Part A. PERSONAL INFORMATION

CV date	11/01/2023

First name	Vicente		
Family name	Andrés García		
Gender	Male	Birth date (dd/mm/yyyy)	03/06/1962
Social Security, Passport, ID number	DNI: 43.398.205B		
e-mail	vandres@cnic.es	URL Web: https://www.cnic.es/es/investigacion/fisiopatologia-cardiovascular-molecular-genetica	
Código ORCID		0000-0002-0125-7209	

A.1. Current position

Position	Group Leader (Full Prof.) & Director Basic Research Department		
Initial date	Since 1/09/2009 and 01/02/2015, respectively		
Institution	Centro Nacional de Investigaciones Cardiovasculares Carlos III (CNIC)		
Department/Centre	Novel mechanisms of atherosclerosis Program		
Country	Spain	Phone number	91 453 12 00 ext. 1502
Keywords	Cardiovascular Disease, Ageing, Progeria, Lamin A/C, Telomeres		

A.2. Previous positions (research activity interuptions, indicate total months)

Period	**Position/Institution/Country/Cause of the interruption**
1986-1987	Teaching Assistant, Dept. Biochemistry, School of Medicine, Univ. Barcelona, Spain
1986-1990	Graduate Student, Dept. Biochemistry, School of Medicine, Univ. Barcelona, Spain
1991-1994	Postdoctoral Fellow, Dept. Cardiology, and Dept. Pediatrics, Harvard Medical School, Children's Hospital and Harvard Univ., Boston, US
1994-1995	Postdoctoral Fellow, Division of Cardiovascular Research and Dept. Biomedical Research, St. Elizabeth's Medical Center, Tufts Univ., Boston, US
1995-1996	Assistant Investigator, Division of Cardiovascular Research and Dept. Biomedical Research, St. Elizabeth's Medical Center, Tufts Univ., Boston, US
1995-2000	Assistant Professor, Dept. Medicine, Tufts Univ., Boston, US
1996-1999	Investigator, Division of Cardiovascular Research and Dept. Biomedical Research, St. Elizabeth's Medical Center, Tufts Univ., Boston, US
1997-2003	Tenured Scientist, Biomedical Institute of Valencia (IBV), Spanish Council for Scientific Research (CSIC), Spain
2003-2005	Research Scientist, IBV-CSIC, Spain
2003-2009	Head of Dept. Molecular and Cellular Pathology and Therapy, IBV-CSIC, Spain
2005-2009	Full Professor, IBV-CSIC, Spain. On voluntary leave of absence since August 30, 2009

A.3. Education

PhD, Graduate Degree	**University/Country**	**Year**
BSc (Biology)	University of Barcelona/Spain	1986
PhD (*Biological Sciences)*	University of Barcelona/Spain	1990

Part B. CV SUMMARY *(max. 5000 characters, including spaces).* Dr. Andrés obtained his PhD in Biological Sciences from Univ Barcelona (1990). In his postdoctoral training at Children's Hospital/Harvard Univ (1991-1994) and St. Elizabeth's Medical Center/Tufts Univ (1994-1995), he led studies into the role of homeobox and MEF2 factors in processes of cellular differentiation and proliferation, and developed an interest in cardiovascular disease

(CVD). In 1995, he was appointed Assist. Prof. of Medicine at Tufts Univ. After obtaining a position as Tenured Scientist in the Spanish National Research Council (CSIC), Dr. Andrés returned to Spain in 1999 to establish his research group at the Institute of Biomedicine of Valencia, where he worked as a Full Professor and Head of the Department of Pathology & Molecular & Cellular Therapy (2003-2009). In September 2009, he moved to Madrid to lead the laboratory of Molecular and Genetic Cardiovascular Pathophysiology in the CNIC, where he has been Director of Basic Research Dept since 2015. His lab has identified cell cycle and transcription factors that regulate atherosclerosis & restenosis and biomarkers of these diseases (JACC 2010; Circ Res 1997/2003/2014; ATVB 2013/2013; Circulation 1999; JCI 1997/1998). His research has also unveiled mechanisms underlying physiological and premature aging & associated CVD with the goal of improving diagnosis & treatment (Genes Dev 2006; Circ Res 2006; J Cell Biol 2008/2009/2010; Aging Cell 2013/2019/2020; Circulation 2013/2018/2021; JACC 2016/2018/2020; EMBO Mol Med 2019; Cell Stem Cell 2019; Cardiovasc Res 2022). His translational research provides a framework for understanding how genes and environmental factors dictate aging & CVD with the ultimate goal of improving diagnosis & treatment. Dr Andrés received the 2010 Dr León Dumont Prize from the Belgian Society of Cardiology, and an Innovator Award (2012) and an Established Investigator Award (2014) from the Progeria Research Foundation (PRF). He is a member of PRF's Medical Research Committee since 2015, member of External Advisory Board in "Research for healthy Ageing" EC Project (H2020-WIDESPREAD-2018-2020 call, Horizon 2020) (2021-2023), member of the Advisory Board at Centro de Investigación en Trombosis, Univ Talca, Chile (since 2019), and has organized several PRF Workshops (2016/2018/2020/2022) and other international meetings such as two CNIC Conferences (2012/2019) and the workshop "The nuclear lamina in health and disease", Univ Internacional de Andalucía (2015).

