歐盟心血管疾病計畫跨國公開徵求計畫書
(Cardiovascular Diseases – CVD – JTC2017)

計畫網址: www.ERA-CVD.eu

線上申請網址:https://secure.pt-dlr.de/ptoutline/app/eracvd_jtc2017

壹、 緣起

歐盟 Horizon 2020 心血管疾病研究計畫(**C**ardio**V**ascular **D**iseases - **CVD**)乃透過歐盟研究總署整合歐洲各國研發經費，共同投入之跨國心血管疾病研究計畫。各國之 Funding Agency 自行編列研究經費補助自己國家的研究人員，促成心血管疾病跨國研究團隊之形成，避免資源重複投資，集各國家所長共同研究。

科技部參與歐盟 CVD 計畫，與歐洲各國同步公開徵求計畫書，細節請參閱 CVD 計畫網站(**www.ERA-CVD.eu - 建議用 IE 開啟**)英文版之 **Call Text Document 及 Guidelines for Applicants**，本次公開徵求之主題為:

Mechanisms of early atherosclerosis and/or plaque instability in Coronary Artery Disease

貳、 歐盟 CVD 計畫參與之機構

- Belgium, Flemish Region: Research Foundation Flanders (FWO)
- Estonia: Estonian Research Council (ETAg)
- France: French National Research Agency (ANR)
- Germany: Federal Ministry of Education and Research (BMBF)
- Israel: Chief Scientist Office of the Ministry of Health (CSO-MOH)
- Italy: Italian Ministry of Health (MoH-IT)
- Latvia: State Education Development Agency (VIAA)
- Norway: The Research Council of Norway (RCN)
- Poland: National Centre for Research and Development (NCBR)
- Portugal: Ministry of Health Portugal (MS)
- Romania: Autoritatea Naţională pentru Cercetare Ştiinţifică şi Inovare (ANCSI)
- Slovakia: Slovak Academy of Sciences (SAS)
- Spain: National Institute of Health Carlos III (ISCIII)

- Taiwan: Ministry of Science and Technology (MoST)
- The Netherlands: Dutch Heart Foundation (DHF)
- The Netherlands: The Netherlands Organization for Health Research and Development (ZonMw)
- Turkey: The Scientific and Technological Research Council of Turkey (TÜBITAK)

參、 申請資格

一、 公私立大專校院、公立研究機構。
二、 經科技部認可之財團法人學術研究機構、醫療社團法人學術研究機構。
三、 計畫主持人需符合「科技部補助專題研究計畫作業要點」規定。

肆、 補助經費

我國研究團參與CVD研究計畫並獲審查通過後，得向本部提出經費補助之申請，本部比照歐盟計畫方案辦理補助每件獲審查通過之 CVD 研究計畫:

一、 補助上限: 新台幣 300 萬元/年。
二、 計畫期限: 最多不超過 3 年。
三、 實際補助金額經科技部進行經費審查後核定。

伍、 補助項目

一、 國外差旅費(含移地研究費)。
二、 業務費: 研究人力費(含專任助理、研究生或助理津貼、臨時工資等)、耗材、物品及雜項費用，及補助國外學者來台費用。
三、 管理費 (上限 8%)。

陸、 計畫件數

一、 我方計畫主持人參與歐盟計畫(3 國以上所組成之跨國研究型計畫)得以 1 件計畫不算件數。

二、 申請人目前主持 2 件本部「雙邊協議專案型國際合作研究計畫」，且其計畫執行日期均與本次徵求案之預定執行迄日重疊達 3 個月以上者，得不受理辦理補助。

柒、 申請方式及運作模式

一、 所有歐盟 CVD 計畫之 Funding Agency 同步於 **2017 年 1 月 16 日**公開徵求計畫書 Pre-Proposal，並將於 **2017 年 3 月 6 日 16:00** (Central European Time)截止收件，每 1 件計畫書必須由多國團隊所組成，並委任 1 位擔任計畫主持人 Coordinator，共同撰寫 1 份計畫申請書，並統一由計畫主持人 Coordinator 線上提出申請。

