



**Chemical Sciences**

## **Cooperation US - International Collaboration in Chemistry (ICC)**

**Joint NWO/NSF Call for Proposals, 2010-2011**



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# 1 Introduction

**The National Science Foundation (NSF) and Netherlands Organisation for Scientific Research (NWO) seek to enhance opportunities for collaborative activities in chemistry between investigators working in the US and The Netherlands. The NSF Division of Chemistry and NWO Division for Chemical Sciences will accept *new* bilateral collaborative research proposals between chemists from the US and The Netherlands who work in academic institutions.**

In April 2010, a collaboration agreement between NWO and NSF has been signed to make International Collaboration in Chemistry (ICC) possible. NWO participates with this call for the first time in the ICC programme. Other partnered foreign agencies that make new bilateral collaborations between US investigators and investigators from abroad possible are DFG (Germany), FWF (Austria), EPSRC (United Kingdom), NSFC (China), ANR (France), JSPS (Japan), RFBR (Russia), FNR (Luxembourg) and MICINN (Spain).

NWO Chemical Sciences (CW) has no fixed funds available for support of ICC projects in this call; however CW aims to grant at least four projects of excellence. The NSF has not set aside funds for this solicitation. It funds its ICC projects by competing these projects with other unsolicited proposals received by the NSF Division of Chemistry's programmes. The number of awards depends on the quality of submitted proposals.

The Dutch part of ICC project grants are awards of € 260,000, plus € 5,000 per year for project exchange activities, intended for excellent collaborative chemical research with chemists from the US. Joint applications can be submitted by researchers at Dutch universities or research institutes acknowledged by NWO, who satisfy the conditions (see section 3.1), and by US investigators. Together these grants offer the opportunity to carry out high-quality, curiosity-driven research in molecular chemistry, chemistry or chemical technology in an international setting. This allows creative and daring ideas to be pursued, the seeds of future research themes to be sown and/or scientific innovations to be realized. The funding can be used for personnel, consumables, equipment and project exchange activities.

The proposed ICC projects must have clear relevance to areas supported by both NWO and NSF Divisions of Chemistry.

Research areas supported by the NSF Division of Chemistry's programmes are: Chemical Synthesis (SYN), Chemical Catalysis (CAT), Theoretical, Modeling and Computational methods (TMC), Chemical Measurement and Imaging (CMI), Chemical Structure, Dynamics and Mechanisms (CSDM), Macromolecular Supramolecular and Nanochemistry (MSN), Environmental Chemical Sciences (CLP) and Chemistry of Life Processes (CLP). A detailed description of these programmes can be found at: <http://www.nsf.gov/div/index.jsp?div=CHE>.

NWO Chemical Sciences promotes research in the following three focal areas:

- Chemistry in relation to Biological/Medical sciences
- Chemistry in relation to Physics/Materials
- Chemistry in relation to Technology/Sustainability

More information of the focal areas can be found at:  
[http://www.nwo.nl/nwohome.nsf/pages/NWOP\\_6EEDU7\\_ENG](http://www.nwo.nl/nwohome.nsf/pages/NWOP_6EEDU7_ENG).

## 2 Aim

The International Collaboration in Chemistry programme aims to realize both the NWO and NSF strategic goals of developing a diverse, globally-engaged, science and engineering workforce. The programme also encourages the development and use of cyber infrastructure to increase the level of synergy of the proposed projects. It can enable the communities to address scientific problems of unprecedented complexity; leverage resources by facilitating the sharing of instrumentation, data, and expertise; and broaden participation. (The NSF Division of Chemistry has established a website to describe cyber-enabled chemistry, see [www.nsf.gov/chem/cyber](http://www.nsf.gov/chem/cyber)).

This call addresses the criteria that are of relevance to the Dutch investigators. The full NSF ICC Programme solicitation can be found at: [http://www.nsf.gov/publications/pub\\_summ.jsp?WT.z\\_pims\\_id=13627&ods\\_key=nsf10606](http://www.nsf.gov/publications/pub_summ.jsp?WT.z_pims_id=13627&ods_key=nsf10606).

## 3 Guidelines for applicants

Proposals to this cooperative activity comprise two portions submitted as a single proposal: the portion including the joint scientific research project and specific details requested from the US partner is submitted in the usual manner to the NSF. The portion with specific details of the Dutch partner is submitted as a supplementary document to the first portion of the proposal. Proposals must be submitted to NSF by the US investigator.

These guidelines for applicants refer to information and criteria that apply for Dutch investigators.