Dr. Andrés supports actively the training of young investigators in the field of aging & cardiovascular translational research by supervising every year national & international students. He has supervised 15 doctoral thesis (+ 5 ongoing), 12 Master Course Final Projects (TFM) and 11 Grade Course Final Projects (TFG), and mentored 24 students from International Exchange Training Programs (ERASMUS, Saperi Senza Frontiere, etc) and 20 students from CNIC Training Programmes. He has extensive teaching experience having participated in more than 70 courses and master's degrees related to biotechnology, molecular biomedicine, among others, at different national and international universities.

Dr. Andrés´s involvement goes beyond the laboratory. He collaborates very actively with his research target users/patients. Patient associations such as Progeria Research Foundation (PRF, USA), Assoziacione Italiana Progeria Sammy Basso Onlus (Italy) and Asociación Progeria Alexandra Peraut (Spain) are partners of some of his projects, thus facilitating the dissemination of clinical and scientific advancements in progeria to the society. Other examples of outreach activities include dissemination in printed and digital press (eg, https://www.abc.es/salud/enfermedades/abci-atlas-mas-completo-corazon-humano-desvela-datos-mas-ocultos-este-organo-202009241841_noticia.html), audiovisual media (eg., Universidad de Talca, Chile: http://campustv.utalca.cl/?p=8464), radio (eg., "La linterna" de COPE), and through CNIC´s social networks (Facebook and Twitter).

Indicators of Quality in Scientific Production (Data from Web of Science, InCites and Journal Citation Reports on January 11, 2023

a) Total number of citations: 8,476 (47.35/document); Average number of citations during the last five years (2018-2022): 656 citations/year; **b)** Total number of documents in journals with impact factor in the Web of Science database: 157; 129 of them were published in first quartile journals (82.17% in Q1); 83 in the first decile (52.87% in D1); and 40 in the TOP3 of their category (25.48%); **c)** h-index: 49; **d)** 97.45% of Dr. Andrés' publications are original articles and reviews, and he is main author (first and/or (co)corresponding) in 71,24% of them; **e)** Categorized Normalized Citation Impact (CNCI): 2.41 (CNCI=1 represents performance at par with world average, CNCI values above 1 are considered above average, and CNCI values below 1 are considered below average); and **f)** Thesis supervised: 15 defended and 5 ongoing.

Part C. RELEVANT MERITS *(sorted by typology)*

C.1. Publications *(see instructions)*

Notes: 1) IF: impact factor in year of publication (except in articles published in 2022, for which the most recent data from JCR2021 are shown; **2) CR**: Category Rank. **3)** Dr. Andrés is corresponding author in all selected publications (*, co-corresponding authors); All papers in PubMed: https://www.ncbi.nlm.nih.gov/myncbi/1PkXr3CCzaP/bibliography/public/

Macías A, Díaz-Larrosa JJ, , **Andrés V** (position authorship: 13/13). Paclitaxel mitigates structural alterations and cardiac conduction system defects in Hutchinson-Gilford progeria syndrome. ***Cardiovasc Res*** 118:503-16 (2022). **IF:** 14.239 **(D1). CR:** 10/143.

Sánchez-López A, Espinós-Estévez C, ……, **Andrés V** (position authorship: 16/16)**.** Cardiovascular progerin suppression and lamin A restoration rescues Hutchinson-Gilford progeria syndrome. ***Circulation*** 144:1777-94 (2021). **IF:** 39.922 **(D1, TOP3). CR:** 1/67.

Fanjul V, ……, López-Otín C*, **Andrés V*** (position authorship: 12/12). Identification of common cardiometabolic alterations and deregulated pathways in mouse and pig models of aging. ***Aging Cell*** 19(9):e13203. doi: 10.1111/acel.13203 (2020). **IF:** 9.304 **(D1). CR:** 4/53.