CVD 計畫線上申請系統網址如下，**有意申請計畫者請先至下列網址先行註冊一個帳號**。

網址: https://secure.pt-dlr.de/ptoutline/app/eracvd_jtc2017

二、 我國研究人員欲申請 CVD 計畫者，請自行從參與國/區域中尋求合作夥伴，自行媒合並組成團隊共同申請[1]。獲審查通過推薦之 CVD 研究計畫，將由參與歐盟 CVD 計畫之 Funding Agency 自行補助自己國家研究團隊所需之經費，我國之研究團隊/人員所申請或參與之計畫如獲推薦者，則由科技部補助所需之研究經費。

三、 請依附件 Pre-Proposal 格式完成構想申請書，於 **2017 年 3 月 6 日前(Central European Time – CET 16:00 前)上傳[2] Pre-Proposal 至 CVD 計畫線上申請系統**；並以 Email 方式寄至科技部陳禹銘博士 (email: ymchen@most.gov.tw)。

四、 1 件計畫只需線上提送 1 份計畫申請書(由多國團隊共同撰寫)，故如我國研究人員與歐洲研究人員共同組成 1 隊並由歐洲人員擔任計畫主持人(Coordinator)，則由歐洲計畫主持人(Coordinator)線上一併提出 Pre-Proposal，我方則配合計畫團隊所需提供計畫相關資料；如我國乃計畫之計畫主持人(Coordinator)，則必須協調歐洲團隊提供資料並由我方於指定時間內線上提出申請。

五、 請按照 CVD 網站(**www.ERA-CVD.eu**) 上所提供之 Pre-Proposal

[1]可於 CVD 網站(**www.ERA-CVD.eu**)上表達尋求夥伴之需求。
[2]申請一律採線上作業，由 CVD 網站上繳交送出。

及 Final Proposal 表格及格式填寫，並確認計畫申請書符合 **Guidelines for Applicants** 內描述有關 Pre-Proposal Structure 及 Final Proposal Structure 等相關規定。未符合申請「表格及格式」之規定(例如:字數或頁數超過上限或擅自調整字型、大小、頁邊界限等)則無法通過資格審查(Eligibility Check)，未通過資格審查之計畫申請書則無法進入學術審查階段。

六、 計畫申請將透過 2 階段審查: 分別為第 1 階段 Pre-Proposal 及第 2 階段 Final Proposal。第 1 階段 Pre-Proposal 是先由各 CVD 計畫之參與國/機構所組成，執行資格審查 (Eligibility Check)，每件通過資格審查之計畫將委請中立專家審查委員進行書面審查。通過第 1 階段 Pre-Proposal 審查之計畫才會被邀請撰寫 Final Proposal。

七、 第 1 階段 Pre-Proposal 之審查:每件計畫將分配 2 位審查委員[3]，書面審查完畢後會產生 1 份計畫優先推薦排序表。後續 CVD 計畫參與國之 Funding Agency 將於召開 Pre-Proposal Meeting 時討論並決定通過 Pre-Proposal 之件數。

八、 通過 Pre-Proposal 之計畫將會由 CVD 計畫委員會正式發信通知，並將邀請計畫主持人於 **2017 年 6 月 23 日 16:00 CET (Central European Time)** 前於 CVD 計畫線上申請系統上繳交 Final Proposal。

九、 每件 Final Proposal 經審查委員審查完畢後，會開放一段時間(一個星期)讓每件計畫主持人評論(答辯)審查委員的意見或回應審查委員的問題(但審查委員所給的分數將不會開放給計畫主持人查閱)。審查委員將會以匿名方式在線上系統呈現。計畫主持人僅能回應審查委員的意見或問題，其餘不相關的部分則不得回應，計畫書內容或工作規劃亦不能再修改或變更，計畫書亦不得再重送。

十、 如計畫主持人選擇回應審查委員的意見(僅限在 Final Proposal Phase)，必須在 2017 年 8 月 14 日至 8 月 21 日間在線上系統內回答 (Optional) 。

[3] Pre-Proposal 由各國推薦之中立專家學者審查。

十一、 通過 Final Proposal 審查[4]獲推薦之計畫將於 CVD 網站上公告，計畫獲推薦之主持人亦會收到正式書信通知，如我國所參與之計畫經 Final Proposal 審查後獲推薦者，經聯繫科技部承辦人後可透過科技部線上專題研究計畫系統提出申請(隨到隨審)，並由科技部進行經費審查後核定補助經費。

