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2021 JUNE NEWS

CONGRATULATIONS IUBMB Wood–Whelan Fellows



Mirtha E Aguado
(Cuba)



Giovanna L Gallo
(Argentina)



Federico Perez
(Argentina)

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Diego D Del Balzo
(Argentina)



Antonella Lombardi
(Argentina)



Gowri Poigaiwar
(India)



Elodie Ekoka
(South Africa)



Paolma
Narros Fernández
(Spain)



Karen Schriever
(Sweden)

CONGRATULATIONS

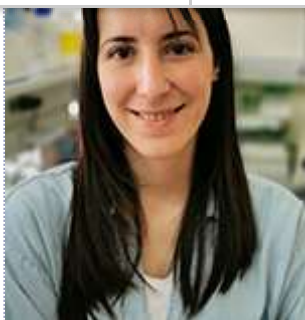
Recent IUBMB MilliporeSigma Fellows



David Emide
(Italy)



Khorsandi Khatereh
(Iran)

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Tania Fontanil López
(Spain)



Benjamin Dieter Weger
(Australia)

UPCOMING DEADLINE



[IUBMB Jubilee Lecture Awards](#) recognize outstanding contributions in biochemistry and molecular biology. Nominate your Plenary Speaker (in person or virtual)

*** deadline extended to July 15 ***



OPEN DEADLINE

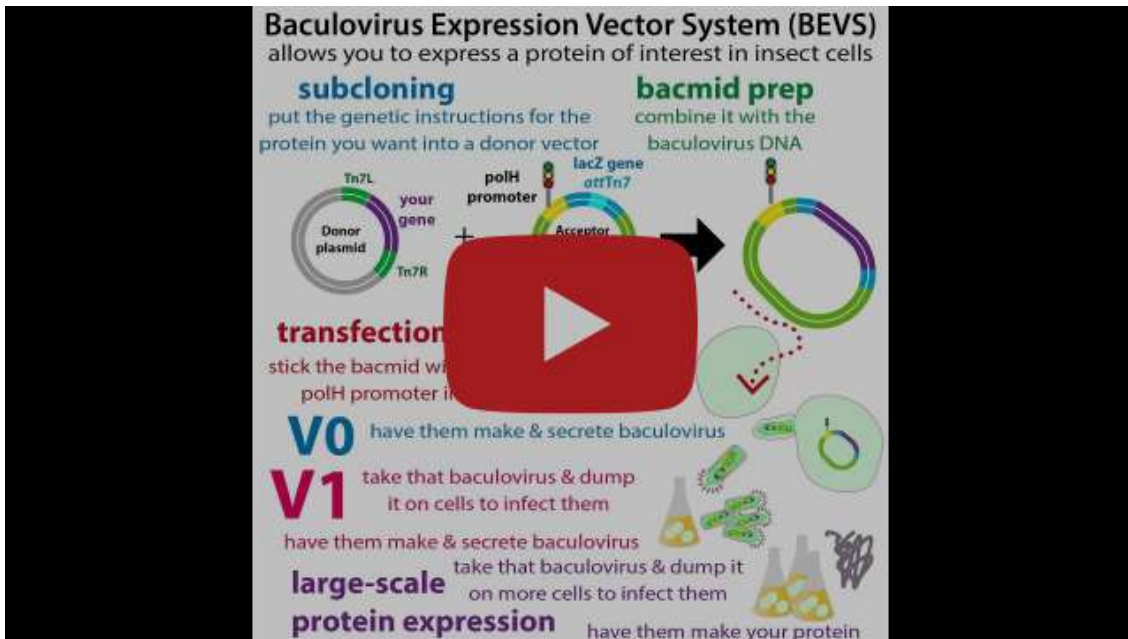
IUBMB MilliporeSigma
Virtual Meeting Fellowships

MILLIPORE
SIGMA

Virtual meeting you'd like to attend from anywhere in the world?

In response to the pandemic, we have collaborated with MilliporeSigma to offer Virtual Meeting Fellowships with **OPEN DEADLINES** to cover registration costs.

