

## THE POLISH ACADEMY OF SCIENCES<sup>1</sup>

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### 1. HISTORY AND GENERAL PERCEPTION OF THE ACADEMY

The Polish Academy of Sciences (Polska Akademia Nauk, PAN) was founded in 1952 following the decision of the First Congress of Polish Science. It was established as a result of the consolidation of earlier learned societies, including the Polish Academy of Learning (Polska Akademia Umiejętności) and the Warsaw Scientific Society (Towarzystwo Naukowe Warszawskie). The mission of the organization specifies diverse activities for the development of science aimed at serving society and the enrichment of the national culture. The Academy conducts continuous research projects in several fields of science, aiming to popularize the highest standards of research quality and ethical standards.<sup>2</sup>

The Act of 30 October 1951 on the Polish Academy of Sciences established the new entity as the highest scientific institution of the Republic of Poland. The Act defined key functions of the Academy as: organization and conduct of research in all fields of science, with particular emphasis on issues that are of major importance for the development of science, economy and culture; organization of national and international congresses and conferences which guide the development of science in Poland; publishing of

<sup>1</sup>The chapter is an updated and extended version of the working paper for the workshop ‘Comparing National Academies of Science in Central and Eastern Europe’ held at the Centre for Social Sciences of the Hungarian Academy of Sciences, Budapest on 7–8 April 2015 and published in *MTA Law Working Papers* 2015/30.

<sup>2</sup>Polish Academy of Sciences: *Dzieje Instytucji*. 2016. <http://instytucja.pan.pl/index.php/dzieje-akademii>

research results and other scientific works; training of researchers and the award of scientific degrees; dissemination of scientific knowledge in society; evaluation of the research plans of scientific institutions and the preparation of scientific advice and expertise for public authorities (Act of 1951 on the Polish Academy of Sciences). The Act was significantly amended in 1960 (Act of 1960 on the Polish Academy of Sciences) and 1997 (Act of 1997 on the Polish Academy of Sciences). Currently, the status and tasks of the Academy is regulated by the Act of 2010 on the Polish Academy of Sciences with subsequent amendments and other regulations on higher education and science in Poland.<sup>3</sup>

The Polish Academy of Sciences is seen as a prestigious research institution in terms of research and expertise; however, it is not an esteemed one in public opinion or regarding its lobbying power. Professor Mirosława Marody, one of only two women who have held the position of Vice-President of PAN, stressed the need to rebuild the scientific prestige of the Academy because of the “progressive decline in the importance of the Academy within the scope of science policy of the country, marginalizing its position and reducing the financial and organizational autonomy”.<sup>4</sup> In the same vein, Professor Jerzy Duszyński (elected President of PAN in March 2015), emphasized the importance of “reinforcing the sense that PAN is an organization that is essential to the structure of Polish science, active in fields that matter to society, well managed, and influential”.<sup>5</sup>

The Academy has undergone numerous changes over the years in line with higher education reforms and reflecting the increasing democratization processes. Nevertheless, its organizational structure has remained unchanged since the Socialist period. What has changed, however, is the process of appointing members of the Academy and electing its governing bodies. Currently, it has a more democratic character. Researchers can become members of the Academy through the recommendations of three existing members of the Academy or five scientists unaffiliated with the Academy but having made outstanding scientific achievements. Earlier, in

<sup>3</sup> The 1951 Act on the Polish Academy of Science, Dz.U. 1951 nr 57 poz. 391, <http://isap.sejm.gov.pl/DetailsServlet?id=WDU19510570391>; The 1960 Act on the Polish Academy of Science, Dz.U. 1960 nr 10 poz. 64 1960.02.29, <http://isap.sejm.gov.pl/DetailsServlet?id=WDU19600100064>; The 1997 Act on the Polish Academy of Science, Dz.U. 1997 nr 75 poz. 469 1997.10.15, <http://isap.sejm.gov.pl/DetailsServlet?id=WDU19970750469>; The 2010 Act on the Polish Academy of Science, Dz.U. 2010 nr 96 poz. 619, <http://isap.sejm.gov.pl/DetailsServlet?id=WDU20100960619>.

