

## FUNDING APPLICATION

*Section C – CV Centre Director: Adrian C. COVIC, MD, PhD, FRCP (London), FRCP (Edin.), FERA, FESC*

### C.1 CURRICULUM VITAE

#### Personal information

Name, Surname:	Adrian Constantin COVIC		
Date of birth:	06.05.1967	Sex:	M
Nationality:	Romanian		
Researcher unique identifier(s) (ORCID, Researcher ID etc.):	ORCID: 0000-0002-9985-2486; Scopus Author Identifier: 7006186181; Web of Science ResearcherID: G-5017-2016.		
URL for personal website (if case):	NA		

#### Education

Year	Faculty/department - University/institution - Country
1997	PhD in Medicine- Grigore T. Popa University of Medicine and Pharmacy of Iasi, Romania; <i>PhD thesis title: Study on cardiovascular changes in chronic renal failure: determinant factors and impact of renal replacement therapies</i>
1991	BSc-MD- Faculty of Medicine- Grigore T. Popa University of Medicine and Pharmacy of Iasi- Iasi, Romania
1992-93/94-95	Research stage in Nephrology- Withington Hospital, Artificial Kidney Unit (at <i>Dr. P. Ackrill</i> ), Manchester, United Kingdom
1997	Research stage in Nephrology- Université Amiens Picardie Jules Verne, Centre Hospitalier Universitaire Amiens-Picardie (at <i>Prof. dr. A. Fournier</i> ), Amiens, France
1998	Research stage in Cardiology- Herz-zentrum, Hospital for Cardiac Surgery (at <i>Dr. D.V. Schmitt</i> ), Leipzig, Germany
1999-2000	Research stage in Genetic Susceptibility to ESRD- Case Western Reserve University, Cleveland, United States of America

#### Positions - current and previous

*(Academic sector/research institutes/industrial sector/public sector/other)*

Year	Job title – Employer - Country
Present/2016-23/2012-13	Vice-Rector for Scientific Research- <i>Grigore T. Popa</i> University of Medicine and Pharmacy of Iasi, Romania;
2004-present	Professor of Internal Medicine & Nephrology- <i>Grigore T. Popa</i> University of Medicine and Pharmacy of Iasi, Romania
2005-present	PhD coordinator- <i>Grigore T. Popa</i> University of Medicine and Pharmacy of Iasi, Romania; with 24 finalised PhD students
2001-present/2008-present	Chief of the Renal Transplant Department (170 supervised kidney transplants and 400 transplant patients followed in the ambulatory setting) and Clinical Nephrology Unit- <i>Dr. C. I. Parhon</i> Hospital of Iasi
2004-present	Primary Physician in Internal Medicine and Nephrology- <i>Dr. C. I. Parhon</i> Hospital of Iasi
2003- 2012	Manager- <i>Dr. C. I. Parhon</i> Hospital of Iasi, Romania
2004-2008	Vice-Dean- <i>Grigore T. Popa</i> University of Medicine and Pharmacy Iasi, Romania
2002-2003	Medical Director- <i>Dr. C. I. Parhon</i> Hospital of Iasi, Romania
1999-2012	Director of the Dialysis Center- <i>Dr. C. I. Parhon</i> Hospital of Iasi, Romania

1999-2000	Research Assistant - Case Western Reserve University, School of Medicine, John Sedor, Cleveland, United States of America
1991-2004	Assistant professor/lecturer/associate professor- <i>Grigore T. Popa</i> University of Medicine and Pharmacy of Iasi, Romania

### Career breaks (if case)

Year	Reason
yyyy-yyyy	NA

### Project management experience

(Academic sector/research institutes/industrial sector/public sector/other. Please list the most relevant.)