Hamczyk MR, Nevado RM, Barettino A, Fuster V, **Andrés V.** Vascular Aging: Biological versus chronological aging: JACC Focus Seminar. ***J Am Coll Cardiol*** 75:919-30 (2020). **IF:** 24.093 **(Q1; D1). CR:** 4/142. **Highly Cited Paper (publication amongst the 1% most cited worldwide, per category and year, considering citations in last 10 years)**

Hamczyk MR, Villa-Bellosta R, Quesada V, Gonzalo P, Vidak S, Nevado RM, Andrés-Manzano MJ, Misteli T, López-Otín C*, **Andrés V.*** Progerin accelerates atherosclerosis by inducing endoplasmic reticulum stress in vascular smooth muscle cells. ***EMBO Mol Med*** 11(4).pii:e9736. doi: 10.15252/emmm.201809736 (2019) **IF:** 8.821 **(D1). CR:** 9/139.

Hamczyk MR, Villa-Bellosta R, Gonzalo P, Andrés-Manzano MJ, Nogales P, Bentzon JF, López-Otín C, **Andrés V**. Vascular smooth muscle-specific progerin expression accelerates atherosclerosis and death in a mouse model of Hutchinson-Gilford progeria syndrome. ***Circulation*** 138:283-6 (2018). **IF:** 23.054 **(D1, TOP3). CR:** 1/65

Hamczyk MR, del Campo L, **Andrés V**. Aging in the cardiovascular system: Lessons from Hutchinson-Gilford progeria syndrome. ***Ann Rev Physiol*** 80:27-48 (2018). **IF:** 17.902 **(D1, TOP3). CR:** 2/81.

Rivera-Torres J, …., **Andrés V** (position authorship: 22/22). Cardiac electrical defects in progeroid mice and Hutchinson-Gilford progeria syndrome patients with nuclear lamina alterations. ***Proc Nat. Acad Sci.*** USA 113: E7250-59 (2016) **IF:** 9.661 **(D1). CR:** 4/64.

Fernández-Alvira JM, Fuster V*, Dorado B, Soberón N, Flores I, Gallardo M, Pocock S, Blasco MA & **Andrés V.*** Short telomere load, telomere length & subclinical atherosclerosis in the PESA study. ***J Am Coll Cardiol*** 67:2467-76 (2016) **IF:** 19.896 **(D1, TOP3). CR:** 2/126.

Villa-Bellosta R, Rivera-Torres J, Osorio FG, Acín-Pérez R, Enriquez JA, López-Otín C, **Andrés V**. Defective extracellular pyrophosphate metabolism promotes vascular calcification in a mouse model of Hutchinson-Gilford progeria syndrome that is ameliorated on pyrophosphate treatment. ***Circulation*** 127:2442-51 (2013) **IF:** 14.948 **(D1, TOP3). CR:** 1/65.

C.2. Congress, indicating the modality of their participation (invited conference, oral presentation, poster). Dr. Andrés has been invited to give talks in 57 international and 51 national meetings. Recent invited lectures in international meetings:

Andrés V. Cardiovascular disease in HGPS: new preclinical models and mechanisms. 8th EUROBIOTECH Congress (Session: Medical biotechnology of rare diseases). Cracovia, Poland. 20-22/06/2022

Andrés V. How to protect the heart against multiple comorbidities in ageing. Frontiers in Cardiovascular Biomedicine 2022 Congress/European Society of Cardiology (Session: Novel concepts in cardiac protection in the ageing heart). Budapest. 29/04/2022- 01/05/2022

Andrés V. (KEYNOTE SPEAKER). Mechanisms of accelerated cardiovascular disease and premature aging in HGPS. 86th Annual Scientific Meeting of the Japanese Circulation Society (Symposium "Basic Biology of Aging"). Online. 11-13/03/2022

Andrés V, Espinós C, Prados B, Giovinazzo G, Eckhard W, Benedicto I, Dorado B. A pig model for HGPS. 19th Int. Congress on Animal Reproduction. Bolonia, Italy. 26-30/06/2022

Andrés V. **(KEYNOTE SPEAKER).** New animal models to investigate molecular and cellular mechanisms of cardiovascular disease and premature aging in HGPS. 6th World Congress Tissue Engineering and Regenerative Medicine Int. Society (TERMIS). Online.15-19/11/2021

C.3. Research projects, indicating your personal contribution.

