Nomination Statement of Professor Abdallah Badou

Candidate for Council Member, International Union of Immunological Societies (IUIS), 2025–2028 Term

I am honored to submit my candidacy for a second term as Council Member of the International Union of Immunological Societies (IUIS) for the 2025–2028 term. With continued dedication and enthusiasm, I am eager to further support the Union's mission and contribute to its strategic direction.

My commitment to the field of immunology is grounded in a longstanding record of leadership and service. From 2017 to 2020, I served as Treasurer of the Federation of African Immunological Societies (FAIS), where I played a key role in enhancing financial oversight, introducing transparent reporting practices, and ensuring the strategic allocation of limited resources to strengthen immunology across the African continent.

Since 2020, I have served as Secretary General of FAIS, and in 2024, I was elected President of the Moroccan Society of Immunology. These roles have expanded my involvement in both regional and international immunological initiatives and strengthened my capacity to engage with diverse stakeholders.

If re-elected, I will remain deeply committed to ensuring the strategic coherence and financial sustainability of the IUIS. I fully recognize the Union's ambitious goals and will work to align its initiatives with practical, forward-looking strategic planning. I will continue to advocate for inclusive, empowering strategies—especially through our four Regional Federations—while upholding the financial resilience necessary for lasting global impact.

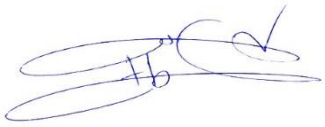
With a collaborative and forward-thinking approach, I will work closely with the Council, Executive Committee, IUIS 2028 organizers, and Secretariat to ensure transparency, accountability, and adaptability in all organizational matters.

It would be a privilege to continue contributing my experience, leadership, and vision in service to the IUIS.

Please find below my biosketch for your consideration. Should you require any additional information, I can be reached at **abdallahbadou@yahoo.com** or **abdallah.badou@univh2c.ma**, or via phone/WhatsApp at **+212 (0) 618 574 166**.

Thank you for your kind consideration and continued support.

With warm regards,



Abdallah Badou, PhD
Professor of Immunology
Faculty of Medicine and Pharmacy
University Hassan II of Casablanca
Casablanca
Morocco

BIOGRAPHICAL SKETCH

NAME: **Abdallah BADOU**

eRA COMMONS USER NAME (credential, e.g., agency login): abdallahbadou

POSITION TITLE: **Professor of Immunology and Molecular Biology**

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)*

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	Completion MM/YYYY	FIELD OF STUDY
University Hassan II, Casablanca, Morocco	BSc	07/1992	Biology (option: Immunology)
René Descartes University, Paris, France	MSc	07/1994	Physiology
Paul Sabatier University, Toulouse, France	PhD	06/1998	Immunology
Yale University, Connecticut, USA	Post-doc	02/2005	Immunology and Molecular Biology
University Cadi Ayyad's degree "Capacity to lead research and teaching activities"	« Professeur Habilité »	05/2012	Immunopathology and Inflammation

A. Specific Statement

I have completed my Master's degree in René Descartes University (Paris, France) in 1994, then my PhD in Immunology in 1998 at Paul Sabatier University (Toulouse, France). Afterwards, I joined the Immunobiology department at Yale University School of Medicine (Connecticut, USA) from 1999 to 2007, as a post-doc then as a research scientist. In 2007, I joined Cadi Ayyad University in Morocco as assistant then qualified professor (2007 to 2014). Since 2014, I was affiliated to the Faculty of Medicine and Pharmacy of Casablanca. My research topic is related to the study of the tumor microenvironment in human gliomas and breast cancer.

Languages: Arabic, English and French.

Research ID and Scores: orcid: 0000-0003-4849-9085; Web of science: Publications = 53; H index = 20. Scopus: Publications = 55; H index = 22.

B. Positions and Employment

2018 - present **Professor of Immunology**, Faculty of Medicine and Pharmacy, Casablanca, Morocco.
2020 - present **Head** of the Immuno-genetics and Human Pathology Laboratory.
2023 - 2024 **Scientific Director, then General Director**, Mohammed VI center for research and innovation, Rabat Morocco
2014 - present **Visiting Professor**, University Mohamed VI for health Sciences, Casablanca, Morocco.
2014 - 2018 **Qualified Professor**, Faculty of Medicine and Pharmacy, Casablanca, Morocco.
2012 - 2014 **Qualified Professor,** Cadi Ayyad University, Safi, Morocco.
2007 - 2012 **Assistant Professor,** Cadi Ayyad University, Polydisciplinary Faculty, Safi, Morocco.
2005 - 2007 **Associate research scientist,** Yale University, Connecticut, USA.

C. Professional Memberships and invitation as examiner

2024 - present Member of the Editorial Board of the journal "Scientific Reports".
2023 - present Member of the grant evaluation committee, University Mohammed VI Polytechnique, Ben Guérir.