<sup>4</sup> Marody, cited in “Jaka Polska Akademia Nauk na najbliższe lata? Tezy wyborcze i biogramy dwojga kandydatów na stanowisko Prezesa PAN: prof. Jerzego Duszyńskiego oraz prof. Mirosławy Marody (2015)” *Panorama Polskiej Akademii Nauk* 2015/5 2–5. 4.

<sup>5</sup> Duszyński, cited in “Jaka Polska...” (n 4) 2.

the Socialist period, Academy members were appointed by the President of PAN.

The current efforts of the Polish Academy of Sciences are focused on obtaining grants from scientific funds of the European Union and on increasing the role of the Academy in public discourse.

## 2. STRUCTURE AND EMPLOYMENT AT THE POLISH ACADEMY OF SCIENCES

The structure of the Academy is two-dimensional. It acts as an elected corporative body of leading scientists and researchers (members) and as such has become a key scientific advisory body. At the same time, it coordinates the work of 69 research institutes, currently employing an academic and supporting staff of about 8,000 persons in total. The institutes are grouped into five faculties: Faculty of Humanities and Social Sciences, Faculty of Biological and Agricultural Sciences, Faculty of Natural Sciences, Faculty of Technical Sciences, and Faculty of Medical Sciences. Departments coordinate the activities of research institutes and committees of the Academy and supervise auxiliary scientific units.

The basic unit of the Academy is a research institute. Institutes may also form scientific centers and consortia. The other institutional forms characteristic of the Academy are committees of the Polish Academy of Sciences which act as national representative bodies of scientific disciplines. Committees are composed of members of the PAN and delegates from other scientific centers and universities as well as representatives of social and economic organizations. The number of committees (which may take the form of a ‘research’, ‘problem’ or ‘national committee’) is not constant; currently, for the term 2015–2018, there were 13 problem and 78 research committees set up. Additionally, there are auxiliary units of the Polish Academy of Sciences, including archives, libraries, museums, and botanical gardens.

In addition to the national headquarters in Warsaw, the Academy comprises of eight territorial branches in Katowice, Gdańsk, Lublin, Poznań, Łódź, Wrocław, Kraków and a joint branch in Olsztyn and Białystok. They integrate the local scientific communities and act as representatives of the Academy in the respective regions. There are also seven branches abroad, aimed primarily at international scientific cooperation and promotion of Polish science abroad, in Moscow, Paris, Rome, Wien, Kiev, Berlin and Brussels.

The Academy is a leading research institution in Poland, employing the most qualified and best recognized researchers. In 2013, the Polish Ministry of Science experts (Committee for Evaluation of Research) investigated and compared the academic achievements of departments and scientific and re-

search institutes of Polish universities. As part of that assessment, scientific organizations were awarded scores and categories (A+, A, B, C) based on four criteria: scientific and creative achievements; scientific potential; tangible results of scientific activity; other effects of scientific activity.<sup>6</sup>

Out of the 963 organizations evaluated, 37 were awarded the highest rating (A+). Of these, the majority were the institutes of the Polish Academy of Sciences (12 organizations), followed by the University of Warsaw (6), Jagiellonian University (4), the University of Wrocław (2) and Warsaw School of Economics (SGH) (1). Out of all of the Polish Academy of Sciences institutes evaluated, 77% were assessed as excellent or very good (A+ and A categories) compared to only 32% of other research institutions classified as equally good.

