future of Europe. One is scientific policy at the European level. FEBS has limited resources for action but, as a key European Federation able to present the views of its scientific community and collaborate with other organizations, it can act as a catalyst in creating a vision for the life sciences. A unified scientific vision will create a dynamic initiative for forwarding to the politicians who are the final granting decision makers. Second, the explosion of progress in the life sciences in recent years has at times raised ethical concerns in the wider society. It is a responsibility of the Committee, in collaboration with the Constituent Societies, to facilitate the social acceptance of promising endeavours.”

Prof. Jerka Dumić  
Chair, FEBS Working Group on Integration

Jerka Dumić is Professor and Head of the Dept of Biochemistry and Molecular Biology at the University of Zagreb, Faculty of Pharmacy and Biochemistry, Croatia. She received her PhD in Biomedicine from the University of Zagreb in 2000, and was a postdoctoral fellow at Johns Hopkins University, Baltimore, USA. Having worked in the glycobiology field, she focused her scientific interest on glycobiological aspects of cell communication and adaptation, particularly in immune reactions. She received the National Award for Young Scientists for 2001. She served as Dean of the University of Zagreb Faculty of Pharmacy and Biochemistry from 2014 to 2016.

Jerka Dumić has been Secretary General (2001–2007) and President (2009–2013) of the Croatian Society of Biochemistry and Molecular Biology, and served as a member of the FEBS Working group on Integration from 2010 to 2014.

Aims at FEBS
“Although the differences between European ‘east’ and ‘west’ significantly diminished over the past 25 years, many ‘eastern’ countries still face diverse socioeconomic problems, resulting in insufficient development of scientific and technological capacities. The FEBS Working Group on Integration (WGI) is committed to improving and promoting molecular life sciences in these countries, thus helping to create better research environments, enhance networking and mobility at an international level, improve biosciences education, and encourage young students to opt for scientific careers and assist them in their scientific development. I am deeply honoured to be elected as a Chair of the WGI and to serve the FEBS ideal of equal opportunities for all.”
FEBS Advanced Courses 2017

FEBS Workshop
Nucleotide excision repair and crosslink repair – from molecules to mankind
Smolenice, Slovakia
May 7–11, 2017
www.exon.sk/smolenice2017/

Event with FEBS YTF support
HFP2017: molecular mechanisms of host–pathogen interactions and virulence in human fungal pathogens
La Colle sur Loup, France
May 13–19, 2017
www.abdn.ac.uk/hfp2017/

FEBS/EMBO Lecture Course
Biophysics and medicine of channels and transporters: electrifying new insights
Erice, Sicily, Italy
May 14–20, 2017
channels.ge.ibf.cnr.it

FEBS Practical and Lecture Course
Chemistry of metals in biological systems
Louvain-la-Neuve, Belgium
May 21–28, 2017
cpaquete.wixsite.com/louvain2017

FEBS Advanced Lecture Course
Matrix pathobiology, signaling and molecular targets
Spetses Island, Greece
May 25–30, 2017
www.febs-mpst2017.upatras.gr

FEBS Advanced Lecture Course and ECF2017 meeting on “cytoskeleton: mechanical coupling from the plasma membrane to nucleus”
Helsinki, Finland
June 4–8, 2017
www.cytoskeleton2017.com

FEBS Practical Course
8th International practical course in systems biology
Göteborg, Sweden
June 5–16, 2017
icysb.se/

FEBS Practical Course
Functional imaging of cellular signals
Amsterdam, The Netherlands
June 11–16, 2017
intranet.lcam-fnwi.nl/

FEBS/EMBO Lecture Course
Molecular architecture, dynamics and function of biomembranes
Cargèse, France
June 12–22, 2017
web.science.uu.nl/cargese2017

FEBS Advanced Lecture Course
Oncometabolism: from conceptual knowledge to clinical applications
Figueira da Foz, Portugal
June 18–24, 2017
www.febsoncometabolism2017.eu

FEBS Workshop
Biological surfaces and interfaces
Sant Feliu de Guixols, Spain
July 2–7, 2017
mimeresearch.com/biointerfaces2017/

FEBS Advanced Lecture Course
Molecular mechanisms of signal transduction and cancer
Spetses Island, Greece
August 16–24, 2017
mcr.umcutrecht.nl/upcoming-events/spetes-2017/

FEBS Advanced Lecture Course
Nuclear receptors and epigenomic mechanisms in human disease and aging
Spetses Island, Greece
August 27 – Sept 1, 2017
ki.se/en/bionut/spetes-2017