### 3.1 Who can apply

All criteria below apply to the main applicants as well as all co-applicants:

- Professors, associate professors and assistant professors as well as other researchers holding a similar appointment can apply if they:
  - are employed at a Dutch University or a research institute acknowledged by NWO, and
  - have at least a master's degree in science or engineering or an equivalent qualification, and
  - have an employment contract for at least the duration of the application procedure and the duration of the research the grant is applied for. For co-applicants an exception can be made if the applicants can prove that adequate supervision of all researchers for whom funding is applied can be guaranteed for the full duration of the grant.
- Maximum one proposal per applicant in response to this solicitation is accepted.

### 3.2 What can be applied for

- The project duration would typically be three years for the US and Dutch side of the collaboration. However, if the project scope is clearly extended and convincingly explained, a four year project for a PhD student appointment is welcomed as well.
- The maximum budget for an ICC grant is maximum € 260,000 plus € 5,000 per year for project exchange activities.
- The grant can be used for temporary personnel, consumables, equipment related to the research proposal and project exchange activities.
- The grants are paid as a lump sum once per year over the duration of the grant. Personnel costs are subsidized in accordance with the most recent 'Agreement on Employers' responsibilities NWO - VSNU'. An estimation of the maximum amounts (including a bench fee for among others travel and promotion costs):  
PhD student (4 yr) - k€ 205, post-doc 1 yr - k€ 66, post-doc 2 yr - k€ 134, post-doc 3 yr - k€ 202.

### 3.3 When can applications be submitted

The deadline for the submission of preliminary proposals is 5 November 2010 and of full proposals 19 January 2011 (5 p.m. of the US proposer's local time). Proposals should be received no later than these deadlines. After these deadlines, no alterations or additions can be made to the proposal.

### 3.4 Drawing up an application

- This call is only suitable for new bilateral projects with a high degree of interaction between the Dutch and US investigators, which are not currently funded by other sources.
- The NSF portion of the proposal is to be prepared in accordance with standard NSF proposal preparation and submission guidelines. The Dutch portion of the proposal is submitted as a supplementary document to the NSF portion of the proposal. Specific details are found below.
- Applications should be completed in English.

#### 3.4.1 Guidelines for the Dutch portion of the joint application; specific details

##### Preliminary proposals:

- Indicate to which of the three focal areas of CW (see section 1) your portion of the joint research proposal should be classified. If of relevance, indicate a first and second choice.
- Biographical sketch of the Dutch investigator(s), limited to two pages, including up to ten leading references to provide context for the proposed research.

##### Full proposals:

- Indicate to which of the three focal areas of CW (see section 1) your portion of the joint research proposal should be classified. If of relevance, indicate a first and second choice.
- Scheduled total project duration (Dutch portion)  
(a typical ICC project has a project duration of preferably three but maximum four years)
- Summary of requested funding within the total budget.

Summary of the budget	Personnel	Consumables	Equipment	Exchange Activities	Total
	k€ ... total	k€ ... total	k€ ... total	k€ ... total	k€ 275 (3 yr); k€ 280 (4 yr) maximum
specification	... x pd-1 yr ... x pd-2yr ... x pd-3 yr ... x PhD				

- Group members involved in the proposed research  
(list all staff members involved in the proposed research; provide name, initials, first name, title(s) and type of involvement, e.g. daily guidance, advisor or thesis supervisor PhD-student).
- Two page biographical sketch of the Dutch investigator(s), including up to ten leading references to provide context for the proposed research.
- Grant applications  
(indicate for each proposal on the same research topic submitted to other funding agencies including NWO councils by you or co-applicants or by members of your research groups; title proposal, applicant(s), funding agency, budget applied for, date of submission and date of decision).

### 3.5 Specific conditions

- The research should start within six months after receiving the granting decision letter. If this obligation cannot be met, NWO has the right to undertake appropriate measures.
- An ICC project has an anticipated project duration of preferably three but maximum four years. You are required to contact NWO immediately to obtain approval, in case the granted research project duration will differ from that in the granting decision letter. NWO has the right to undertake appropriate measures.
- You have the obligation to keep NWO informed about the appointed researcher(s) on the project by sending in the requested details via a Personnel Information Form (PIF).
- The Reporting Requirements (annual, final project report and project outcomes report for the general public) applicable for the US researchers will also account for the Dutch researchers. Joint reports must be sent via the NSF's electronic project-reporting system, available through FastLane.
- The principal Dutch investigator, or alternatively the management of the host institution, must submit a final expenditure statement accounting for the deployment of all project funds within three months of the completion date of the research project and/or the termination date of the employment of the researcher(s) working on the project, and must permit NWO or its agents to make whatever checks it requires in this respect. The right to the final payment of grant shall be forfeited if (the final research report and) final expenditure statement have not been submitted to NWO within one year of that date. A format for the final expenditure statement will be made available.
- You must inform NWO immediately of any alterations in the project (i.e. appointed personnel, address details, payment details, etc.).
- Where one of the purposes of a research project for which the grant is awarded is utilitarian in nature, NWO and the institution at or under the aegis of which the research is conducted shall hold joint property rights in respect of all results generated by it, providing that this arrangement is laid down in an agreement between the parties as referred to in section 12 (5) of the Dutch Patent Act (Rijksoctrooiwet) 1995.
- The NWO general terms and conditions apply unless these extra specific conditions or the ICC Call for proposals provide otherwise.

