

## Helmholtz Young Investigator Groups – Annual Report

**Disclaimer:** The questionnaire is provided in English and can also be filled out in German.

**All form fields with a red frame are mandatory and need to be filled out.**  
(If you cannot make an entry, please enter “–” or “n/a”.)

Core data		
Funding program	Helmholtz Young Investigator Groups	
Project ID number	VH-NG- 1104	
Project title	Structure and dynamics of gas-phase biomolecules studied by phc	
Name of reporting person	Sadia Bari	
Helmholtz Center	DESY	
Partner university	Georg-August-Universität Göttingen	
Helmholtz research field	Matter	
Reporting period [dd.mm.yyyy – dd.mm.yyyy]	01.01.2019-31.12.2019	
Number and length of cost-neutral extensions of the project (if applicable)	n/a	
Annual installment (reporting year)	Reference value (in EUR)	Actual value (in EUR)
Share of the Initiative and Networking Fund	125000	104526,18
Share of the Helmholtz Center	137000	146220,80

1	How do you assess the utilization of the current allocated annual installment until the end of the year? (forecast)
Code	Item
V1.1	<p>I am planning to use 262000 EUR of this year's allocated planned installment.</p> <p>(The planned annual installments are listed in the contract, which was concluded between the Helmholtz Association and the Helmholtz Center.)</p>

2	Please explain last year's expenses with regard to the following categories:
Code	Item
V2.1	<p>Investment costs:</p> <p>Vakuum Kammern Helium Puffer System Gestell Apparatur</p>
V2.2	<p>Personnel costs:</p> <p>Eigene Stelle Postdoc Doktorand</p>
V2.3	<p>General expenses/material costs:</p> <p>Biomolekül Samples Elektrospray Zubehör Vakuum und Elektro-Zubehör Reisekosten Konferenzen Reisekosten Messzeiten</p>

3 How do you rate the following aspects?						
Code	Item	I fully agree	I agree	I partially agree	I agree less	I do not agree
V3.1	My research group has reached full development.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
V3.2	I am well connected with my university partner.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
V3.3	The status of my career development corresponds to my vision.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
V3.4	I am satisfied with my overall situation.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
V3.4C	Please list positive or critical aspects, if applicable:					
V3.5	The working progress of my research group is according to my schedule.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
V3.6	The promises of the Helmholtz Center, e. g. regarding access to technology and infrastructure, financial independence, personnel responsibility are being kept.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
V3.6C	Please list positive or critical aspects, if applicable:					

4 How do you assess the independence of your research group?			
Code	Item	Yes	No
V4.1	I can freely decide on the budget allocated to me as per the application.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
V4.2	I continue to develop my research agenda autonomously.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
V4.3	I make my own personnel decisions.	<input checked="" type="checkbox"/>	<input type="checkbox"/>

5	How do you assess the progress of the project?		
Code	Item	Yes	No
V5.1	Compliance with the timeline as described in the proposal	<input checked="" type="checkbox"/>	<input type="checkbox"/>
V5.1C	In case you deviated from the timeline, please give a brief explanation:		
V5.2	Achievement of important milestones in line with the proposal	<input checked="" type="checkbox"/>	<input type="checkbox"/>
V5.2C	In case milestones have not been reached, please give a brief explanation:		
V5.3	Compliance with the financial plan as described in the proposal	<input checked="" type="checkbox"/>	<input type="checkbox"/>
V5.3C	If changes to the financial plan have occurred, please give a brief explanation:		