Year	Project title - Role – Funder – Budget – link to project webpage
2024-2026	Integrated Approach for Patients with Autosomal Dominant Polycystic Kidney Disease and related ciliopathies (PN-IV-P8-8.3-ROMD-2023-0259)- Project Manager- UEFISCDI- 500.000 Lei- under construction
2020-2023	Long Term Cardio-Vascular Risk Assessment in CKD and Kidney Transplanted Patients Following SARS-COV-2 (PN-III-P4-ID-PCE-2020-2393)- Project Manager- UEFISCDI- 1.198.032 Lei- <a href="https://cardioscarsinckd.grant.umfiasi.ro">https://cardioscarsinckd.grant.umfiasi.ro</a>
2020-2023	MAVIS- Center for Innovation and Technology Transfer (SMIS 128789)- Project Manager- Regional Development Agency North-East- 6.478.761,66 Lei- <a href="https://www.umfiasi.ro/ro/cercetare/Centre-si-platforme/Pagini/Centrul-de-Inovare-si-Transfer-tehnologic-MAVIS.aspx">https://www.umfiasi.ro/ro/cercetare/Centre-si-platforme/Pagini/Centrul-de-Inovare-si-Transfer-tehnologic-MAVIS.aspx</a>
2021-2023	Cross-border integrated network for advanced health services in obesity, diabetes and metabolic disorders (1HARD/4.1/93)- Nephrology and kidney care Center Coordinator- European Union- 1.113.231 Euro- <a href="https://obdia-net.grant.umfiasi.ro/en/">https://obdia-net.grant.umfiasi.ro/en/</a>
2017- 2019	Lung ultrasound guided fluid management protocol for the critically ill patient: a randomized controlled trial (CLUSTER-PN-III-P4-ID-PCE-2016-0908)- Project Manager – UEFISCDI- 850.000 Lei- <a href="https://icu-lus.grant.umfiasi.ro">https://icu-lus.grant.umfiasi.ro</a>
2012-2016	Extravascular lung water monitoring by combined ultrasound and bioimpedance as a guide for treatment in hemodialysis cardiomyopathic renal patient (PN-II-ID-PCE-2011-3-0637)- Project Manager- UEFISCDI- 1.149.240 Lei- <a href="http://www.umfiasi.ro/Cercetare/sr/Projects/Documents/351/SITE%20BUST%20HTML">http://www.umfiasi.ro/Cercetare/sr/Projects/Documents/351/SITE%20BUST%20HTML</a>
2013-2015	A combined cardiovascular and endocrine biomarker panel as a risk stratification tool for hemodialysis patients (IDEAS 1640)- Project Manager- <i>Grigore T. Popa</i> University of Medicine and Pharmacy of Iasi- 15 000 Euro

### Other relevant professional experiences

(e.g. institutional responsibilities, organisation of scientific meetings, membership in academic societies, review boards, advisory boards, committees and major research or innovation collaborations, other commissions of trust in public or private sector)

Year	Description - Role
Since 2023	Coordinator of the Human Resources Strategy for Researchers ( <i>HSR4R</i> ) Steering Committee at <i>Grigore T. Popa</i> University of Medicine and Pharmacy of Iasi
	Member of the European Society of Hypertension
	Rapporteur and monitor (project monitoring process) for European Commission- European health and digital executive agency: HADEA.A-Health and Food. A.3-Health research, grant number 896932, project: <i>Personalisation of immunosuppression by monitoring viral load post kidney transplantation-a randomised controlled phase II trial (TTV Guide TX)</i>
Since 2022	Member of European Kidney Transplant Association (EKITA) and of the European Society

	for Organ Transplantation (ESOT)
	Member of the Medicine commission of CNATDCU
Since 2021	Member on the Regional Innovation Consortium, Regional Development Agency N-E
Since 2018	Fellow - Royal College of Physicians, Edinburgh
Since 2016	Fellow- European Society of Cardiology
Since 2011	Fellow of the ERA-EDTA (FERA)
2012-15/2005-08	President of the Romanian Society of Nephrology
Since 2009	Member of the Romanian Academy of Medical Sciences
2008-2011	Member of the Nephrology Commission of the Ministry of Health
Since 2008	Fellow Royal College of Physicians - FRCP (London)
2007-08	Evaluator for Romanian Agency for Quality Assurance in Higher Education
2005-2011	Secretary-Treasurer of the European Renal Association ERA/EDTA
Since 2003	President of Europeann educational course <b>Renal Failure Academy</b> , with anual organisation under the auspices of the ERA-EDTA, for young nephrologists from Central and Eastern Europe
1999-2012	Chief of the Iasi Dialysis Center: introduction of the peritoneal dialysis program in 1996

## C.2 Track record of the last 10 years

A list of the ten most important scientific outputs (publications, patents, technologies etc).