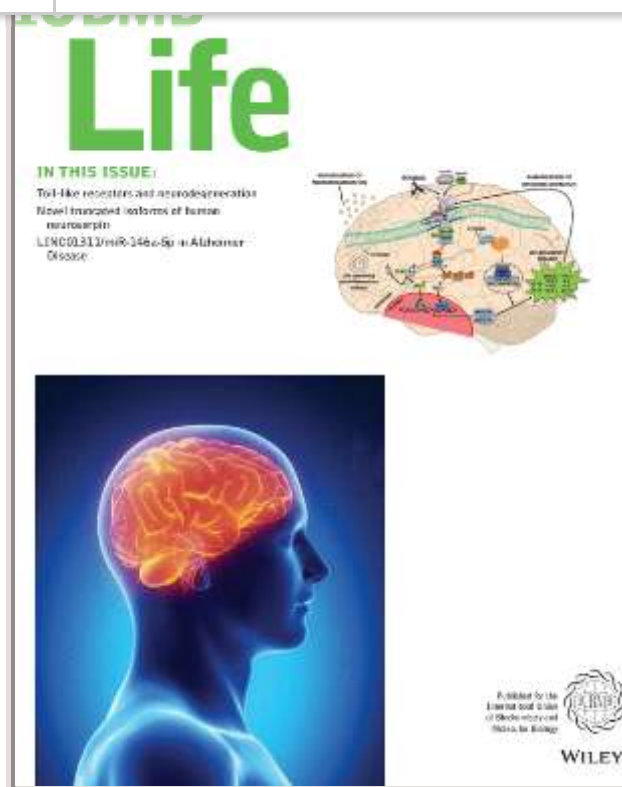
BRI-FING FROM THE BENCH



Baculovirus Expression Vector Systems

Her video tutorial explains how to express your favourite protein using the Baculovirus Expression System (BEV).

IUBMB JOURNALS



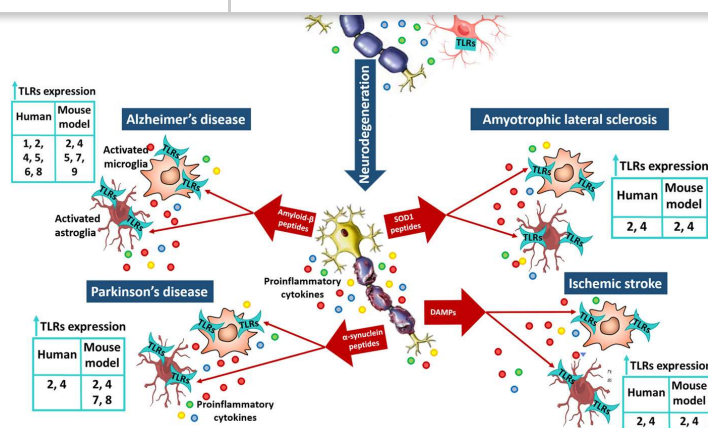
New Issue: Volume 73, Issue 7

Issue Highlights

- [Toll-like receptors in neuroinflammation, neurodegeneration, and alcohol-induced brain damage](#)

By: María Pascual, María Calvo-Rodriguez, Lucía Núñez, Carlos Villalobos, Juan Ureña, Consuelo Guerri

Toll-like receptors (TLRs) are crucial in innate immunity. They recognize pathogens (PAMPs) or tissue damage (DAMs), activating signaling pathways that lead to release of proinflammatory cytokines/chemokines as a defense mechanism against invaders. In the nervous system, TLRs are mainly expressed in glial cells, where their over-activation by DAMs from neural damage results in production of pro-inflammatory molecules (cytokines, miRNAs and chemokines) which in turn, induce neuroinflammation and participate in neurodegeneration. We discuss the critical role of the TLRs response in several neurodegenerative diseases (Alzheimer's, Parkinson's, Ischemic stroke, Amyotrophic lateral sclerosis, and alcohol-induced brain damage)