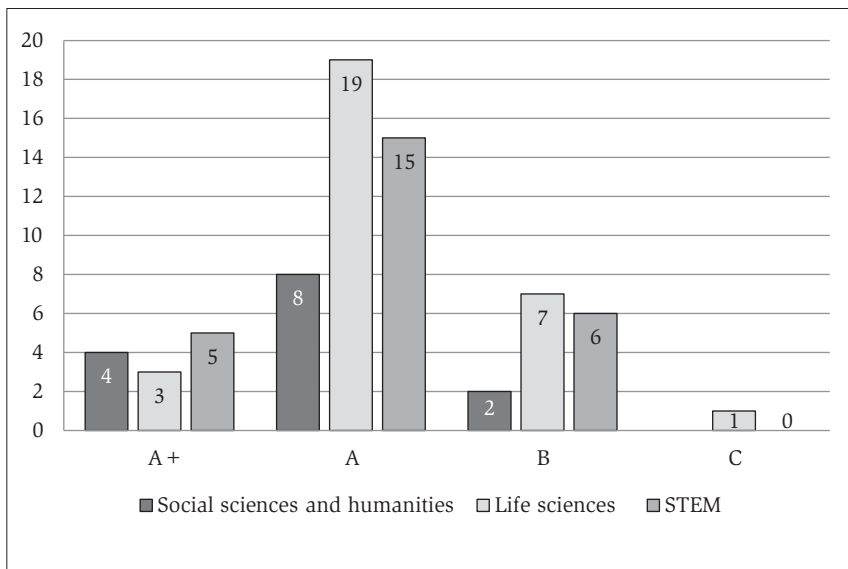


FIGURE 1. • *Distribution of ratings of Polish Academy of Sciences institutes in 2013.*<sup>7</sup>

In the next assessment of departments and scientific and research institutes of Polish universities, planned for 2017 and based on new criteria, greater

<sup>6</sup> Ministry of Science and Higher Education. *Komunikat o wynikach kompleksowej oceny działalności naukowej lub badawczo-rozwojowej jednostek naukowych*. Warszawa, 2013. <http://www.nauka.gov.pl/komunikaty/komunikat-o-wynikach-kompleksowej-oceny-dzialalnosci-naukowej-lub-badawczo-rozwojowej-jednostek-naukowych.html>

<sup>7</sup> Source: Ministry of Science and Higher Education. (n 6).

weight will be given to the quality of research and publications, innovation and internationalization of institutions.<sup>8</sup>

The Academy's research institutes receive funding depending on the assessment class. The institutes evaluated as "C" are penalized with respect to state budget funding. Generally, the more external grants an institute receives and the higher the scientific output volume, the more funds it receives from the budget. Many international studies in Poland (e.g. PISA, advanced genetic testing, etc.) are also being conducted within the Academy. In 2014, 82.8% of expenditures in research institutes of the Polish Academy of Sciences was devoted to basic (theoretical) research, 10.5% concerned applied research and 6.70% was spent on development.<sup>9</sup> Figure 2 presents the structure of internal expenditures of institutes of the Polish Academy of Sciences in comparison with other types of institutions.

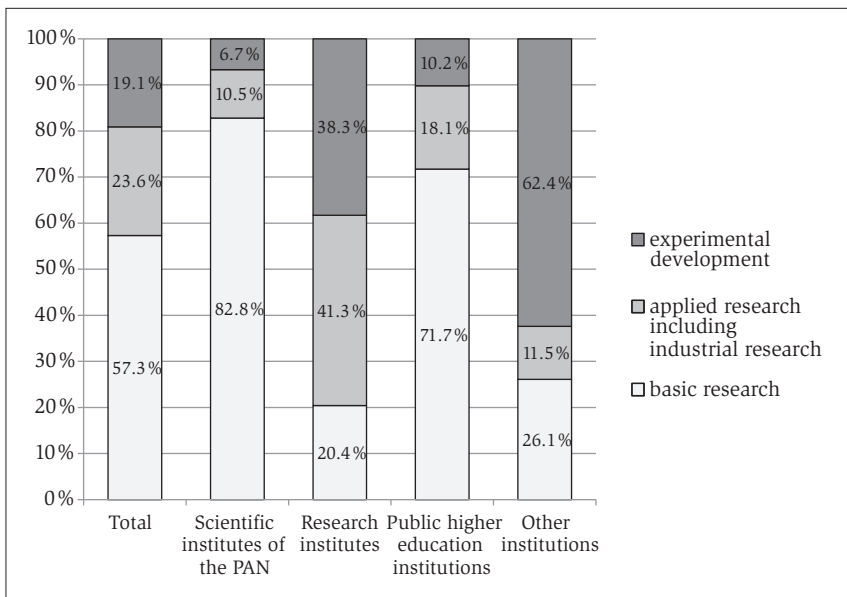


FIGURE 2. • The structure of internal expenditures on research and development in government and local government institutions in 2014.<sup>10</sup>