### Highly cited papers (WoS) in the last 10 years:

1. Effect of Hemodiafiltration or Hemodialysis on Mortality in Kidney Failure. CONVINC Scientific Committee Investigators: Blankestijn PJ, Vernooij RWM, ... **Covic A**, et al. N Engl J Med. 2023; 389(8): 700-709 (28 citations, IF: 158.5).
2. COVID-19-related mortality in kidney transplant and dialysis patients: results of the ERACODA collaboration. ERACODA Collaborators: Hilbrands LB, Duivenvoorden R, ... **Covic A**, et al. Nephrol Dial Transplant. 2020; 35(11): 1973-1983 (282 citations, IF: 6.1).
3. Recommendations for the prevention, mitigation and containment of the emerging SARS-CoV-2 (COVID-19) pandemic in haemodialysis centres. Basile C, Combe C, Pizzarelli F, Covic A, et al. Nephrol Dial Transplant. 2020; 35(5): 737-741 (170 citations, IF: 6.1).
4. Epidemiology, contributors to, and clinical trials of mortality risk in chronic kidney failure. Board of the EURECA-m Working Group of ERA-EDTA: Ortiz A, **Covic A**, Fliser D, et al. Lancet. 2014; 383 (9931):1831-43 (284 citations, IF: 168.9).
5. Bioimpedance-guided fluid management in maintenance hemodialysis: a pilot randomized controlled trial. Onofriescu M, Hogas S, Voroneanu L, Apetrii M, Nistor I, Kanbay M, **Covic AC**. Am J Kidney Dis. 2014; 64(1): 111-8 (182 citations, IF: 13.2).

### The most important papers:

6. Denosumab in the treatment of osteoporosis associated with chronic kidney disease. Covic A, Apetrii M. Lancet Diabetes Endocrinol. 2024 (IF: 44.5).
7. The double challenge of resistant hypertension and chronic kidney disease. Rossignol P, Massy ZA, ... **Covic A**, et al. Lancet. 2015;386: 1588-1598 (IF: 168.9).
8. A randomized multicenter trial on a lung ultrasound-guided treatment strategy in patients on chronic hemodialysis with high cardiovascular risk. Zoccali C, Torino C, ... **Covic A**, et al. Kidney Int. 2021;100(6):1325-1333 (IF: 19.6).
9. Anticoagulation in Concomitant Chronic Kidney Disease and Atrial Fibrillation: JACC Review Topic of the Week. Kumar S, Lim E, **Covic A**, Verhamme P, Gale CP, Camm AJ, Goldsmith D. J Am Coll Cardiol. 2019; 74(17): 2204-2215 (IF: 24.4).
10. Bone and mineral disorders in chronic kidney disease: implications for cardiovascular health and ageing in the general population. **Covic A**, Vervloet M, Massy ZA, et al. Lancet Diabetes Endocrinol. 2018; 6(4): 319-331 (IF: 44.5).

### C.3 Narrative CV

*A narrative summarizing which work has had the greatest importance and impact.*

The Centre Director is a primary physician in Internal Medicine and Nephrology, specialist in Cardiology, with a PhD in Medicine and strong research background in a significant array of subjects/scientific areas. The most important to be mentioned are the following: long-term cardio-vascular risk assessment in chronic kidney disease and kidney transplanted patients following SARS-COV-2 disease, fluid management by the use of bioimpedance and lung ultrasound, coronary heart disease in uraemia, hypertension, particularities of dialysis patients (determining and prognostic factors), uric acid, inflammation and biomarkers, endocrine disorders in the chronic kidney disease patients, survival determinants in end-stage renal disease, polycystic kidney disease; **overall a complex integrative approach around renal disease patients.**

The *Centre Director* is currently **Vice-Rector** for Scientific Research, **Professor** of Internal Medicine & Nephrology and PhD coordinator at *Grigore T. Popa* University of Medicine and Pharmacy of Iasi. He is also **Primary Physician** in Internal Medicine and Nephrology, **Chief** of the Renal Transplant Department and Clinical Nephrology Unit at *Dr. C. I. Parhon Hospital* of Iasi in Romania and at international level, **Board member** of KDIGO, ERBP, and ERA-EDTA working groups-EUDIAL EURECAM and CKD-MBD.