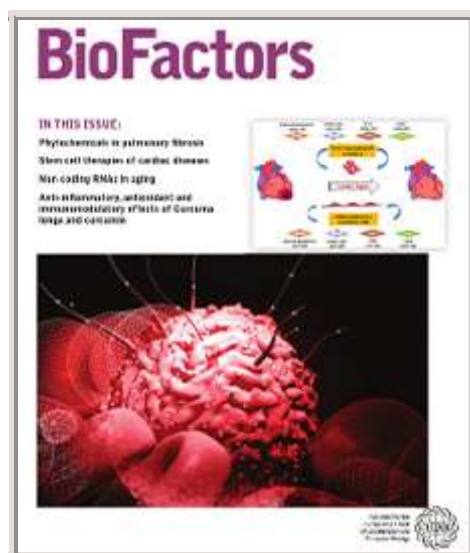


SPECIAL ISSUE CALL FOR PAPERS

See the full list of Calls for papers [here](#)

NEW VIRTUAL ISSUES

See all the new IUBMB Life Virtual issues [here](#)



New Special Issue: Volume 47, Issue 3

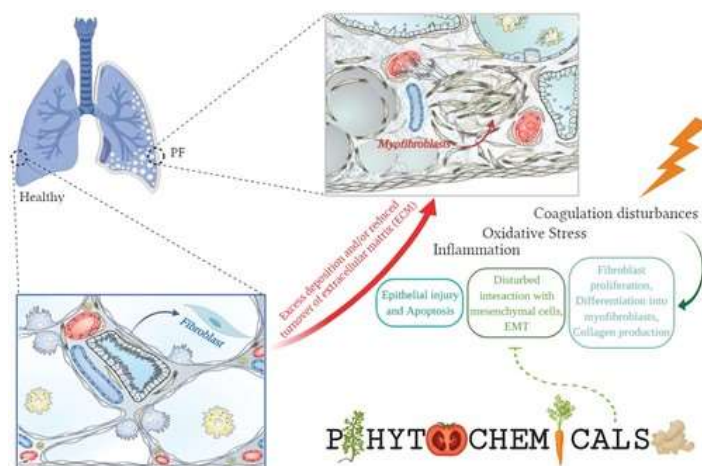
Issue Highlights

- [Pulmonary fibrosis: Therapeutic and mechanistic insights into the role of phytochemicals](#)

By: Seyede Atefe Hosseini, Fatemeh Zahedipour, Thozhukat Sathyapalan, Tannaz Jamialahmadi and Amirhossein Sahebkar

Pulmonary fibrosis (PF) is the devastating consequence of various inflammatory diseases of the lung. PF leads to a reduction of lung function, respiratory failure, and

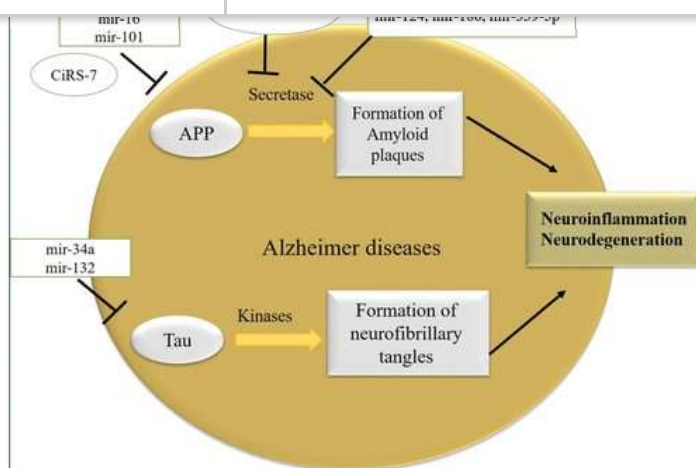
(TNF β 1), interleukin 6 (IL-6), and interleukin 4 (IL-4), reactive oxygen species, matrix metalloproteases, and transforming growth factor-beta (TGF- β). Targeting these processes involved in the progression of PF is essential for the treatment of this disease. Natural products, including plant extracts and active compound that directly target the processes involved in PF, could be suitable therapeutic options with less adverse effects. In the present study, we reviewed the protective effects and the therapeutic role of various bioactive compounds from plants in PF management.