FEBS Advanced Lecture Course
Immune system: genes, receptors and regulation
Hvar Island, Croatia
September 23–30, 2017
www.febs-immunology-course.org/

FEBS/EMBO Lecture Course
Proteins and organized complexity
Spetses Island, Greece
September 24 – October 1, 2017
www.spetsai.org/

FEBS/EMBO Lecture Course
Mitochondria in life, death and disease
Selva di Fasano, Italy
October 9–13, 2017
meetings.embo.org/event/17-mitochondria

FEBS Youth Travel Fund (YTF) grants are available to assist participation of early-career scientists in FEBS Advanced Courses: click here for more information and eligibility criteria.
FEBS3+ Meeting 2017

This joint meeting, supported under the FEBS3+ Meeting Program, will bring together the French, Portuguese and Spanish Biochemistry and Molecular Biology Societies in Barcelona in October 2017 for an exciting program of plenary lectures, symposia, posters, awards and more. See the early announcement here.

Other meetings:
Biochemical Society (UK) Conferences and Events 2017
ROS and Mitochondria; Protein Modelling; Quantitative Proteomics; Non-Coding RNA; Deubiquitinases; Extracellular Electron Transfer; and more
www.biochemistry.org/Events.aspx

EMBO|EMBL Symposia 2017
Metabolism in Time and Space; Neural Circuits in the Past, Present and Future; Molecular and Cell Biology of Membranes; Mechanisms of Neurodegeneration; New Approaches and Concepts in Microbiology; Mechanical Forces in Biology; Seeing is Believing – Imaging the Processes of Life; The Mobile Genome; From Single- to Multimomics
www.embo-embl-symposia.org/symposia/2017

EMBL/EMBO Courses and Conferences 2017
Advances in Stem Cells and Regenerative Medicine; The Nucleosome: From Atoms to Genomes; Cancer Genomics; BioMalPar XIII: Biology and Pathology of the Malaria Parasite; and more
https://goo.gl/Xjbz7W

To announce a scientific event in FEBS News and on the FEBS website, please email brief details to the webmaster. Priority will be given to events in the FEBS area on topics within the molecular life sciences.

---

Other Scientific Events

Fatty Acids & Lipids Course: Chemistry, Biology and Analysis
Dundee, UK
February 23–24, 2017

FAT10 in Cancer & Immune Regulation
Rehovot, Israel
March 8–9, 2017
www.weizmann.ac.il/conferences/FCIR2017/

27th Annual Meeting of the Society for Virology
Marburg, Germany
March 22–25, 2017
www.virology-meeting.de/

68th Mosbacher Kolloquium – “Cell Organelles: Origin, Dynamics and Communication”
Mosbach/Baden, Germany
March 30 – April 1, 2017
www.mosbacher-kolloquium.org

Annual Swiss Proteomics Meeting 2017, organised by LS² (Life Sciences Switzerland)
April 20–21, 2017
Thun, Switzerland
meetings.ls2.ch/proteomics-2017

Keystone Symposium: Single Cell Omics
Stockholm, Sweden
May 26–30, 2017
www.keystonesymposium.org/17E3

Bioorigami – designed bionanostructures from nucleic acids to proteins and beyond
Ljubljana, Slovenia
June 21–23, 2017
2017.bioorigami.eu/

Essential Molecular Biology – Hands-On Laboratory Course – 11th edition
Porto, Portugal
July 3–21 2017
bit.ly/2jP8Kql

IDAR2017 – 3rd International conference of D-Amino acid Research
Varese, Italy
July 10–13, 2017
www.idar2017.com

15th International Congress on Amino Acids, Peptides and Proteins
Vienna, Austria
August 7–11, 2017
www.aminoacidscongress2017.com/

International Dictyostelium conference, co-organized by LS² (Life Sciences Switzerland)
Geneva, Switzerland
August 20–24, 2017
meetings.ls2.ch/dicty2017

LS² (Life Sciences Switzerland) Satellite Meeting “DNA Topoisomerases and DNA Topology”
Les Diablerets, Switzerland
September 16–17, 2017
meetings.ls2.ch/topo2017

GBM Fall Conference 2017 – The Molecular Basis of Life
Bochum, Germany
September 24–27, 2017
www.molecular-basis-of-life.org

17th International Nutrition & Diagnostics Conference
Prague, Czech Republic
October 9–12, 2017
www.indc.cz/en/