### 3.6 Submitting an application

- Proposals to this cooperative activity comprise two portions submitted as a single proposal: the portion including the joint scientific research project and specific details requested from the US partner is submitted in the usual manner to the NSF. The portion with specific details of the Dutch partner is submitted as a supplementary document to the first portion of the proposal. Proposals must be submitted to NSF by the US investigator.
- The Dutch main applicant should contact NWO by 6 November 2010 at the latest by email ([a.werner@nwo.nl](mailto:a.werner@nwo.nl)) that a collaborative proposal has been submitted to NSF. No paper or electronic documents need to be sent to NWO, since NWO has unrestricted access to the electronic documents.
- Joint preliminary proposals are required and must be submitted via the NSF FastLane system by the US investigator. Proposals are accepted by the NSF Division of Chemistry until 5 November 2010, by 5 p.m. of the US proposer's local time. Please see the full text of the solicitation for further information. This can be found at:  
[http://www.nsf.gov/publications/pub\\_summ.jsp?WT.z\\_pims\\_id=13627&ods\\_key=nsf10606](http://www.nsf.gov/publications/pub_summ.jsp?WT.z_pims_id=13627&ods_key=nsf10606).

- The full proposals must be submitted either via the NSF FastLane in accordance with the NSF Grant Proposal Guide (GPG) or via Grants.gov. The complete text of the GPG is available electronically on the NSF website at: [http://www.nsf.gov/publications/pub\\_summ.jsp?ods\\_key=gpg](http://www.nsf.gov/publications/pub_summ.jsp?ods_key=gpg). The Grants.gov Application Guide is available at: [http://www.nsf.gov/publications/pub\\_summ.jsp?ods\\_key=grantsgovguide](http://www.nsf.gov/publications/pub_summ.jsp?ods_key=grantsgovguide). Proposals are accepted by the NSF Division of Chemistry until 19 January 2011, by 5 p.m. of the US proposer's local time.
- In accordance with the agreement between NWO and the Association of Dutch Universities (VSNU), applicants should inform their employing institute of the submission. You should send a copy of your application to the scientific director or dean of your institute or department. If you submit a proposal, NWO will assume that you have informed your institute and that your university or institute accepts the granting conditions of this programme.

## 4 Assessment procedure

### 4.1 Procedure

#### 4.1.1 Proposals

- Preliminary proposals are submitted via FastLane, and full proposals via Grants.gov or via FastLane, the electronic online submission systems of the NSF, according to the guidelines (see section 3.6).
- Applicants must indicate the most suitable focus area(s) in which the proposal should be assessed. CW has three focus areas: Chemistry in relation to Biological/Medical sciences, Chemistry in relation to Physics/Materials and Chemistry in relation to Technology/Sustainability (see also section 1).

#### 4.1.2 Eligibility

- The preliminary proposals will be reviewed by NSF and NWO. NWO checks the eligibility of the proposals, i.e. whether the proposal meets the formal criteria in sections 3.1–3.6. At NSF, the preliminary proposals will be reviewed programmatically for their fit to NSF and specifically to the NSF Division of Chemistry in terms of scientific content. Only applications that meet all criteria of both NWO and NSF can be taken into consideration. Preliminary proposals will thus not be reviewed for their scientific merit.
- A preliminary proposal is required to obtain the encourage/discourage recommendations for submitting a full proposal.

#### 4.1.3 Assessment

- NWO Chemical Sciences (CW Board) will assess the suitability of the preliminary proposals within NWO-CW.
- Both NWO-CW and NSF will nominate referees.
- Three-four national and international referees will assess the proposals for criteria 1–5 (section 4.2). They will assess both the US and the Dutch portions.
- In this programme, applicants will *not* be given the opportunity to respond to the referee's reports, in accordance with the NSF and ICC procedures.