- [The role of exosomal non-coding RNAs in aging-related diseases](#)

By: Sanam Dolati, Seyed Kazem Shakouri, Neda Dolatkah, Mehdi Yousefi, Farhad Jadidi-Niaragh and Sarvin Sanaie

Aging is a biological process caused by the accumulation of senescent cells with a permanent proliferative arrest. To the influence of aging on human life expectancy, there is essential for new biomarkers which possibly will assistance in recognizing age-associated pathologies. Exosomes, which are cell-secreted nanovesicles, make available a new biomarker detection and therapeutic approach for the transfer of different molecules with high capacity. Recently, non-coding RNAs (ncRNA) which are contained in exosomes have developed as important molecules regulating the complexity of aging and relevant human diseases. The discovery of ncRNA provided perceptions into an innovative regulatory platform that could interfere with cellular senescence. The non-coding transcriptome includes a different of RNA species, spanning from short ncRNAs (<200 nucleotides) to long ncRNAs, that are >200 bp long. Upgraded evidence displays that targeting ncRNAs possibly will influence senescence pathways. In this article, we will address ncRNAs that participated in age-related and cellular senescence diseases. Growing conception of ncRNAs in the aging process possibly will be responsible for new understandings into the improvement of age-related diseases and elongated life span.



- [Experimental and clinical reports on anti-inflammatory, antioxidant, and immunomodulatory effects of Curcuma longa and curcumin, an updated and comprehensive review](#)


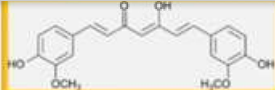
By: Arghavan Memarzia, Mohammad R. Khazdair, Sepideh Behrouz, Zahra Gholamnezhad, Maryam Jafarnejhad, Saeideh Saadat and Mohammad H. Boskabady

Curcuma longa (C. longa) or turmeric is a plant with a long history of use in traditional medicine, especially for treating inflammatory conditions. C. longa and its main constituent, curcumin (CUR), showed various pharmacological effects such as antioxidant and anti-microbial properties. The updated knowledge of anti-inflammatory, antioxidant, and immunomodulatory effects of C. longa and CUR is provided in this review article. Pharmacological effects of C. longa, and CUR, including anti-inflammatory, antioxidant, and immunomodulatory properties, were searched using various databases and appropriate keywords until September 2020. Various studies showed anti-inflammatory effects of C. longa and CUR, including decreased white blood cell, neutrophil, and eosinophil numbers, and its protective effects on serum levels of inflammatory mediators such as phospholipase A2 and total protein in different inflammatory disorders. The antioxidant effects of C. longa and CUR were also reported in several studies. The plant extracts and CUR decreased malondialdehyde and nitric oxide levels but increased thiol, superoxide dismutase, and catalase levels in oxidative stress conditions. Treatment with C. longa and CUR also improved immunoglobulin E (Ig)E, proinflammatory cytokine interleukin 4 (IL)-4, transforming growth factor-beta, IL-17, interferon-gamma levels, and type 1/type 2 helper cells (Th1)/(Th2) ratio in conditions with disturbance in the immune system. Therefore C. longa and CUR showed anti-inflammatory, antioxidant, and immunomodulatory effects, indicating a potential therapeutic effect of the plant and its constituent, CUR, for treating of inflammatory, oxidative, and immune dysregulation disorders.