6	Please describe the scientific progress of the project in the reporting year along the individual work packages.
Code	Item
V6.1	<p><b>Max. one page</b></p> <p>Die Resultate der Messungen von kleinen molekularen Bausteinen mit PIPE an der PETRAIII/P04 Beamline wurden zusammen mit modernsten quantenmechanischen Berechnungen in Zusammenarbeit mit einem Postdoc aus der Theoriegruppe von Robin Santra 2019 in PCCP veröffentlicht. Durch Röntgenabsorptionsspektren der kationischen Reihe <math>\text{NH}_y^+</math> (<math>y=0-3</math>) in der Innenschale haben wir signifikante Veränderungen der Absorptionsresonanzen in Abhängigkeit von der Anzahl der an den zentralen Stickstoff gebundenen Wasserstoffe gefunden.</p> <p>Weitere Messungen an Peptiden, Proteinen und an verschiedenen Metallporphyrine wurden mit der Apparatur C (ESI gekoppelt an der Nanocluster Falle) am Synchrotron durchgeführt und die Ergebnisse werden gerade für Publikationen erfasst.</p> <p>Aufbau A (mobiles ESI-Fallen-Massenspektrometer) wurde erfolgreich bei einer FEL Messzeit eingesetzt.</p> <p>Wir haben ortsspezifische Fragmentation in schwefelhaltigen Peptiden bei resonanter Absorption an der Schwefel L-Kante nachweisen können. Dies ist ein wichtiger Schritt in der Ermöglichung Pump-Probe Experimenten in größeren Biomolekülen und die Beobachtung von Dynamiken in solchen Systemen.</p> <p>Zum ersten Mal wurden Messungen von Elektronen in Koinzidenz mit Protein-Ionen mit dem Ersatzaufbau B in einer Messzeit am SOLEIL erfolgreich durchgeführt.</p>

7 How do you assess your career development and networking with the university?			
Code	Item	Yes	No
V7.1	I work closely together with the university and its structures (e.g. integration into the faculty council, doctoral procedures).	<input checked="" type="checkbox"/>	<input type="checkbox"/>
V7.2	I am gaining teaching experience.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
V7.2C	If yes, please indicate the number of semester hours per week:		
V7.3	I am appointed to a joint junior professorship.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
V7.4	I am appointed to a joint W2/W3 professorship.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
V7.5	I have an option for permanent employment ("tenure").	<input checked="" type="checkbox"/>	<input type="checkbox"/>
V7.6	Please describe your foreseeable or planned future career prospects: Angestrebte W2/W3 Professur		
V7.7	I have taken advantage of the employer's support for family phases.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
V7.8	Please describe your current function within the Helmholtz Center (position description): DESY-wide deputy speaker of the Research Topic Life Sciences-Building Blocks of Life: Structure and Function (MML-Life, RT3). Member of DESY Scientific Committee (WA). Co-speaker Pillar 5 (Biochemical and Biological Function) at Centre for Molecular		
V7.9	Please describe your current function within the university (e. g. also as a committee member): PhD committee member: Clara Saak (10/2019, Uppsala University), Frederik Busse (07/2019, Universität Hamburg), Zhipeng Huang (05/2019, Universität Hamburg), Linda Giacomozzi (04/2019, University of Stockholm). Co-PI in the cluster of excellence CIII: Advanced Imaging of Matter of the Universität		
V7.10	Please indicate the current status of networking with other actors (multiple answers possible): <input checked="" type="checkbox"/> Cooperations at the partner university <input checked="" type="checkbox"/> Cooperations with other universities in Germany <input checked="" type="checkbox"/> Cooperations with universities abroad <input checked="" type="checkbox"/> Cooperations with other non-academic research institutions in Germany <input checked="" type="checkbox"/> Cooperations with non-academic research institutions abroad <input type="checkbox"/> Cooperations with companies <input type="checkbox"/> Cooperations with other organisations, namely		

8	Please describe the current output of your group.		
Code	Item	Amount / total sum	N/a
V8.1	Peer-reviewed publications in the reporting year	4	<input type="checkbox"/>
V8.2	Registered patents in the reporting year	0	<input type="checkbox"/>
V8.3	Spin-offs in the reporting year	0	<input type="checkbox"/>
V8.4	Acquisition of third-party funding in the reporting year (please mention the type and amount of funding as well as the involved persons): DASHH, together with Prof. Robert Meißner (TUHH): 2 PhD students. Co-PI in the COST Action CA18212 (EU Framework Programme Horizon 2020)		<input type="checkbox"/>
V8.5	Awards and recognitions (please include the names of the respective persons): Bari: 7 invited talks Schwob: 2 invited talks		<input type="checkbox"/>
V8.6	Please describe which activities you have carried out in the area of knowledge and technology transfer:		<input type="checkbox"/>

9	How do you assess the personnel development measures and qualification? (Helmholtz Academy)			
Code	Item	Yes	No	N/a
V9.1	Have you fully attended the course “Leading Your Group”?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
V9.2	Have you implemented the acquired personnel development measures and the qualification plan?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
V9.3	Have you been assigned a permanent contact person?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
V9.4	Did you have opportunities for discussions with the institute management to reflect on your own development and career planning?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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