2014 - present	Participation in PhD thesis evaluations.
2013 - present	Participation in Assistant Professors' recruitment.
2023 - present	Member of IUIS council.
2017 - present	ExCo of the "Federation of African Immunological Societies "FAIS": Treasurer (2017-2020) Secretary General (2020-present).
2011 - present	ExCo of the Moroccan Society of Immunology (SMI): Secretary General (2011-2025), President (2025-present).
2007 - present	Co-founding member of the Moroccan Society of Immunology (SMI).
2011 - 2013	Elected member of the council of the Polydisciplinary Faculty of Safi (FPS).
2010 - 2014	Deputy director of the "Environment and Health" research team at the FPS.
2009 - 2013	Pedagogical coordinator of the SVI section at the FPS.
2007 - 2014	Member of the scientific council of the Natural sciences department at the FPS.

D. Grants and honors

Ongoing grants:

- Co-recipient, Intra-Africa Academic Mobility Grant from the European Commission (ref: 624289-PANAF-1-2020-1-KEPANAFMOBAF), **1 400 000 Euro**
- Principal recipient, PPR research grant from the "Moroccan ministry of research", "Bio-engineering of nanobodies for immunotherapy of cancer", **$ 310,000**
- Co-recipient, research grant from the UH2C, "Biomedical, bioengineering and social aspects of cancer", **$ 220,000**
- Co-recipient, UH2C grant support for "LPCM" Lab, **$ 87,000**

Awards and honors:

2003-2004	Polard Memorial Fellowship Award of the Arthritis National Research Foundation.
2020	Certificate of appreciation awarded by the National Radio and Television Company for active participation during COVID-19 pandemic.
2020	Over 30 invitations, as researcher in Immunology, by the media (radio, television and newspapers).

E. Contributions to Science.

- Mechanisms of HgCl2-induced Th2 lymphocyte activation and autoimmunity.

Mercuric chloride (HgCl2) induces T helper 2 (Th2) autoreactive anti-class II T cells. These cells produce interleukin (IL)-4 and induce a B cell polyclonal activation that is responsible for autoimmune disease. HgCl2 triggers early IL-4 mRNA expression both in vivo and in vitro by T cells, which may explain why autoreactive anti-class II T cells acquire a Th2 phenotype. We have contributed to understanding the transduction pathways by which this chemical operates. We have shown a series of evidence for the involvement of Cav1 channels in this process. Furthermore, we have shown that Cav1 channels might be implicated also in the TCR-mediated T lymphocyte activation. However, at this stage, we have used mainly inhibitory chemicals.

1- **Badou A**, Savignac M, Moreau M, Leclerc C, Foucras G, Cassar G, Paulet P, Lagrange D, Druet P, Guery JC, Pelletier L. Weak TCR stimulation induces a calcium signal that triggers IL-4 synthesis, stronger TCR stimulation induces MAP kinases that control IFN-gamma production. **Eur. J. Immunol**. 2001 Aug;31(8):2487-96.

2- Savignac M, **Badou A**, Delmas C, Subra JF, Cramer SD, Paulet P, Cassar G, Druet P, Saoudi A, Pelletier L. Gold is a T cell polyclonal activator in BN and LEW rats but favors IL-4 expression only in autoimmune prone BN rats. **Eur J Immunol**. 2001 Aug;31(8):2266-76.

3- **Badou A**, Savignac M, Moreau M, Leclerc C, Guery JC, Paulet P, Druet P, Ragab-Thomas J, Pelletier L. Protein kinase C-mediated calcium entry dependent upon dihydropyridine sensitive channels: a T cell receptor-coupled signaling pathway involved in IL-4 synthesis. **FASEB J**. 2001 Jul;15(9):1577-9.

4- **Badou A**, Savignac M, Moreau M, Leclerc C, Pasquier R, Druet P, Pelletier L. HgCl2-induced interleukin-4 gene expression in T cells involves a protein kinase C-dependent calcium influx through L-type calcium channels. **J. Biol. Chem**. 1997 Dec 19;272(51):32411-8.

5- Bridoux F, **Badou A**, Saoudi A, Bernard I, Druet E, Pasquier R, Druet P, Pelletier L. Transforming growth factor beta (TGF-beta)-dependent inhibition of T helper cell 2 (Th2)-induced autoimmunity by self-major

histocompatibility complex (MHC) class II-specific, regulatory CD4(+) T cell lines. **J. Exp. Med**. 1997 May 19;185(10):1769-75.

- Genetic evidence for Cav1 channel role in T lymphocyte activation and pathogenesis.
We have studied how T-cells are activated and could be implicated in pathologies such as autoimmune diseases. We have identified, using genetic approaches, specific proteins, Cav 1, responsible for causing cytokine release. We defined the role of each class of Cav1 channels in T-cell function. Selectively blocking one class of Cav1 channels would only partially alter the calcium response, inhibiting the activation of cells with limited side toxic effects. We worked to block the activation step, i.e. block the specific calcium channel involved, thereby opening the door for new drugs targeting T-cell activation.