十二、 重要日期時間表

下表為 CVD 委員會暫定之時間表，如執行期間有修正，將透過會員國表決通過後，在 CVD 網站上公告更新時程。

Stage	Date
Publication of the JTC 2017	16th January 2017
Submission deadline for pre-proposals (at least 60 days)	6th March 2017
Eligibility check (JCS and participants)	6th – 16th March 2017
Send pre-proposals to SEB	20th March 2017
Return of SEB members evaluation sheets	19th April 2017
1st SEB & CSC meeting	27th April 2017
Send pre-proposals having associated partners, if positively reviewed to associated partner	16th May 2017
Communication selection of pre-proposals	16th May 2017
Submission deadline for full proposals	23rd June 2017
Return of SEB members and external experts evaluation sheets	9th August 2017
Deadline for rebuttal (1 week)	21th August 2017
Send rebuttals and external votes to SEB	30th August 2017
Deadline for submission of funding commitment for project partners from associated partners (if necessary)	5th September 2017

[4] Final Proposal 除了 Pre-Proposal 之審查委員審查外，並配予 2 位外部 (External Reviewer) 專家審查。

2nd SEB meeting, CSC meeting	13th/14th September 2017
Final funding decision consortium	Mid October 2017
Submission of relevant documents to EC (ranking list, observers report, joint selection list, signed commitment of national funds)	
Feedback from EC	
Funded projects start	April 2018

捌、 本次歐盟 CVD 計畫公開徵求計畫之主題

Coronary Artery Disease (CAD), including stable angina pectoris and acute coronary syndromes, is caused by atherosclerosis and plaque formation in the walls of the coronary arteries, which supply blood to the heart. Despite the discovery and management of many risk factors, complications of atherosclerosis remain high and are nowadays the leading cause of cardiovascular morbidity and mortality worldwide (WHO, global burden of disease). This indicates that i) additional pathophysiological mechanisms still require to be uncovered, ii) prevention can be significantly improved, and iii) efforts should be made to fill the gap between basic research and clinical practice.

ERA-CVD intends to address these challenges by a Joint Transnational Call for proposals (JTC 2017) focused on:

"Mechanisms of early atherosclerosis and/or plaque instability in Coronary Artery Disease"

The JTC 2017 aims at enabling scientists in different countries to build an effective collaboration on common multidisciplinary research projects based on complementarities and sharing of expertise in the field of coronary artery disease, with a clear translational research approach.

Supported projects are expected to have a concrete impact in the early recognition and prognosis of CAD and will be of help at identifying those individuals /patients who will likely develop acute events in the near future (0-12 months).

Transnational research proposals must cover at least one of the following two sub-topics, which are equally relevant for this call, in relation to early recognition of CAD:

- **exploration of mechanisms leading to plaque instability**, including the role of genetic factors, nutritional and gut microbiota giving mechanistic insights into the development, progression or plaque instability;
- **improvement of imaging techniques as well as validation of biomarkers** (genetic, epigenetic, lipidomic, proteomic, metabolomics, microbiota), leading to earlier recognition of risk and/or protective factors. Biomarkers are characteristics that are measured as an indicator of a biological or pathological process, or of a pharmacological response. Validation studies must provide published data on the sensitivity of the biomarker in question and may apply for further specificity, bio-analytical assessment, probability of false positives or false negatives and Pharmacokinetic-Pharmacodynamic (PK-PD) model validation steps.

Additionally, each proposal should consider the following cross-sectional aspects:

- **interdisciplinary approach**, e.g. integrating biomedicine, physics, chemistry, mathematics, systems biology and clinical medicine for the development of the applications;
- **research on sex/gender differences** in order to give further mechanistic insights into the development of the disease, its progression and to identify difference in treatment responses;
- **Translational research approach/perspective**.

The research proposals should be built on an effective collaboration between the different research participants from different countries. Project proposals must clearly demonstrate the potential scientific impact as well as the added value of transnational collaboration: sharing of resources (models, databases, diagnosis etc.), harmonisation of data, sharing of specific know-how and/or innovative technologies, etc.