<sup>8</sup> Ministry of Science and Higher Education: *Rozporządzenie Ministra Nauki i Szkolnictwa Wyższego z dnia 27 października 2015 r. w sprawie kryteriów i trybu przyznawania kategorii naukowej jednostkom naukowym*, M.P.2016.782. 2015. <http://isap.sejm.gov.pl/DetailsServlet?id=WDU20150002015>.

<sup>9</sup> Central Statistical Office of Poland (2015). *Science and Technology in 2014* (Warszawa: GUS 2015) 72. [http://stat.gov.pl/download/gfx/portalinformacyjny/pl/defaultaktualnosci/5496/1/11/1/nauka\\_i\\_tekhnika\\_w\\_2014pl.pdf](http://stat.gov.pl/download/gfx/portalinformacyjny/pl/defaultaktualnosci/5496/1/11/1/nauka_i_tekhnika_w_2014pl.pdf)

<sup>10</sup> Source: Central Statistical Office of Poland (n 9) 72.

## 2.1. Membership

The number of members of the National Academy is regulated in article 10 of the Act on the Polish Academy of Sciences: numbering no more than 350 in total, a figure not including foreign members. Members are divided into two groups: ordinary members and corresponding members. Currently, there are 492 members of the Polish Academy of Sciences, of whom 310 are domestic (as of 3 October 2016). Out of all domestic members, 165 are ordinary members and 145 are corresponding members (see details in Table 1). Membership of the Academy is a position granted for life and upon reaching the age of seventy, incumbent researchers receive senior member status.

TABLE 1. \* *Membership in the Polish Academy of Sciences (as of 3.10.2016).*<sup>11</sup>

Faculty	Domestic members			Foreign members
	All domestic	Ordinary	Correspondent	
Faculty of Humanities and Social Sciences	48	25	23	27
Faculty of Biological and Agricultural Sciences	67	33	34	44
Faculty of Natural Sciences	86	49	37	50
Faculty of Technical Sciences	71	39	32	37
Faculty of Medical Sciences	38	19	19	24
Total	310	165	145	182

Members of the Academy are chosen by the General Assembly from among the most eminent Polish and foreign researchers on the personal recommendation of three Academy members or five other prominent scientists or the scientific council of the institute or the faculty council of universities having the right to confer postdoctoral degree (Article 7 of the Act on the Polish Academy of Sciences). Every member receives a monthly salary, provided independently of the income from other sources. The current remuneration is 2271 PLN (around 520 EUR) for ordinary members, while corresponding members receive 1689 PLN (around 390 EUR).<sup>12</sup> For comparison, the average salary in Poland for the second quarter of 2015 is 4019

<sup>11</sup> Source: Polish Academy of Sciences: *Członkowie Polskiej Akademii Nauk. Zestawienie*, 2016. <http://czlonkowie.pan.pl/czlonkowie/sites/Zestawienie.html>.

<sup>12</sup> Ministry of Science and Higher Education: *Rozporządzenie Ministra Nauki i Szkolnictwa Wyższego z dnia 17 września 2010 r. w sprawie wysokości uposażenia członków krajowych Polskiej Akademii Nauk*. Warszawa, 2010. <http://isap.sejm.gov.pl/DetailsServlet?id=W-DU20101781202>.

PLN (around 930 EUR).<sup>13</sup> These emoluments are not taken into account in determining the amount of pension, nor do they affect the suspension or reduction of a pension.

