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# Review of Funding Schemes for Creative Research

Workshop

Dublin, 14 December 2006

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# Multiple funding schemes

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## 1. Individual grant schemes

- Personal research grants
- Career development
- Support of junior scientist groups

## 2. Project grant schemes

- Complementary to disciplinary research council funding
- Encouragement of unconventional, "out-of-the-box" research approaches

## 3. Institutional schemes

- European Research Council – ERC
- Karlsruhe Institute of Technology – KIT

# Individual schemes overview

<b>Individual Schemes</b>	Investigator Programme	Krupp-Förderpreis	21st Century Science Initiative	European Young Investigator Award
Funding organization	Howard Hughes Medical Institute	Krupp von Bohlen und Halbach Stiftung	James S. McDonnell Foundation	European Science Foundation
Country	USA	Germany	USA	EU member states
Start year	1985	1986	2000	2003
End year	Running	Running	Running	Running
Target groups	Top 10-15 % tenured faculty	Top junior faculty (tenured)	Top junior faculty (tenured)	Top junior Scientists
Target research Areas	Biomedical sciences	Sciences and Engineering	-Bridging brain, mind, behaviour -Complex systems -Brain cancer	All research fields
Program scope	National	National	International	European

# Selection criteria: individual schemes

Individual Schemes	Investigator Programme	Krupp-Förderpreis	21st Century Science Initiative	European Young Investigator Award
Originality of proposal/candidate potential	++	++	++	++
Speculative nature/riskiness of proposal or project				
Feasibility of proposal/ appropriateness of chosen methods	+	+	++	++
Quality of previous research/ track record of proposer	++	++	++	++
Potential payback to society	+		+	+
Addressing perceived need of society	+			-
Multidisciplinarity of research	++		+	-
Collaboration with other institutions	-			+
Group leadership qualification	++	++	+	++

++ "indispensable"    + "important"    - "not important"

# Duration – Selectivity – Size

Individual Schemes	Investigator Programme	Krupp-Förderpreis	21st Century Science Initiative	European Young Investigator Award
Average duration of funding	5 years	5 years	3,7 years	5 years
Average success rate of applications	< 14%	< 4%	< 5%	< 4%
Average amount per individual or project	\$ 7,5 mio	€ 680.000	\$ 380.000	€ 1,13 mio
Average amount per individual or project per year	\$ 1,5 mio	€ 136.000	\$ 103.000	€ 226.000
Average annual program spend	\$ 450 mio	€ 895.000	\$ 6,8 mio	€ 28 mio
Share of annual spend relative to total annual research funding of organization	67%	20%	38%	0,64%
Cost coverage	Full	Additional	Additional	Full

# Howard Hughes Institute in comparison

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2005 numbers	Hughes Foundation	Princeton University	Yale University	Harvard University
Net endowment/assets (\$ bill)	14,8	10,8	15,2	25,9
Total spend of endowment/ investment earnings (\$ mio)	717	336	567	868
Total number of investigators/ tenured professorial faculty	314	544	890	925

# Project schemes overview

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	Showcase Award	Off the Beaten Track	Ideas Factory	FIRST
Funding organization	Wellcome Trust	Volkswagen Foundation	Engineering and Physical Sciences Research Council	Israel Science Foundation
Country	United Kingdom	Germany	United Kingdom	Israel
Start year	1996	2001	2005	2002
End year	2003	Running	Running	Running
Target groups	Any researcher	Any researcher	Any researcher	University researchers
Target research areas	Biomedical sciences	All research fields	Topics that need new dimension of thinking	All research fields
Program scope	National	National	National	National

# Selection criteria : project schemes

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Project Schemes	Showcase Award	Off the Beaten Track	Ideas Factory	FIRST
Originality of proposal/candidate potential	++	++	++	++
Speculative nature/riskiness of proposal or project	++	+	+	++
Feasibility of proposal/ appropriateness of chosen methods				
Quality of previous research /track record of proposer	+	+	-	+
Potential payback to society	++	-	++	-
Addressing perceived need of society	+	-	++	-
Multidisciplinarity of research	+	+	++	++
Collaboration with other institutions	-	+	++	-
Group leadership qualification				

++ "indispensable"    + "important"    - "not important"

# Duration – Selectivity – Size

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Project Schemes	Showcase Award	Off the Beaten Track	Ideas Factory	FIRST
Average duration of funding	1,5 years	3,2 years	2,5 years	2,8 years
Average success rate of applications	< 27%	< 44%	Not applicable	< 17%
Average amount spent per individual or project	£ 78.000	€ 424.000	£ 271.000	\$ 58.000 <sup>1</sup>
Average amount spent per individual or project per year	£ 52.000	€ 134.000	£ 109.000	\$ 20.000
Average annual program spend	£ 2,1 mio	€ 2,7 mio	£ 4,8 mio	\$ 845.000
Share of annual spend relative to total annual research funding of organization	0,62%	2,87%	0,36%	1,41%
Cost coverage	Additional	Additional	Additional	Additional

# Conclusion

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1. Individual schemes differ in budget size, but little in funding mission, duration and selectivity
2. Project schemes differ in budget size, duration, but little in their aim to fill gaps in mainstream research funding
3. There are too few individual schemes
4. Project schemes subject to the same administrative burden as standard project grants