Each transnational collaborative project should represent the critical mass to achieve ambitious scientific goals. Consortia are encouraged to demonstrate engagement with clinics, SME or Pharma and Patient organisation for its active participation including areas of collaboration, sharing of resources, capabilities and expertise, in order to ensure an efficient transfer of pre-clinical results into clinical utility.

玖、CVD 不受理下列類型之研究計畫書

- Interventional clinical trials;
- Building up of new cohorts, registries and/or biomaterial banks;
- Neurological aspects (stroke);
- Research that primarily leads to cardiovascular risk management instead of early diagnosis. Risk management is understood as long term health improvement and/or CAD prevention strategy;
- Conducting screenings.

拾、注意事項

一、 每件計畫必須由**最少 3 個及最多 5 個 CVD 計畫參與國之團隊所組成**。**每件計畫**所組成之標準原則是**1 國最多僅能派出 1 隊參與**。

二、 如計畫已有 **5 個 CVD 計畫參與國之團隊所組成(1 國組 1 隊)**且該計畫的參與團隊中並未包含下列國家的團隊者，如欲增加或整併下列國家之研發團隊入計畫者，該計畫則可以接受由最多 6 個 CVD 計畫參與國之團隊所組成。

國家: Estonia, Latvia, Poland, Romania, Slovakia, Slovenia and Turkey。

亦即:

(一) 如計畫團隊中並未包含上述國家團隊者，最多能由 5 個 CVD 計畫參與國之團隊所組成。

(二) 如計畫團隊中包含 1 隊上述國家團隊者，最多能由 6 個 CVD 計畫參與國之團隊所組成。

三、 每件計畫亦可以接受 **1 個「非」CVD 計畫參與國之團隊**所組成(惟仍必須符合基本條件:至少已有 3 個團隊來自於 CVD 計畫參與國)，前提是該團隊必須在計畫書內清楚敘明所需研究經費將自籌，並在 Final Proposal 階段時能夠提出正式書面證明自籌經費來源，及擔保計畫所需之執行經費可以取得。

四、 綜整上述之組隊規則: 每件計畫最多可以有 7 個團隊所組成(分別由 7 個不同國家所組成，其中 1 隊為「非」CVD 計畫參與國之團隊，其他 6 隊為 CVD 計畫參與國之團隊，且這 6 隊來自於 CVD 計畫參與國之團隊必須包含 1 個團隊來至於 Estonia, Latvia, Poland, Romania, Slovakia, Slovenia 或 Turkey.

五、 每件 CVD 研究計畫必須有 1 位計畫主持人(Coordinator)，且計畫主持人必須由 CVD 計畫參與國家中的團隊擔任，我國亦可擔任 CVD 研究計畫之計畫主持人(Coordinator)。

六、 擔任計畫主持人者，最多僅能參與 1 件計畫，不得同時申請或參與兩件計畫。

七、 每件計畫執行期限最多不超過 3 年，但可以接受計畫團隊中有些歐洲團隊僅能從自己國家的 Funding Agency 獲取低於 3 年的經費資助，故該團隊參

與計畫的期程不滿 3 年。

八、 CVD 計畫審查將針對每個審查要點採分數制(0-5 分)辦理，例 3.5 分則介於 Good and Very Good:

0 分	The proposal fails to address the criterion in question, or cannot be judged because of missing of incomplete information
1 分	The proposal shows serious weaknesses in relation to the criterion in question
2 分	The proposal generally addresses the criterion, but there are significant weaknesses
3 分	The proposal addresses the criterion in question well but improvements are necessary
4 分	The proposal addresses the criterion very well but small improvements are possible
5 分	The proposal successfully addresses all aspects of the criterion in question

審查要點 1: Excellence

a. Clarity and pertinence of the objectives
b. Credibility of the proposed approach and methodology
c. Soundness of the concept
d. Innovative potential
e. Competence and experience of participating research partners in the field(s) of the proposal (previous work in the field, specific technical expertise)

審查要點 2: Impact

a. Potential of the expected results for future clinical, public health and/or other socio-economic health relevant applications including patients' needs
b. Added-value of transnational collaboration: gathering a critical mass of patients/biological material, sharing of resources (models, databases, diagnosis etc.), harmonization of data, sharing of specific know-how and/or innovative technologies, etc.
c. Effectiveness of the proposed measures to exploit and disseminate the project results (including management of intellectual property rights - IPR), to communicate the project, and to manage research data where relevant
d. Industry and Patient Organization participation/engagement (when appropriate/applicable)