In terms of status, there is a significant difference between members of the Academy and researchers employed by the Academy. The first group comprises well-established, experienced, renowned, usually senior academics. Their membership of the Academy, both ordinary and corresponding, is first of all an honorary position, denoting their high academic status and recognition by other Polish academics. Technically speaking, they are not employed by the Academy, but they receive a remuneration related to their membership. The second group constitutes of “ordinary” researchers, whose only distinctive feature in comparison with university researchers is the lack of, or limited, teaching duties.

The Academy does not exercise any control over researchers outside its own institutional structure. There is cooperation (within research projects or teaching activities) with other research institutes and universities.

## 2.2. Employment

In 2014, the total staff of the Academy comprised 7914 employees, of whom 5270 held research positions. Table 2 shows the occupational structure of the Academy institutes as of 2014, by faculties.

TABLE 2. • *Personnel in institutes of the Polish Academy of Sciences by occupation in 2014.*<sup>14</sup>

Faculty	Number of persons			
	Total	Researchers	Technicians	Supporting staff
Faculty of Humanities and Social Sciences	1 170	980	41	149
Faculty of Biological and Agricultural Sciences	2 116	1 268	501	347
Faculty of Natural Sciences	2 657	1 746	516	395
Faculty of Technical Sciences	1 185	699	258	228
Faculty of Medical Sciences	786	577	71	138
Total	7 914	5 270	1 387	1 257

<sup>13</sup> Central Statistical Office of Poland: *Komunikat Prezesa Głównego Urzędu Statystycznego z dnia 9 sierpnia 2016 r. w sprawie przeciętnego wynagrodzenia w drugim kwartale 2016 r.* 2016. <http://stat.gov.pl/sygnalne/komunikaty-i-obwieszczenia/lista-komunikatow-i-obwieszczen/komunikat-w-sprawie-przecietnego-wynagrodzenia-w-i-kwartale-2016-r-271,12.html>.

<sup>14</sup> Central Statistical Office of Poland (n 9) 86.

Most of the researchers working for the Academy are employed on a full-time basis. Until very recently, it was not uncommon for a researcher to hold two (or sometimes even more) full-time positions: one in the Academy institute and another in a private university or other non-public institution of higher education. The ongoing reform, which has been implemented in the last few years by two consecutive Ministers of Science and Higher Education, Barbara Kudrycka and Lena Kolarska-Bobińska, aimed at eliminating such cases, introducing the “one person – one full-time position” rule.

Directors of Institutes within PAN are chosen through open competitions and are then appointed, usually for a period of four years, by the president of the Polish Academy of Sciences. The exact requirements may differ, but generally a prospective director needs to hold a certain academic degree (typically the post-doctoral degree of *doktor habilitowany*, dr. hab., ‘habilitated doctor’, i.e. an intermediate degree between a doctorate and the scientific title of a professor, granted by the Central Commission for Academic Titles and Degrees) and have substantial administrative and management experience (usually at least a few years spent in a management position in the Academy, i.e. as a Dean, is enough). A director of the research institute does not have to be – and usually is not – a member of the Academy.

There are two main motivations for being employed by the Academy. One is, without doubt, the prestige of the Academy. In general, Academy institutes are decent academic organizations, which – especially taking into account Central and Eastern European standards – provide satisfactory conditions for conducting high-quality research. The second motivation relates to the specific situation of the researchers in the Academy, as they do not have teaching duties, in contrast to their peers in university positions. Devoting all their working time to scientific activities facilitates the provision of high-quality research.

### 2.3. *Research careers*

The Academy confers academic degrees and titles that enjoy the same prestige as those awarded by universities. It is perceived as the primary institution for academic research, at least in certain areas or disciplines. This unique status is first of all related to the position of Academy researchers. Academy institutes are purely research institutions; they do not teach students, with the exception of a (usually rather low) number of postgraduate and doctoral students. Furthermore, according to doctoral students, the laboratories of the Polish Academy of Sciences are better equipped than the



university ones.<sup>15</sup> It is also easier for early-stage researchers to start an international career thanks to the numerous research contacts of the Academy.