The contributions of the Centre Director that had the greatest importance and impact are employed as follows:

**1) Enhanced national and international visibility and the impact of the scientific contribution** demonstrated by:

- Published articles in Q1 (red zone)/Q2 (yellow zone) journals: 65% from 692 publications in total (WoS);

The most significant research results are reflected in highly rated international journals, namely *Lancet* (IF: 168.9), *New England Journal of Medicine* (IF: 176.082), *Lancet Diabetes & Endocrinology* (IF: 44.5), *Nature Reviews Nephrology* (IF: 42.439), *Kidney International* (IF: 18.998), *Clinical Kidney International* (IF: 18.998), *Nephrology Dialysis Transplantation* (IF: 7.186) that validate the ability and commitment to disseminate important findings. The Centre Director is the main author of more than 450 research articles from a total of 692 publications, quantified in **H-index of 70** (the highest in the university, source WoS).

- The total number of citations: 17380 citations; **the increasing number of citations highlights the Centre Director role in spreading new knowledge and ideas and his contribution in the field.**

- Important results of his scientific activity were presented at many international conferences (over 114 indexed abstracts) and training courses. Prof. Covic organized several regional European educational courses under the auspices of ERA-EDTA, ASN and ISN. For a mandate he was chair of the ISN/COMGAN Eastern Europe. This specific area of expertise led to important international recognition, including invited lectures, such as: 52<sup>nd</sup> ERA-EDTA European Nephrology Congress; ERA-EDTA Course-International Centre of Biocybernetics: Management of fluid overload in dialysis patients- Warsaw, Poland 2016: Lecture 1: Fluid removal by HDF, HF and HDI; and Lecture 2: Managing fluid overload by dialytic therapies in heart failure.

- **National and international awards:** the most important to be mentioned are: in **2024**, Prof. Covic won the highest price “Ana Aslan” for Medicine at the Romanian Research Gala organized by the Ministry of Research, Innovation and Digitization; in **2023**, Diploma of excellence “Doctor of the Year 2023”, within the Romanian Healthcare Awards, the “Medical Team of the Year” at *Dr. C. I. Parhon Hospital of Iasi*, Renal Transplant Department, awarded by College of Physicians Gala, and “Excellence in Health” award during the Evening of Values 2023 organized by the Iasi City Hall; in **2022**, Prof. Covic received the distinction of Doctor Honoris Causa awarded by Nicolae Testemițanu State University of Medicine and Pharmacy, Republic of Moldova, due to the increased prestige and value in the world of European and international renal disease science and research; also, the prize for “Education and Research in the medical field” for the Nephrology Discipline at UMF Iasi, at 7<sup>th</sup> Edition of Medical Elites Gala; in **2021**, the CARDIO SCARS IN CKD project was the Finalist for the Research Project of the Year 2021, within the 2<sup>nd</sup> Edition of Romanian Healthcare Awards, and, Excellence in Patients Care Awards, International Award section granted by the Royal College of Physicians, London; in **2020**, Doctor of the Year Award 2020 given by Romanian Healthcare Awards; in **2019**, Award for Performance and Innovation in

Medicine- 4<sup>th</sup> Edition Gala of the Medical Elites; in **2017**, “Constantin C. Iliescu” Award of the Romanian Academy of Scientists, and in **2003**, Award at the World Congress of Nephrology, Berlin.