審查要點 3: Quality and efficiency of the implementation

a. Coherence and effectiveness of the work plan, including appropriateness of the allocation of tasks, resources and time-frame
b. Complementarity of the participants within the consortium
c. Appropriateness of the management structures and procedures, including risk and innovation management

d. Budget and cost-effectiveness of the project (rational distribution of resources in relation to project's activities, partners responsibilities and time frame)

Sub-criteria 2a and 2b will be prioritized for assessing the impact of proposals (pre- and full proposal stage). (當有 2 件計畫獲得同分數時，將會採用審查要點 **2a 及 2b** 的分數來排列計畫的優先推薦順位，審查要點 **2a 及 2b** 分數高則列為優先推薦) 。

Sub-criteria 2d, 3c, 3d will be taken into account only for the full proposal evaluation step. (審查要點 **2d, 3c 及 3d** 不適用於 Pre-Proposal 審查，僅會於 Final-Proposal 審查時實施)。

Evaluation scores will be awarded for the 3 main criteria, and not singularly for the different aspects listed below the criteria. Each criterion will be scored out of 5. The threshold for individual criteria will be 3. The overall threshold, applying to the sum of the three individual scores, will be 12. The maximum score that can be reached from all three criteria together is 15 points.

九、 通過審查且獲得補助之計畫團隊必須簽署團隊協議: It is mandatory for a funded research project consortium to sign a consortium agreement (CA), addressing the issues indicated in the document "Guidelines for Applicants", including Intellectual Property Rights (IPR) issues. The research consortium is strongly encouraged to sign this CA before the official project start date. In any case the CA has to be signed no later than six months after the official project start date.

十、 智慧財產歸屬計畫團隊中之研究機構: Results and new IPR resulting from projects funded through the CVD will be owned by the researchers' organizations according to international/national/regional rules on IPR. If several participants have jointly carried out work generating new IPR, they shall agree amongst themselves (CA) as to the allocation of ownership of IPR, taking into account their contributions to the creation of those IPR as well as the European Commission´s guidelines on IPR issues.

十一、每件獲 CVD 補助之研究計畫，計畫主持人必須於每年度計畫結束後 2 個月內繳交期中報告，並於計畫結束後 6 個月內繳交期末報告給 Portugal: Foundation for Science and Technology (FCT)。FCT 負責管考所補助之 CVD 計畫。所有報告必須用英文撰寫。計畫成員必須配合計畫主持人之協調繳交英文計畫報告資料。

十二、 每件獲補助之 CVD 研究計畫，其計畫主持人或是分項計畫主持人可

能會被邀請出席(期中或期末討論會/Symposium)報告計畫執行情形。故計畫主持人應於經費編列上先行考量到未來出國之需求，並先行編列出國差旅費。

十三、 **計畫主持人應先行編列出國差旅費用以利支應計畫內之年輕研究人員(博士生、博士後、取得博士或碩士學位超過兩年並低於 10 年之計畫人員[5])出席 CVD 計畫各國 Funding Agency 擬規劃辦理予年輕研究人員之研習及培育活動。**

十四、 本部核定通過之 CVD 研究計畫，請依本部專題研究計畫相關規定繳交研究成果及結案報告(建議用英文書寫，因為 CVD 研究計畫團隊會向計畫成員索取 1 份)。本部亦得請計畫主持人至本部指定場合口頭報告，或配合本部辦理實地考評審查。

十五、 本徵求公告未盡事宜，應依「科技部補助專題研究計畫作業要點」、「科技部補助專題研究計畫經費處理原則」及其他相關規定辦理。

十六、 申請本計畫無申覆機制，一切依照歐盟制定之審查機制及各國公認的程序及方式辦理(與所有參與 CVD 計畫會員國適用相同標準)。

拾壹、承辦人

陳禹銘博士/Louis Chen
科技部科國司
電話:02-2737-7959
Email: ymchen@most.gov.tw

[5] 以本公告 Pre-Proposal 截止收件日前為基準。