Most institutes of the Polish Academy of Sciences have the right to confer doctoral and higher academic degrees. As of 3 November 2016, there are 63 institutes and 6 other research units having the right to award the doctoral degree and 48 institutes and 4 other research units with the right to award the degree of *doktor habilitowany* (the requirements are higher in the second case, POLON, 2016). Some institutes have the right to confer degrees in more than one academic field. (The regularly updated list of these institutes is available from POLON – an integrated database of information on scientific and higher education institutions in Poland: <https://polon.nauka.gov.pl>.)

The institutes of the Polish Academy of Sciences have the right to teach students up to the doctoral level. Under the present law, private universities under the auspices of the Academy were established in the 1990s (e.g. the School of Computer Science and Management, the University of Social Sciences and Humanities, the College of Sciences). The Academy does not confer any other academic qualifications beyond those which are generally granted within the higher education system. Degrees and titles are granted by the PAN in the same way as by the universities, i.e. by secret voting. Since 2015, a new system for granting habilitation has been in effect, involving external reviewers unrelated to the institution at which the habilitation procedure is carried out.

#### 2.4. Financing

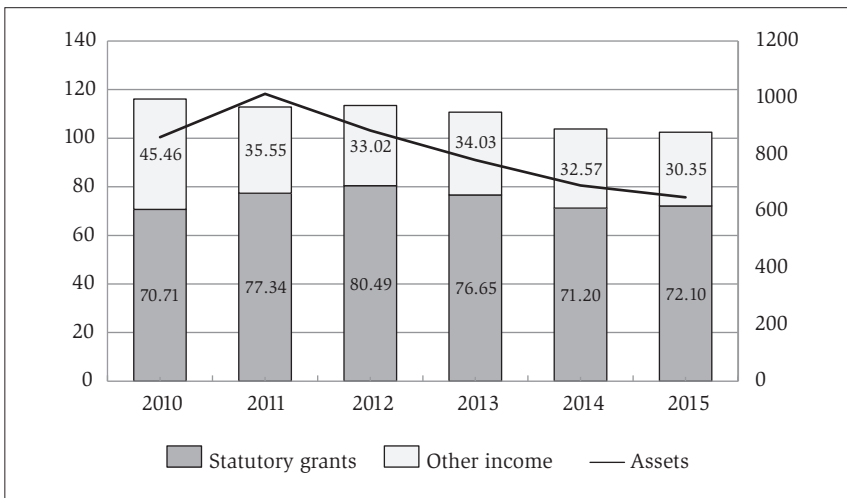
According to Article 78 of the 2010 Act on the Polish Academy of Sciences, PAN's activity is funded from the state budget and other sources. Academy research activities funded by the state are classified under "Science" and are recognized in a dedicated part of the state budget (Section 67). The President of the Academy of Sciences is endowed with the powers of executing the budget and carries out the tasks of implementation. In terms of budget management quality control, the President reports to the Minister of Science and Higher Education.

In 2015, PAN's total net income amounted to 102.5 million PLN. The single most significant source of funding was the state budget, with statu-

<sup>15</sup>Doktorat w PANie – Forum dyskusyjne portalu *Gazeta.pl* 2008. <http://forum.gazeta.pl/forum/w,16566,66616456,66616456.html>.

tory subsidies and other grants totaling 78.06 million PLN,<sup>16</sup> of which 72.1 million was dedicated to current operations. The remaining income was generated by sales of products, services and materials. This income structure has remained roughly unchanged throughout recent years (see Figure 3).

At the end of 2015, the total value of the Polish Academy of Sciences assets, both tangible and intangible, amounted to 648.3 million PLN. The majority of this was accounted for by property, i.e. land and buildings. This figure has been declining steadily for several years, falling from over 1 billion PLN at the end of 2011 to 606.1 million PLN at the end of 2015 (Polish Academy of Sciences, 2016c).



Note: The changing models followed in the accounting records might have affected the numbers.