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Past Issues

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 <p>Anti-inflammatory effects</p> <ul style="list-style-type: none"> • Decreased IL-1 and TNF-α • Reduced eosinophils, neutrophils, and monocytes • Decreased total & diff WBC • Reduced lung pathological changes • Improved and self-reported bowel effectiveness • Inhibited β-carrageenan 	 <ul style="list-style-type: none"> • Inhibited NF-κB and COX-2 • Decreased expression IL-1β, IL-6 and TNF-α • Down-regulated PKC • Inhibition of TLR-4 and MyD88 • Inhibited the IL-6, TNF-α, and iNOS • Decreased the production of iNOS mRNA • Inhibited NLRP3 • Inhibited the PGD2 release • Decreased level of leptin
<p>Antioxidant effects</p> <ul style="list-style-type: none"> • Inhibited MDA and increased SOD and CAT • Decreased α-tocopherol and coenzyme Q • Up-regulated SOD-1 and PRDX-1 • Reduced CK-MB and LDH activities • Decreased ALT • Elevated GSH level • Reduced NO$_2$ and NO$_3$ • Increased GPX and GR 	<ul style="list-style-type: none"> • Inhibited oxygen radical production • Reduced expression of NFAT2 • Activated protein kinases ERK, JNK and p38 • Increased THARS and protein carbonyls • Increased SOD; and GPx1 • Improved MDA and SOD levels • Improved SOD, GSH and γ-GT • Decreased levels of lipid peroxidation • Enhancing NO production
<p>Immunomodulatory effects</p> <ul style="list-style-type: none"> • Inhibited platelet aggregation • Activated the macrophages • Suppressed T-cells & B-cell • Diminished Toll-Like receptors • Telomerase-inhibitory effect on cell line A549 • Suppressed mRNA expression of LP-BM5 • Protected DNA damage • Adjusting the balance of CD4$^{+}$ CD25$^{+}$ 	<ul style="list-style-type: none"> • RANKL-mediated osteoclast activation • Immunomodulatory effect on macrophage polarization • Improved the T cell • Inhibited PMN chemotaxis and IL-8-mediated chemotaxis of human neutrophils • Decreased absolute lymphocyte • Increased CD4, CD8 and NK cells • Down-regulated MHC expression levels on leukocytes



Volume 68, Issue 2

Issue Highlights

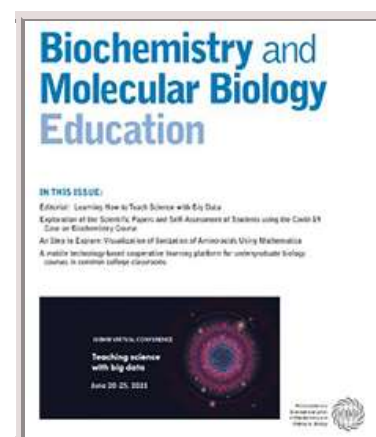
[Harmful effects of high amounts of glucose on the immune system: An updated review](#)

- [New Virtual Issue on Teaching in the Time of COVID-19](#)

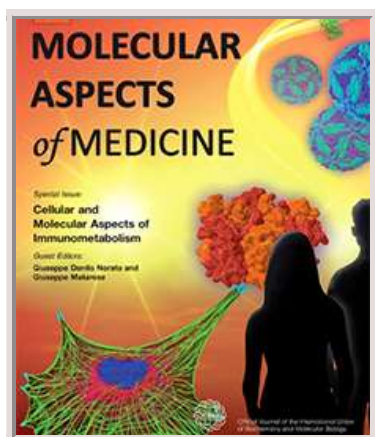
Volume 49, Issue 3

Issue Highlights

- [Quantitative study showing how and why students access lecture recordings, and of the association between accessing and academic outcomes, in a biochemistry course](#)



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Volume 77, February 2021, 100943

Issue Highlights

- [The need for precision nutrition, genetic variation and resolution in Covid-19 patients](#)

UPCOMING MEETINGS



Join us at the 45th FEBS Congress for an inspiring exchange of knowledge and ideas from leading experts across the molecular life sciences, and opportunities to present your work.

JUL 1: Online Registration Deadline

Register [here](#) | [Meeting link](#) | **JUL 3 - 8:** Event

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Calling all PHD STUDENTS AND EARLY CAREER RESEARCHERS

From FAOBMB or IUBMB-affiliated national societies

**Deadline
Extended**

**YOUNG SCIENTIST
PROGRAMME**

FELLOWSHIP APPLICATION AND
ABSTRACT SUBMISSION DEADLINE:

Friday 02 July 2021

The Young Scientist Programme offers the opportunity for these young scientists to share and exchange scientific experiences, present their work to an international audience, build their network and promote their scientific career.