## **2) Exploratory research specifically related to the topic of the current application (selective work)**

Prof. Covic's exceptional expertise in kidney-specific populations led to his notable contributions in the field. By delving into this research area, Prof. Covic demonstrated his commitment to advancing knowledge and understanding in this field. His efforts not only contribute to the current body of literature but also provide a solid foundation for further investigations in many areas of study. All of this was quantified in numerous achievements (**692** publications in total from 1996 to present) from which:

- at least 15 papers published with **ERA-EDTA group authors**: Monocyte subpopulations and cardiovascular risk in chronic kidney disease. *A. Covic et al., Nature Reviews Nephrology, 8(6), 362-369, 2012;*

- at least 6 papers with the **ERA-EDTA ERBP Advisory Board**: Kidney Disease Improving Global Outcomes (KDIGO) Guidelines on Anaemia Management in Chronic Kidney Disease: *A European Renal Best Practice Position Statement. A. Covic et al., Nephrology Dialysis Transplantation, 28(6), 1346-1359, 2013*, considered by WoS the most highly cited Paper (289 citations);

- at least 4 papers published with CKD-MBD Working group ERA-EDTA: *Pro: Cardiovascular calcifications are clinically relevant. A. Covic, et al., Nephrology Dialysis Transplantation, 30(3), 345-351, 2015;*

- 4 papers published with COSMOS group and 5 papers published with European Renal Association European Dialysis; etc. More details can be found on Prof. A. Covic WoS profile.

Worth mentioning is that Prof. Covic correctly **considered new molecules that proved to be relevant in the pathogenesis of kidney disease and were validated into first-time publications**: just to quote **endocan** (see publication: M.I. Yilmaz, D. Siriopol, A. Covic, et al., *Kidney International, 86(6), 1213-1220, 2014*), **sclerostin** (M. Kanbay, D. Siriopol, M. Saglam, Y.G. Kurt, M. Gok, H. Cetinkaya, M. Karaman, H.U. Unal, Y. Oguz, S. Sari, T. Eyileten, D. Goldsmith, A. Vural, G. Veisa, A. Covic, M.I. Yilmaz, *Journal of Clinical Endocrinology & Metabolism, 99(10), E1854-E1861, 2014*), **interleukin 10/interleukin 6 ratio, monocyte/HDL cholesterol ratio**.

## **3) The autonomy and visibility of the scientific activity demonstrated by clinical trials implementation:**

As an expert in clinical epidemiology research, he designed and conducted various studies including systematic reviews, observational and interventional trials and cohort studies in all renal conditions. Some of the publications are highly quoted, with more than 250 citations/paper. It is noteworthy to mention that Prof. Covic played a significant role as the principal investigator in the recently published CONVICE trial, a large randomized controlled trial across 61 centers from 8 countries, in which 1360 patients were randomized in a 1:1 ratio to receive either high dose hemodiafiltration or conventional hemodialysis. The primary outcome assessed in this trial was all-cause mortality, while key secondary outcomes included cause-specific mortality, fatal and nonfatal cardiovascular events, kidney transplant, and recurrent hospitalizations. The results of this groundbreaking study were presented at the latest European Renal Association Congress held in Milan and were simultaneously published in the prestigious *New England Journal of Medicine: Covic, A. et al., Effect of Hemodiafiltration or Hemodialysis on Mortality in Kidney Failure. NEJM, 2023.*

Another longitudinal study was published in 2020: *Inflammation is an amplifier of lung congestion by high lv filling pressure in hemodialysis patients: a longitudinal study. C. Torino, L. Gargani, R. Sicari, ..., A. Covic, et al., Journal of Nephrology, 33(3), 583-590, 2020.*

Due to his high expertise in the research field of objectively assessing fluid status in specific populations, Prof. Covic was invited to take part as Center Coordinator in a multicentric study funded by the European Renal Association (ERA-EDTA) entitled: **LUST** -Lung Water by Ultra-Sound Guided Treatment to Prevent Death and Cardiovascular Complications in High Risk End Stage Renal Disease Patients with Cardiomyopathy. This randomized trial (2013-2017) took place in 23 centers from Europe and had as a main intervention the lung ultrasound assessment in end-stage renal disease patients.

## **4) Independent researcher activity highlighted by successful project ideas: 7 as Project leader and 9 as Member.**

- Specifically related to collaborative projects, it is worth mentioning the project entitled Cross-border

integrated network for advanced health services in obesity, diabetes and metabolic disorders (OBDIA-NET) in partnership with Nicolae Testemițanu State University of Medicine and Pharmacy. The project managed to integrate and strengthen regional capacities by creating a network of excellence in the field of obesity/diabetes/nutrition pathologies. Prof. Covic occupied the Nephrology and kidney care center coordinator position and managed to create a differential diagnostic platform for patients with diabetes and CKD.