International

Identification of biomarkers to monitor the progression of HGPS ("ProgerOmics"). **Funding body:** Instituto de Salud Carlos III (EU EJP Rare Diseases Joint Transnational call 2017) (EJPRD22-049). **Coordinator:** V. Andrés. **Start-end:** 01/01/2023-31/12/2026. **Amount:** 249.865 € (for V. Andrés lab); 1.123.077 € (for whole consortium)

Exploring new therapeutic strategies in HGPS preclinical models (AC17/00067). **Funding body:** Instituto de Salud Carlos III (EU H2020 E-Rare joint transnational call 2017). **Coordinator:** V. Andrés. **Start-end:** 01/01/2018-31/12/2020. **Amount:** 149.919 € (for V. Andrés lab); 797.744 € (for whole consortium)

Exploring new pathways in age-related heart diseases (AC16/00091). **Funding body:** Instituto de Salud Carlos III (EU H2020 ERA-CVD joint transnational call 2016). **Co-PIs:** V. Andrés, V. Fuster. **Start-end:** 01/01/2017-31/12/2019. **Amount:** 99.825 €

Generation of a HGPS knock-in pig model to expedite the development of effective clinical applications (PRF 2014-52). **Funding body:** Progeria Research Foundation. **PI:** V. Andrés. **Start-end:** 1/11/2014-31/10/2017. **Amount:** 300.000 $

Living Photonics: Monitoring light propagation through cells (LiPhos) (STREP Project Grant agreement no. 317916). **Funding body:** Directorate General Research, EC, FP7/2007-2013. **Co-PIs CNIC:** V. Andrés, V. Fuster, B. Ibáñez. **Start-end:** 01/11/2012-31/10/2015. **Amount** CNIC: 310.250 €

National

Centro de Excelencia Severo Ochoa **(Institutional grant)** (CEX2020-001041-S). **Funding body:** Spanish Ministry of Science & Innovation. **Scientific Director:** V. Andrés. **Start-end:** 01/06/2022-31/12/2025. **Amount:** 4.000.000€

Identification of new mechanisms of aging and cardiovascular disease regulated by A-type lamins (PID2019-108489RB-I00). **Funding body:** Spanish Ministry of Science & Innovation. **PI:** V. Andrés. **Start-end:** 01/06/2020-30/05/2023. **Amount:** 338.800€

Role of nuclear A-type lamins in cardiovascular disease and aging (SAF2016-79490-R). **Funding body:** Spanish Ministry of Economy and Competitiveness. PI: V. Andrés. **Start-end:** 30/12/2016-29/12/2019. **Amount:** 471.900€

Centro de Investigación Biomédica en Red Enfermedades Cardiovasculares (CIBERCV) (group CB16/11/00405). **Funding body:** Instituto de Salud Carlos III. **PI:** V. Andrés. **Star-end:** Renewals after annual evaluation. **Amount:** 341.775,89€ (since 2017)

Centro de Excelencia Severo Ochoa **(Institutional grant)** (SEV-2015-0505). **Funding body:** Spanish Ministry of Economy & Competitiveness. **Scientific Director:** V. Andrés. **Start-end:** 2016-2019. **Amount:** 4.000.000€

C.4. Contracts, technological or transfer merits

Research contracts with private companies

Identification of genetic polymorphisms in p21, p27, and p57 as risk factors for post-stent coronary restenosis. **Company:** Fina Biotech, S.L.U. **PI:** V Andrés. **Start-end:** 16/09/2005-11/01/2009. Amount: 144.394 €

Validation of genetic markers for risk of post-stent coronary restenosis. **Company:** Fina Biotech, S.L.U. **PI:** V. Andrés. **Start-end:** 15/10/2012-15/01/2013. **Amount:** 23.831 €

Patents and other IPR

Genetic markers of the risk of developing restenosis. **Inventors:** **Andrés V**, Silvestre C, Fernández P, Sánchez PL, Fernández-Avilés F, Chaves FJ. **Patent No:** 200900507. **Priority Country:** Spain. **Priority Date:** 24-02-2009. **Grant Date:** 24-06-2011 (Spanish patent). **Holder entity:** Fina Biotech SLU. **Granted:** US Patent Office (US 12/392,054)

Optic device and Method for Detecting Cardiovascular Disease. **Inventors:** Ackerman T, Muñoz X, Llobera A, **Andrés V**, Dorado B, Rius C. **Patent No:** 62156598 (Application Number) - US/641.1094 (US Patent Office). **Priority Country:** USA. **Priority Date:** 4/05/2015. **Holder entity:** CNIC, CSIC; **Status:** Abandoned

Biophotonic device and methods of use. **Inventors:** Ackerman T, Muñoz X, Llobera A, Rodríguez-Ruiz I, Alvárez ME, **Andrés V**, Dorado B, Rius C, Simonsen U, Röge ME, Schou MH. **Patent No:** EP15382607.8 (Spanish Patent Office). **Priority Country:** Spain. **Priority Date:** 4/12/2015. **Holder entitys:** CNIC, CSIC; **Status:** Abandoned