1- **Badou A**, Jha MK, Matza D, Flavell RA. Emerging roles of L-type voltage-gated and other calcium channels in T lymphocytes. **Front Immunol**. 2013 Aug 30;4:243.
2- Mithilesh K. Jha, **Abdallah Badou**, Veit Flockerzi, Marc Freichel, and Richard A. Flavell. Defective Survival and Function of Naïve $CD8^+$ T Lymphocytes in the absence of β3 regulatory subunit of Ca_v channels. **Nature Immunology**. 2009 Dec;10(12):1275-82. Epub 2009 Oct 18.
3- Matza D, **Badou A**, Jha MK, Willinger T, Antov A, Sanjabi S, Kobayashi KS, Marchesi VT, Flavell RA. Requirement for AHNAK1-mediated calcium signaling during T lymphocyte cytolysis. **PNAS**. 2009 Jun 16;106(24):9785-90. Epub 2009 Jun 2.
4- Didi Matza*, **Abdallah Badou***, Koichi S. Kobayashi, Karen Goldsmith-Pestana, Yutaka Masuda, Akihiko Komuro, Diane McMahon-Pratt, Vincent T. Marchesi and Richard A. Flavell. A Scaffold Protein, AHNAK, Is Required for Calcium Signaling during T Cell Activation. **Immunity**. 2008 Jan; 28: 64-74. ***equal contribution.**
5- **Abdallah Badou**, Mithilesh K. Jha, Didi Matza, Wajahat Z. Mehal, Marc Freichel, Veit Flockerzi and Richard A. Flavell. Critical role for the beta regulatory subunits of Cav channels in T lymphocyte function. **PNAS***.* 2006 Oct ; 103: 15529-34.

- Immune tumor microenvironment in patients with cancer (glioblastoma and Breast cancer).
My current research focuses on cancer immunology, specifically investigating the immune tumor microenvironment in patients with glioblastoma and breast cancer. Several novel immune checkpoints have been identified and assessed in patients at different cancer stages (VISTA, A2AR, BTN3A…). Among these, we aim to identify potential targets, which could contribute to enhancing anti-tumor immunity and overcome treatment resistance. Our approach integrates bioinformatics, drug-protein interaction studies, and molecular and cellular techniques. We collaborate closely with surgeons, oncologists, and computer scientists. Ultimately, our goal is to discover novel drugs with minimal side effects.

1- Kone AS, Ghouzlani A, Qandouci A, Issam Salah NEI, Bakoukou Y, Lakhdar A, Karkouri M, **Badou A.** High expression of BTN3A1 is associated with clinical and immunological characteristics and predicts a poor prognosis in advanced human gliomas. **Front Immunol.** 2024 May 28;15:1397486.
2- Zohair B, Chraa D, Rezouki I, Benthami H, Razzouki I, Elkarroumi M, Olive D, Karkouri M, **Badou A.** The immune checkpoint adenosine 2A receptor is associated with aggressive clinical outcomes and reflects an immunosuppressive tumor microenvironment in human breast cancer. **Front Immunol.** 2023 Sep 11;14:1201632.
3- Rezouki I, Zohair B, Ssi SA, Karkouri M, Razzouki I, Elkarroumi M, **Badou A.** High VISTA expression is linked to a potent epithelial-mesenchymal transition and is positively correlated with PD1 in breast cancer. **Front Oncol**. 2023 Apr 20;13:1154631.
4- Kone AS, Ait Ssi S, Sahraoui S, **Badou A.** BTN3A: A Promising Immune Checkpoint for Cancer Prognosis and Treatment. **Int J Mol Sci**. 2022 Nov 3;23(21):13424. doi: 10.3390/ijms232113424.
5- Ghouzlani A, Lakhdar A, Rafii S, Karkouri M, **Badou A.** The immune checkpoint VISTA exhibits high expression levels in human gliomas and associates with a poor prognosis. **Sci Rep.** 2021 Nov 2;11(1):21504.

Students training activities
16 interns/BSc students, 17 Master's students (7 of which international), 14 completed PhDs (1 international), and 8 ongoing PhDs, 2 Postdocs and 2 international medical students.

Clara Hijano

From: Gray, CM, Prof [cgray@sun.ac.za] <cgray@sun.ac.za>
Sent: Thursday, 3 April 2025 14:30
To: IUIS
Cc: Sabelle Jallow; Abdallah Badou
Subject: Nomination to IUIS council

Follow Up Flag: Follow up
Flag Status: Completed

Categories: Clara

Dear Secretary General

As the FAIS President, I would like to nominate Sabelle Jallow and Abdallah Badou as council members. They are currently existing Council members and wish to stand for a 2nd term.

They will compile their current CVs, along with email address as a single pdf file to send before the deadline.

They are both copied on this nomination email

Regards, Clive

Clive M Gray | BSc Hons, MSc, PhD, ASSAf

Professor, Division of Immunology | Biomedical Research Institute | Group Leader, Reproductive Immunology Research Consortium in Africa (RIRCA) | President, Federation of African Immunology Societies (FAIS) | Director of the Federation of Clinical Immunology Societies (FOCIS) Centre of Excellence at Stellenbosch University | Chair, Education Committee of the International Union of Immunology Societies (IUIS)

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