- Project coordinator for funded grant entitled: Long Term Cardio-Vascular Risk Assessment in CKD and Kidney Transplanted Patients Following SARS-COV-2 (CARDIO SCARS). **This is the first study aimed to evaluate the long-term CV risk after COVID-19 disease in CKD, dialysis or kidney transplanted patients** (Tapoi, L. et al., BMC Nephrol 23, 176, 2022). By using a holistic approach, this study contributed to a better understanding of the long-COVID syndrome and already improves the risk stratification in a special population that already associates an increased CV risk. We managed to enrol 168 patients in the COVID-19 arm that were evaluated at baseline (Tapoi, L., et al., European Heart Journal, 43 (2), 2022), 6 months follow-up (Tapoi, L. et al., Nephrology Dialysis Transplantation, 38(1), 2023), and 1 year (results to be published in the next months); more than 10 published papers.

- Management Committee Member (active) for Romania for **COST Action CA19127** project Cognitive decline in Nephro-Neurology: European Cooperative Target (2020-2024);

- Management Committee Member (active) for Romania for **COST Action CA18216** project Network For Research In Vascular Ageing (2019-2023);

- Project coordinator for national funded Project entitled: Lung ultrasound guided fluid management protocol for the critically ill patient: a randomized controlled trial. Achievements: a multi-centre, randomized controlled two-arm trial; **12 publications** in highly prestigious journals, namely BMC Medicine, Drugs, Hypertension, Trials and Nephrology Dialysis Transplantation (situated in Q1 region);

- Project coordinator for funded grant titled: Extravascular lung water monitoring by combined ultrasound and bioimpedance as a guide for treatment in hemodialysis cardiomyopathic renal patients. This specific research produced important results (**15 articles**), published as main author in top nephrology journals: Covic, A. et al., American Journal of Kidney Diseases, 64(1), 111-118, 2014; Covic, A. et al., Nephrology Dialysis Transplantation, 28(11), 2851-2859, 2013; Covic, A. et al. PLOS One, 10(8), 2015;

##### **5) Monitor the current state-of-the-art in renal related research by evaluating grants and publications:**

- Rapporteur and monitor (project monitoring process) for European Commission- European health and digital executive agency: HADEA.A- Health and Food. A.3- Health research, grant number 896932, project title: Personalisation of immunosuppression by monitoring viral load post kidney transplantation- a randomised controlled phase II trial (TTV Guide TX);

- Evaluator for American Society of Transplant Surgeons, Cardiff University, UK (2016); for PIVOTAL study at Renal Unit, King's College Hospital, London, UK (2012), etc.;

- Top reviewer in 2019, 2018 and 2017 in Medicine, Plos One, Clinical Medicine, Multidisciplinarity, Cross-field and Top reviewer for Romania in 2017. Prof. Covic is an Associate Editor for Nephrology Dialysis Transplantation- the leading nephrology journal in Europe and the official journal of the ERA-EDTA; Editor in Chief (Nephrology) for the International Journal of Urology and Nephrology, Editor-Section for BMC Nephrology, part of Springer Nature and Editor for Journal of Nephrology Research.

Prof. Covic is **Co-Chair of the European Guide**: Clinical practice guideline on the management of chronic kidney disease in frail or elderly patient and Co-Author of European Guide: Clinical Practice Guideline on management of older patients with chronic kidney disease stage 3b or higher (eGFR<45mL/min/1.73m<sup>2</sup>), and Position Statements (A European Renal Best Practice (ERBP) position statement on the Kidney Disease Improving Global Outcomes (KDIGO) Clinical Practice Guidelines on Acute Kidney Injury" and more others.

*Note: For each nominated person, please present the CV (uploaded as a single document of maximum 6 pages, saved with the name of the member, A4 format, Times New Roman font, 11-point font size, 1.15 line spacing and 2 cm margins).*

*Dr. Adrian Covic, Iasi, Romania*