#### 4.1.4 Ranking

- The CW Board will appoint the Dutch part of an assessment committee, also called scientific committee (see section 4.3).
- The committee will discuss and rank the proposals during a videoconference with the nominated members by the NSF. They all will have copies of the proposals and all the referee-reports. By means of a single joint review process the committee will weigh the arguments of the referees (also between the referees) and will issue both a final opinion and a ranking. If the committee considers the referee-reports insufficient to form its opinion, it can make an additional assessment.
- The committee uses the referees' arguments to arrive at an independent opinion on the application. The committee's role differs in this respect from that of the referees, because:
  - The committee considers all applications and reports, while the referee, as a rule, never sees more than one application and the referees do not coordinate their opinion between themselves.

This means that the committee may arrive at a different assessment to the referees.

#### 4.1.5 Final decision

NWO-CW and NSF will make joint and consistent funding decisions and coordinate support for successful proposals, based on the rankings from the assessment committee. A unilateral funding of a proposal is not possible.

#### 4.1.6 Schedule

3 September 2010	The ICC Programme is announced on the NWO and NSF websites
5 November 2010	Final deadline for submitting preliminary proposals to NSF (due by 5 p.m. US proposer's local time)
< 5 December 2010	Review of preliminary proposals is completed and Principle Investigators are notified of the encourage/discourage recommendations
19 January 2011	Final deadline for submitting full proposals to NSF (due by 5 p.m. US proposer's local time)
February-May 2011	Obtaining opinions from referees
May/June 2011	Assessment committee rank the proposals
June 2011	Funding decision by CW Board (and NSF)
End of June 2011	US and Dutch Principle Investigators are notified of the funding or declination

## 4.2 Criteria

Criteria for the review process of the full proposals are:

1. Scientific quality of the project / Qualification of the applicant
  - a. Soundness of the preliminary work, quality of publications
  - b. Originality
  - c. Expected advancement of knowledge (also in relation to the costs)
  - d. Scientific significance (in its own field and/or across different fields)
  - e. Broader impact (science policy, social policy, economic or technical reasons)
2. Working environment / Scientific environment
  - a. Staff, institutional, room and instrument requirements and resources
3. Objectives and work programme
  - a. Clear working hypotheses
  - b. Reasonable limitations of the topic
  - c. Appropriateness of the methods
  - d. Ability to complete the project within the proposed or overall expected time frame
4. Synergy and value added of the proposed collaboration
  - a. Does the international cooperation have any added value? Or would there have been national partners with the same or a better expertise?
  - b. Are there synergistic effects? Or could the project be split in two independent Dutch and US parts without losing any of its substance?
5. What are the broader impacts of the proposed activity? (*only applicable to US portion of the proposal*).
  - a. How well does the activity advance discovery and understanding while promoting teaching, training, and learning?

- b. How well does the proposed activity broaden the participation of underrepresented groups (such as gender, ethnicity, disability, geography)?
- c. To what extent will it enhance the infrastructure for research and education, such as facilities, instrumentation, networks, and partnerships?
- d. Will the results be disseminated broadly to enhance scientific and technological understanding?
- e. What may be the benefits of the proposed activity to society?

### **4.3 Composition of committee**

The NWO Chemical Sciences Board (CW Board) appoints the assessment committee, also referred to as scientific committee. The CW Board will appoint a suitable committee drawn from a pool of candidates. During this procedure every effort will be taken to ensure that the committee members have as large a level of independence and expertise as possible.

## 5 Other information

### 5.1 Contact

The 2010/2011 ICC Programme Solicitation can be downloaded from the NSF website

([http://www.nsf.gov/publications/pub\\_summ.jsp?WT.z\\_pims\\_id=13627&ods\\_key=nsf10606](http://www.nsf.gov/publications/pub_summ.jsp?WT.z_pims_id=13627&ods_key=nsf10606)).

For more information, please contact:

- Dr A.B. (Arlette) Werner
- tel. +31 (0)70 344 08 35, email [a.werner@nwo.nl](mailto:a.werner@nwo.nl).

Information for the US partner may be obtained from the NSF Programme Officer:

- Dr Zeev Rosenzweig
- tel. +1 (703) 292-7719, email [zrosenzw@nsf.gov](mailto:zrosenzw@nsf.gov).

### 5.2 Other CW grants

A brief overview of grants at CW is given below, together with the expected deadlines. Further information about the grants listed can be obtained from the website [www.nwo.nl/cw](http://www.nwo.nl/cw) or by phoning the office, +31 (0)70 344 07 40.

<b>Programme</b>	<b>Type of grant</b>	<b>Deadline</b>
TOP Grants and ECHO Project Grants	curiosity-driven	29 September 2010
Basic Equipment for Research Themes in Chemical Focus Areas (BAZIS)	investments	6 October 2010