FAOBMB2021.ORG/YSP-1



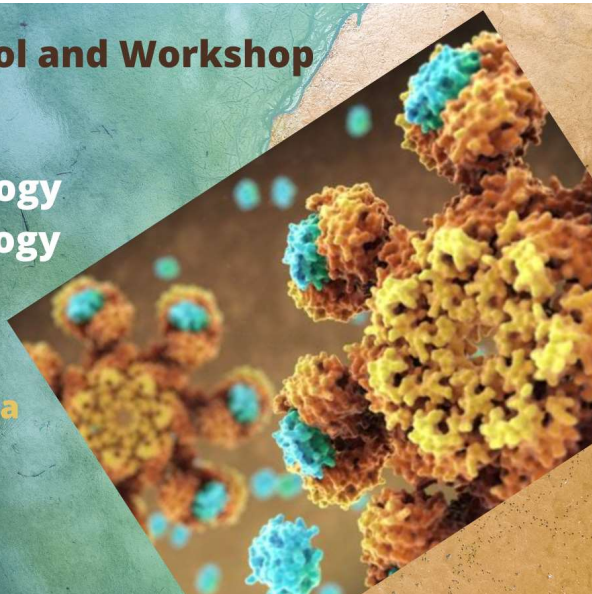
Register [here](#) | [Meeting link](#) | **NOV 22 - 25: Event**

IUBMB Advanced School and Workshop

**Proteins in Nanobiology
and Nanobiotechnology**

new date!

**Nov 29 - Dec 3, 2021
Varadero Beach, Cuba**



JUL 2: NEW Deadline Submission

[Meeting link](#) | **NOV 29 - DEC 3: Event**



Congratulations to Prof Ana Maria Cuervo from the Albert Einstein College of Medicine, New York, USA who will be presenting the IUBMB Jubilee Lecture in Tribute to Margarita Salas at the virtual 43rd Annual Meeting of the Spanish Society of Biochemistry & Molecular Biology on “*Selective autophagy: efficient recycling for a long healthy life*”.

[Meeting link](#) | **JUL 19 - 22: Event**



**IUBMB-FAOBMB-CBSL
VIRTUAL EDUCATION
SYMPOSIUM 2021**

**“The ‘New Normal’
Biochemistry and Molecular
Biology (BMB) Education”**

**Innovative and creative
techniques in BMB education
in the ‘New Normal’**

↓

Identifying gaps and challenges

- Large classes
- Teaching labs
- Assessments
- Student perception

↓

The way forward

Click here to Register

**FREE
REGISTRATION**



<https://bmbed2021.asiatours.lk/>

SAVE THE DATE

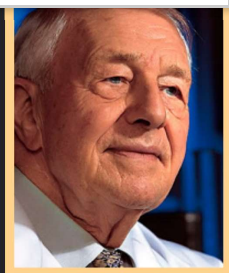
**30
JULY
2021**

 www.collegeofbiochemists.lk

Register here: <https://bmbed2021.asiatours.lk>

ANNOUNCEMENTS

We are sad to report that
Professor William 'Bill'

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William 'Bill' Whelan

1924 - 2021

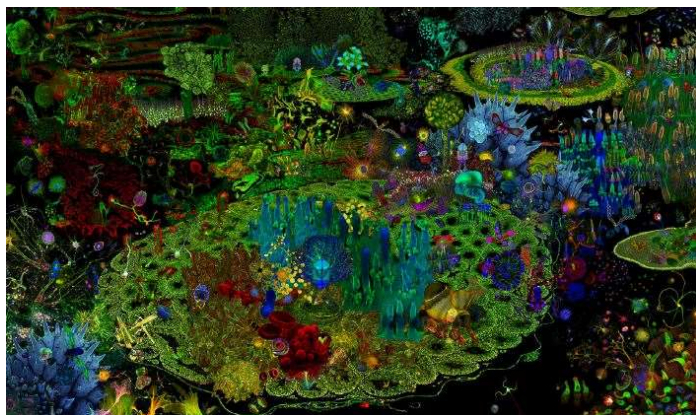
visionary biochemist and IUBMB leader



leader of IUBMB, has died at age 96.

Obituary:

<https://bit.ly/3pBbLi1>



Art and Science break boundaries in *The Garden of Earthly Delights*

By: Daniela Ruffell



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