FIGURE 3. • Funding of PAN, 2010–2015. Authors' compilation.<sup>17</sup>

<sup>16</sup> Supreme Audit Office in Poland: *Wykonanie budżetu państwa w 2015 r., cz. 28 – Nauka, cz. 38 – Szkolnictwo wyższe, cz. 67 – Polska Akademia Nauk oraz wykonanie planu finansowego Funduszu Nauki i Technologii Polskiej* Warszawa, 2016. <https://www.nik.gov.pl/plik/id,11358.pdf>.

<sup>17</sup> Sources: Polish Academy of Sciences: *Statut PAN*. 2010. [http://www.ippt.pan.pl/attachments/STATUT\\_PAN\\_24112010.pdf](http://www.ippt.pan.pl/attachments/STATUT_PAN_24112010.pdf); Polish Academy of Sciences: *Sprawozdanie finansowe za rok 2011*. 2012. [http://www.bip.pan.pl/userfiles/file/Bilans\\_zatwierdzony\\_2011.pdf](http://www.bip.pan.pl/userfiles/file/Bilans_zatwierdzony_2011.pdf); Polish Academy of Sciences: *Sprawozdanie finansowe za rok 2012*. 2013. <http://www.bip.pan.pl/userfiles/SPRAWOZDANIE%20I%20OPINIA%202012.pdf>; Polish Academy of Sciences: *Sprawozdanie finansowe za rok 2013*. 2014. [http://www.bip.pan.pl/userfiles/file/opinia\\_2013.pdf](http://www.bip.pan.pl/userfiles/file/opinia_2013.pdf); Polish Academy of Sciences: *Sprawozdanie finansowe za rok 2014*. 2015. [http://www.bip.pan.pl/userfiles/file/sprawozdanie/Sprawozdanie%20finansowe%20PAN%20I%20Opinia%202014%20\(1\).pdf](http://www.bip.pan.pl/userfiles/file/sprawozdanie/Sprawozdanie%20finansowe%20PAN%20I%20Opinia%202014%20(1).pdf); Polish Academy of Sciences: *Sprawozdanie finansowe za rok 2015*.

The Academy's expenditures of budgetary funds can be divided into three categories. The first one is financing PAN as a corporation of scientists; this includes the functioning of its main organs (the Presidium, Faculties, General Assembly, regional branches, committees, the Committee on Ethics in Science and Audit Committee, Academy of Young Scholars, etc.) as well as remunerations and other benefits of members of the Academy. In 2015, these expenses amounted to 16.7 million PLN. The second category (33.8 million PLN in 2015) comprises PAN's secondary scientific centers and other organizational units, including its libraries, museums, archives and foreign centers. The remaining funds (24.2 million PLN) covered costs to maintain the Academy's administrative offices, foreign cooperation, activities for the popularization of science and other areas.<sup>18</sup> Similar budgetary expenditures were planned for year 2016: 17.1 million, 36.1 million and 27.5 million, respectively.<sup>19</sup>

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2016. [http://www.bip.pan.pl/userfiles/file/ sprawozdanie/Sprawozdanie%20finansowe%20PAN%20i%20opinia%202015.pdf](http://www.bip.pan.pl/userfiles/file/sprawozdanie/Sprawozdanie%20finansowe%20PAN%20i%20opinia%202015.pdf).

<sup>18</sup>Supreme Audit Office (n 16).

<sup>19</sup>President of Polish Academy of Sciences: *Decyzja Nr 43/2016 Prezesa PAN z dnia 19 października 2016 roku zmieniająca decyzję w sprawie podziału kwot zapisanych w ustawie budżetowej na rok 2016 w części 67 Polska Akademia Nauk*. 2. 2016. [http://instytucja.pan.pl/images/2016/decyzje/Decyzja\\_Nr\\_43\\_z\\_19\\_pazdziernika\\_2016\\_roku.pdf](http://instytucja.pan.pl/images/2016/decyzje/Decyzja_Nr_43_z_19_pazdziernika_2016_roku.pdf).